RÉSUMÉ

Aydeniz (Dennis) Siginer, PhD, ScD

LFASME, FAAM, FNYAS

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Deputy Vice-Chancellor
Distinguished University Professor
Department of Mathematics and Statistical Sciences
Department of Chemical, Materials and Metallurgical Engineering &
Department of Mechanical, Energy and Industrial Engineering
Botswana International University of Science and Technology - BIUST
Palapye, Botswana
&
Concurrently
Distinguished Research Professor
Centro de Investigación en Creatividad and Educación Superior – CICES
Departamento de Ingeniaría Mecánica
Universidad de Santiago de Chile – USACH
Santiago, Chile

Formerly

Dean - College of Engineering, Wichita State University, Kansas, **USA**
Chair - Department of Mechanical Engineering, New Jersey Institute of Technology, New Jersey, **USA**
Dean –College of Arts & Sciences, Petroleum Institute (now Khalifa University), Abu Dhabi, **UAE**
Provost (Equivalent to President), Petroleum Institute (now Khalifa University), Abu Dhabi, **UAE**
Associate Provost (Equivalent to Provost), Petroleum Institute (now Khalifa University), Abu Dhabi, **UAE**

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EDUCATIONAL BACKGROUND

- PhD Mechanics, University of Minnesota 1982
- ScD Fluid Mechanics, Technical University of Istanbul 1971
- MSc Solid Mechanics, Technical University of Istanbul 1966
- BSc With Honors, First in class**,** Technical University of Istanbul.....1966

ACADEMIC APPOINTMENTS & PROFESSIONAL EXPERIENCE

- Provost & Senior Deputy Vice-Chancellor; Distinguished University Professor, Botswana International University of Science and Technology, Palapye, Botswana..... January 2014-Present
- Acting Vice Chancellor (holding simultaneously the position of Provost)..... October- November 2014
- Distinguished Research Professor, Centro de Investigatión en Creatividad y Educación Superior-CICES, Universidad de Santiago de Chile, Santiago, Chile ..... June 2011-Present
- Visiting Professor, Mathematical Institute, Czech Academy of Sciences, Prague, Czech Republic .....October 4-15, 2015
- Visiting Professor, Mathematical Institute, Academy of Sciences, Czech Republic ..... September 23-October 10, 2012
- Visiting Professor, Mathematical Institute, Czech Academy of Sciences, Prague, Czech Republic .....October 1-15, 2011
- Visiting Professor, Universiti Teknologi PETRONAS, Bandar Seri Iskandar, Malaysia .....July 15-30, 2011
- Distinguished University Professor, Petroleum Institute, Abu Dhabi, UAE..... September 12, 2007- June 30, 2011
- Dean, College of Arts & Sciences, Petroleum Institute, Abu Dhabi, UAE ..... September 12, 2007-June 30, 2011
- Acting Provost Petroleum Institute, (the position of President did not exist at the time, and the Provost was the facto President of the Institution) Abu Dhabi, United Arab Emirates ..... July 1-September 16, 2010
- Associate Provost, Petroleum Institute, Abu Dhabi, United Arab Emirates ..... October 1, 2008-June 30, 2010
- Visiting Professor, Ecole Centrale de Lyon, Lyon, France .....May, 2006
- Visiting Professor, Centro de Investigatión en Creatividad y Educación Superior, Universidad de Santiago de Chile, Santiago, Chile .....December 15, 2005 – January 15, 2006
- Visiting Professor, Ecole Polytechnique de l'Université de Nantes, Nantes, France ..... May 15 – July 25, 2005
- Distinguished Professor of Mechanical Engineering, Wichita State University, Wichita, Kansas ..... 8/15/2000 – 1/9/2007
- Dean & Distinguished Professor, College of Engineering, Wichita State University, Wichita, Kansas 8/15/2000 – 6/30/2003
- Chair & Professor, Department of Mechanical Engineering, New Jersey Institute of Technology, Newark, New Jersey.....1/1/1998-8/14/2000
- Visiting Professor, Universidad de Santiago de Chile, Santiago, Chile 12/1998-1/1999
- Associate Professor & Professor, Department of Mechanical Engineering, Auburn University, Auburn, Alabama 1/1/1984-12/31/1997

- Visiting Professor, Universidad de Santiago de Chile, Research Institute of Santiago de Chile University and the Department of Mechanical Engineering, Santiago, Chile, July-August 1997
- Visiting Professor, University of New Brunswick, Department of Mathematics, Statistics and Computer Science, Saint John, N.B. Canada, June 15-30.....1997
- Visiting Professor & Lecturer, Pontificia Universidade Catolica, Department of Mechanical Engineering, Rio de Janeiro, Brazil, May 1-15.....1997
- Visiting Professor & Lecturer (sponsored by the World Bank), The University of the West Indies, Department of Mathematics and Computer Science, St. Augustine, Trinidad & Tobago, April & May 16-June 10.....1997
- Visiting Professor, College of Engineering, Niigata University, Niigata, Japan, September.....1996
- Visiting Professor, College of Engineering, Pusan National University, Korea, August/September 1996
- Visiting Professor, College of Engineering, Departments of Chemical and Mechanical Engineering, Seoul National University, Korea, August/September 1996
- Visiting Professor, Department of Mechanical Engineering and the Research Institute of the Universidad de Santiago de Chile, Santiago, Chile, September 1995
- Visiting Professor, Institute of Applied Mechanics, Russian Academy of Sciences, Moscow, Russia ..... August 1991, 1992, 1993 & 1994
- NASA-ASEE Summer Faculty Fellow, NASA Lewis Research Center, Cleveland, Ohio .....Summer 1991 & Summer 1992
- Assistant Professor, Department of Engineering Mechanics, The University of Alabama, Tuscaloosa, Alabama..... 1/1/1981-12/31/1983
- Research Associate, Department of Aerospace Engineering & Mechanics, University of Minnesota, Minneapolis, Minnesota 1/1/1976-12/31/1980

ADMINISTRATIVE EXPERIENCE & HIGHLIGHTS OF MAJOR ACCOMPLISHMENTS

1. **Acting Vice-Chancellor of BIUST** (holding concurrently the position of Provost & Senior Deputy Vice-Chancellor)

- Responsible of managing an annual budget of $100 mil US
- Responsible of all administrative, academic, financial matters concerning the University
- Responsible of periodically reporting to the University Council (the Board of Trustees) all matters requiring major decisions concerning the development of the Institution
- Responsible of reporting periodically to the Minister of Education and Skills Development and in particular to the President of the Republic during the Presidential Briefings major developments and initiatives undertaken as well as accomplishments
- Responsible of negotiating the budget of the University with the Ministry of Education and Skills Development
- Responsible of all interactions with the Ministry of Education, the Ministry of Finance, the Ministry of Research and other Ministries as called upon and need arises
- Responsible of the implementation of the Campus Master Plan and the revisions of it as may be required
- Responsible of the public image and perception of the University
- Responsible of all interactions with and presentations to the Parliamentary Commissions as called upon
- Responsible of preparing and presenting periodic reports to the Education Ministry, the President of the Republic and Parliamentary Commissions
- Responsible of the enrollment planning (closely related to the budget and to the Campus Master Plan)
- Responsible of the research performance of the Institution.
- Responsible of steering the University's research towards helping to transform the economy of the country from resource to knowledge based
- Responsible of institutional and individual program accreditation
- Initiated and successfully concluded the expansion plans

2. **Provost and Senior Deputy Vice-Chancellor at BIUST**

- Responsible of all administrative, academic, financial and infrastructure matters of the academic units of the University
- As second in charge of the University assumes responsibility for all or any of the items listed above as directed by the Vice Chancellor and/or helps and accompanies the Vice Chancellor in the performance of the above items
- Contributed to the master campus plan, and continues to contribute as the master plan is a living document on the main Palapye campus including academic and administrative buildings, student and staff housing and sports facilities
- Contributed to the planning and execution of the move of the full University from the capital Gaborone to the main campus in Palapye 270 km away from Gaborone in the summer and Fall of 2014 (the main campus is still under construction because the University continues to grow gradually from year to year, and it will continue to do so for the next 5~10 years as the enrolment grows, and new buildings are added as the need grows)
- Contributed to the planning and oversaw the execution of the construction of three buildings for the College of Sciences at a cost of $35mil US
- Founded the Graduate School and hired the Dean of the Graduate School

- Supervised the hiring about 140 faculty members from 2014 to the present. The hiring process continues in cycles, and will continue for the next 3~4 years both to enhance the research capabilities and capacity as well as to meet the requirements of teaching both at the undergraduate and graduate levels all the while maintaining a faculty to student ratio not exceeding one for 15 students.
- Developed a six year enrollment, faculty recruitment and campus facilities development plan
- Drafted and got approved by the University Senate and the University Council (equivalent of the Board of Trustees with external members appointed by the Ministry of Education) a number of policies and guidelines regulating the flow of business in the University concerning both students and faculty.
- Working with a Committee drafted, negotiated with the relevant constituencies and got approved "BIUST Appointments & Promotion" policy. The Policy sets a high bar for Appointments & Promotions in BIUST to build a momentum for research capability and reputation and gradually improve the worldwide ranking of the University.
- Developed faculty workload guidelines approved by the University Senate.
- Developed faculty research initiation grant guidelines approved by the University Senate.
- Developed Research Award guidelines approved by the University Senate.
- Developed Teaching Award guidelines approved by the University Senate.
- Developed faculty travel guidelines approved by the University Senate.
- Led a number of research initiatives to put BIUST in a position of leadership in Southern Africa and possibly in the whole of Africa such as the SKA (square kilometer array project funded by the European Union at a cost of Euro 20 billion over more than 20 years with partner nations such as Australia, South Africa, Namibia and others in the region.
- Spearheaded the Microtron project in collaboration with the JINR (Joint Institute for Nuclear Research), a research Institute with a membership from 18 nations in Dubna (20 km south of Moscow), Russia and the Embassy of the Russian Federation to Botswana. Microtron is a mini particle accelerator that can fit in a large building as compared to the CERN accelerator in Switzerland with a radius of several miles. It is a modern tool for both fundamental and industrial research. The project will put Botswana on the map in terms of fundamental research with many direct benefits to the economy of Botswana in lifting it from resource based to a knowledge-based economy. It is a first of its kind in Southern Africa.
- Faculty "Research and Teaching Award Guidelines" were approved by the University Senate.
- Developed a number of Academic Regulations and Guidelines and took them through the approval process by the Senate.
- Launched the effort to accredit the disciplines taught at the University internationally
- Introduced the E-Library concept to convert BIUST Library collection to digital collection, and all the texts books used by students to digital textbooks.
- Introduced E-Learning across the Campus with the ultimate goal of converting the delivery of all the modules in the E-Learning mode.
- Introduced and launched major Science and STEM education initiatives under the rubrics "Demystifying Science" and "STEM Festival" held in major cities and most high schools throughout the country the former in partnership with the Australian National University in Canberra.
- Developed a relationship with the Confucius Institute in Beijing and introduced Chinese Language and Culture courses in BIUST (funded to a large extent by the Confucius Institute) as part of the "General Education Curriculum" at a very little cost to the University
- Developed the Center for Business, Management, Entrepreneurship and General Education and introduced courses in Business, Management and Entrepreneurship as part of the "General Education Curriculum" and supervised the hiring of the related faculty
- Supervised /supervising all capital equipment purchases both for research and teaching

3. **Acting Provost at the Petroleum Institute** (the position of President did not exist at the time, and the Provost was the facto President of the Institution)

- Responsible of managing an annual budget of $150 mil US
- Responsible of all administrative, academic, financial matters and day-to- day running of the University
- Responsible of frequently interacting with the CEO of ADNOC (Abu Dhabi National Oil Company sponsor of the Petroleum Institute) reporting all developments and decisions requiring his input
- Responsible of all administrative, academic, financial and infrastructure matters of the academic units of the University
- Responsible of all final hiring decisions
- Responsible of reporting periodically to the Board of Governors chaired by then CEO of ADNOC on all major matters
- Responsible of institutional and individual program accreditation
- Responsible of establishing and nurturing international linkages with major oil companies as well major institutions worldwide.

4. **Associate Provost for Academic Affairs at the Petroleum Institute** (second in charge of the University as the position of President did not exist, and the Provost was de facto President)

- Responsible of all academic matters related to degree programs administered by PI
- Responsible of hiring faculty, administrative and technical staff for all PI

- Responsible for Rolling Contract recommendations to the Provost
- Responsible of setting up the annual budget of all Academic and Technical Departments in collaboration with the Directors/Chairs/Heads of the units and the Finance Department
- In charge of faculty contracts for all PI
- Supervised the launching of the new Materials Science & Engineering Department
- Responsible of institutional and individual program accreditation working with and under the direction of the Provost
- Established a Center for Teaching Excellence
- Established a consolidated process of Teaching Review
- To enhance research reduced the teaching loads through effective advocacy of teaching simultaneous classes between the female and male campuses using the latest video/audio technology
- Participated in faculty and staff hiring in all grades and at all levels of the search and hiring process for all Academic Staff
- Responsible for the annual Faculty Performance Evaluations/Rankings process at PI and for final recommendations to the Provost/President
- Was instrumental in equipping classrooms in the male and female campuses with the latest video/audio equipment to hold classes simultaneously
- In charge of the annual evaluation process for faculty promotion at PI and final recommendations to the President
- Responsible of final approval of the teaching schedules of all Departments
- Responsible of summer teaching and research schedules and payments to the faculty
- In charge of ABET accreditation efforts for all degree programs at PI
- Chair of the Curriculum Committee; responsible for final approval for all curriculum changes.
- Chair of the Faculty and Technical Staff Recruitment Committee.
- Chair of the Academic Management Committee (equivalent to the Provost Council in the US)
- Chair, Institute Wide Award Committees, Research Award, Teaching Awards (Senior and Junior) and Service Awards
- Responsible together with the Provost of Strategic Planning for the Institute
- Led the efforts to organize the first Symposium in the Gulf region on "Engineering Ethics" held in April 2011 on PI campus.
- Led the efforts to organize the International Conference on Thermal Engineering Theory and Applications held in January 2009 on the PI campus.

5. **<u>As Dean of the College of Arts & Sciences at the Petroleum Institute</u>**

- Managed a budget of $20,000,000
- Supervised a faculty & staff body of 55 in the Departments of Mathematics, Chemistry, Physics, Humanities and Social Sciences, Communications and STEPS (Freshman Engineering Design Course)
- Hired a number of applied mathematicians to build a strong Applied Mathematics group focused on PDE's (partial differential equations) in the Mathematics Department
- PI Governing Board passed a resolution changing the name of the "Core Program" to "College of Arts & Sciences"
- The College of Arts & Sciences did not have its own degree programs and serves PI only by teaching the traditional freshman and sophomore classes to engineering students. However, under the leadership of Dr. Siginer plans are underway to establish degree programs in "Applied Mathematics" and "Applied Chemistry".
- Introduced the concept of research-oriented faculty in the College of Arts & Sciences and led the College on an increasingly research oriented path
- Worked to give an identity to the College Faculty and Staff through efforts to bring the standing of the Departments in the College on a par with the Engineering Departments
- Reduced the laboratory teaching duties of the faculty in the College of Arts & Sciences to use their time more efficiently and to provide more time for research and service for the faculty who were inclined to increase their research and service objectives
- Started the process and made considerable progress in building a Mathematics Department with a research reputation second to none in the region, in particular in petroleum related
- Sought support for establishing stand-alone degree programs in the College of Arts & Sciences
- Established a basis and support for launching MS Degree Programs in Applied Chemistry and Applied Mathematics
- MS Degree Program in Applied Chemistry application has been filed with the UAE Ministry of Education in October 2010
- Encouraged research related platforms in the College such as seminars and invited researchers, distinguished professors
- Established the College of Arts & Sciences Distinguished Lecture series
- Established College of Arts & Sciences Teaching, Research/Scholarship and Service Awards
- Supported the establishment of the Research Seminar series in the Math Department
- Started a twice a year College of A&S Newsletter
- Was instrumental in running the 6th UAE Math Day at PI in May 2008
- Was instrumental in bringing the International Conference on Thermal Engineering to PI in January 2009
- Was instrumental in initiating the "Math Tournament" organized by the faculty of PI Math Department for Glenelg High School in November 2008, which was held again in March 2009 as "Math, Chemistry and Physics Tournament"

6. **As Dean of the College of Engineering at Wichita State University**

- Worked with Kansas State Legislature, Kansas Board of Regents and the Administration of the University to secure funding for **$10,000,000** for ***a new engineering research building*** through a State backed bond issue. The funds have been appropriated for the fiscal year 2003 starting on 7/ 1/2002.
- A ***new Engineering building*** projected at **$25,000,000** became a top University wide priority in the Fall of 2002.
- Worked with Kansas State Legislature, the local Aviation Industry leadership (Boeing, Raytheon, Cessna, Bombardier, Learjet) and the Administration of the University to secure ***research equipment funding*** for **$13,000,000** from the State of Kansas. The funds have been appropriated for the fiscal year 2003 which starts on 7/ 1/ 2002.
- Served in a ***leadership role in a consortium*** of industrial companies led by
  - ***Boeing*** Aircraft Company and
  - ***Sprin***t Inc.

  among others and the three prominent Institutions of Higher Learning in Kansas,
  - ***Wichita State University***,
  - ***University of Kansas*** and
  - ***Kansas State University***.

  The Consortium's primary goal was to improve engineering education in Kansas through active collaboration between industrial and educational partners, to cater to the needs of industry, and to facilitate the implementation of ABET 2000 criteria and vision.
- ***All six programs*** in the College of Engineering ***have been accredited*** by the Engineering Accreditation Commission (EAC) of ABET starting 9/1/2002 including the ***two new programs*** "Computer Engineering" and "Manufacturing Engineering" ***reviewed for the first time*** in the Fall of 2001.
- ***Initiated collaborative efforts in research and teaching*** with the
  - College of Education,
  - College of Liberal Arts and Sciences and
  - School of Business at WSU.
- Established the,
  - ***Boeing Faculty Fellowships*** and the
  - ***Bombardier-Learjet Faculty Fellowships*** in the CoE

  supported by Boeing and Bombardier-Learjet respectively awarded to Faculty on a merit basis. Each fellowship carries a yearly stipend of **$5,000~10,000**.
- Established a ***Cisco Faculty Fellowship*** in the CoE supported by Cisco Inc. The fellowship carries a yearly stipend of **$15,000**.
- ***Cisco Inc. donated equipment worth $2 mil*** at the market prices to the networking laboratory of the Electrical and Computer Engineering Department.
- Undergraduate ***scholarship funds increased by 60%*** in my tenure.
- **Strong commitment to diversity** issues:
  - The ratio of female undergraduate students in the Department of Industrial and Manufacturing Engineering is 38%.
  - ***Appointment of the first ever woman Department Chair*** in the College of Engineering.
  - Almost 50% of the prestigious Wallace scholarship recipients in the College are female.
- ***Initiated international exchange programs*** for faculty and students with the University of Applied Sciences in Bingen, Germany and the Technical University of Ostrava in the Czech Republic.
- Developed plans and spearheaded the effort to implement wireless networking in the College and to give a ***wireless laptop to all the students*** in the College . ***Both initiatives are a first at Wichita State***, and have wider implications. In particular classroom delivery of the materials and teaching methodology in engineering classes will change drastically over a period of time to take full advantage of the technological initiatives.
- Was instrumental in launching ***the distance learning initiative*** at WSU led by CoE in partnership with Boeing Inc to build a global learning capability at Wichita State second to none to deliver courses for credit leading to both undergraduate and graduate degrees to Boeing facilities all over the World.
- As an important component of the "Global Learning Initiative" the concept and the design for ***a model "Global Learning Classroom"*** has been developed in the College of Engineering. The design takes full advantage of the latest teaching technology available both for distance and on campus learning: wireless networking, a wireless laptop for each student, interactive TV, Vacom Cyntiq writing tablets, smartboards.
- ***First Dean of the CoE to hold large alum meetings outside Wichita*** (in California twice) and first Dean of the CoE to meet with individual alumni in Washington DC , New York, San Diego, etc.
- Hired ***six new faculty*** from Princeton, Rice, University of Florida and Ohio State.
- The Wichita State University College of Engineering ***Advisory Board*** has been reconstituted from scratch with nationwide membership. The Board held its first meeting in the Spring of 2003. Before Dr. Siginer assumed his duties the College did not have a functioning Advisory Board.
- ***Led the efforts*** to prepare the ***College for the successful accreditation visit*** of a team of evaluators from the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET) on October 7-9,

2001 to evaluate all six programs in the College, the programs in Aerospace, Computer, Electrical, Industrial,Manufacturing and Mechanical Engineering

- Provided leadership, and initiated efforts which resulted in substantial ***enhancements*** in the ***research productivity*** of the Faculty of the College. Specifically, the CoE Faculty conducted $3.7 mil in research as measured by externally obtained research dollars in fiscal year 2000.
  - In FY 2001 ***research funding*** in the CoE was ***doubled*** to $6.5 mil.
  - The Faculty of the CoE conducts more than 95% of the research done through the National Institute for Aviation Research (NIAR), a Kansas Center of Excellence associated with the College of Engineering. The CoE and NIAR together obtained $9 mil and $12.3 mil in external research funding in FY 2000 and 2001, respectively. The CoE and NIAR together account for half of the productivity in externally obtained research and training grants at WSU in FY 2001: $12.3 mil out of a total $25.6. The same trends continued in the FY 2002 and 2003.
- CoE share of the total research awards obtained in the University increased: CoE and NIAR share of the total awards is 42% and 48.6% in FY 2000 and 2001, respectively.
- The number of ***graduate students increased*** substantially
  - Doctoral students by 25%
  - Master students by 60%
- Led by the example and obtained a ***3 year grant as PI*** for **$1, 453, 964** from the National Science Foundation entitled "Innovation in Aircraft Manufacturing through System-Wide Virtual Reality Models and Curriculum Integration" with several Co-PI's from the Department of Industrial and Manufacturing Engineering and ***several industrial partners***. The research makes extensive use of the recently established Center for Virtual Reality, and is conducted ***in partnership with Boeing Aircraft Company, Raytheon and Cessna Aircraft.***
- Persuaded the administration to assign a Foundation officer to the College to work with the Dean on fund raising issues.
- Managed a budget in excess of $10,000,000.
- ***Established the Jerry Gordon Distinguished Professorship*** in the Aerospace Department.
- ***Established a Regents Endowed Professorship*** in the same Department.
- Kansas BEST (Boosting Engineering, Science and Technology), a robotics competition organized by the Dean's Circle with the support of the College of Engineering
  - grew at a very fast pace from 15 competing High School teams to 28 teams in 2000-2002.
  - The winning top teams in Kansas BEST won two years in a row in 2001 and 2002 the first and second place at the national championships held at Texas A&M.
- The student chapter of the American Society for Quality (ASQ) became the most active and the most effective in ASQ in 2002. According to ASQ other student branches are now benchmarking Wichita State University.
- ASQ cited Dean ***Siginer's leadership, commitment, conscientiousness, and caring attitude*** towards the students in paving the way to this success at the National level.
- The student chapter of the Industrial and Manufacturing Engineering Department represented by female students scored an unprecedented success by obtaining first and second places in the regional competition and went on to win the first place at the National competition.
- ***Initiated the concept of "Research Professor"*** on annual contract and hired the first Research Professor in aircraft deicing.

7. **As Chair of the Mechanical Engineering Department at the New Jersey Institute of Technology**

- Directed the ***complete revision of the M.E. undergraduate curriculum*** in 1998-1999.
- The required number of semester based credits for B.S. degree in M.E. at NJIT
  - has been reduced from 136 to 128 without sacrificing the integrity of the curriculum and the quality of the education received by the students.
  - A number of courses were phased out and, new computer intensive, design experience oriented courses have been introduced to bring the curriculum in line with the drastically changed demands of the workplace, and the evolving needs of the students as well as the industry and also to better address the requirements of ABET 2000 criteria.
- Managed a yearly budget in excess of $2,500,000 between 1.1.1998 – 8.31.2000, and supervised 28 faculty and a support staff of 7 made up of 4 clerical and 3 technical personnel.
- The clerical and technical staff line-up has been rearranged, and ***two new positions*** , one at the clerical and the other at the technical level ***were created and personnel hired***.
- ***Five new faculty have been hired*** in M.E. at NJIT on 1998-1999.
- Undergraduate ***scholarship funds increased*** by 40% during my tenure.
- Initiated ***collaborative research efforts*** with the
  - Department of Chemical Engineering and
  - Department of Applied Mathematics
- ***Collaborative teaching and teaching paradigm efforts*** with the
  - Department of Physics
  - Department of Industrial Engineering
  - Department of Civil Engineering

- Department of Engineering Technology and
- Department of Chemical Engineering.

- Initiated and led to successful conclusion the drive for the appropriation of **$450,000** for the ***renovation and refurbishing of the undergraduate teaching laboratories*** to bring them to nothing less than the state-of-the-art level. $200,000 out of the total $450,000 has been appropriated in the fiscal year 2000 and the remaining amount is allocated to M.E. in the fiscal year 2001 starting on July 1, 2000.
- The research funding picture in M.E. has been drastically improved by identifying areas of strength and directions of research thrusts and focusing on them with an emphasis on and commitment to teamwork.
- Led the effort to obtain $500,000 funding from the Keck Foundation matched by NJIT for a nanotechnology laboratory.
- ***External research funding increased 3-fold*** under the supervision of Dr. Siginer from
  - $35K/faculty /year in the Spring of 1998 to $105/faculty/year in the Spring of 2000.
  - New research funding received in the academic year 1999-2000 alone exceeds $2,000,000.
- ***Archival publications of the faculty more than doubled*** from 0.75/faculty/year in the academic year 97-98 to 1.7/faculty/yearin 1999-2000.
- The number of ***graduate students increased*** substantially
  - Doctoral students by 25%
  - Master students by 60%
- ***The ME Advisory Board was rebuilt in 98-99 from two active members to 12*** actively engaged and committed members of senior executives of mid-cap companies headquartered in New Jersey.
- As a result of the intensive recruitment efforts initiated the precipitously falling **FTFTF** (first time full time freshmen) ***numbers showed a dramatic increase of 61% in the Fall of 1999***, from 31 in the Fall of 98 to 50 in the Fall of 1999.
- Supervised Departmental efforts for readiness for the ABET visit scheduled to take place in the Fall of 2001.
- With the help of the ME Advisory Board Committee Chair Mr. Robert Hemler, who provided the services of his company's architect free, plans were laid out in the Spring of 2000 to remodel parts of the Mechanical Engineering Center.
- Plans were developed to ***renovate*** the Mechanical Engineering Department administrative offices and funds were allocated for fiscal year 2001. Estimated cost **$200,000**. This effort has been initiated and led to fruition by Dr. Siginer.
- The **ASME** (American Society of Mechanical Engineers) Student Chapter at NJIT accomplished in the Spring of 2000 what no other Institution in ASME history has been able to do : ***win all four major competitions*** at the regional Student Conference in Region II (New Jersey & New York) competing against 19 Colleges. Those competitions included: the Old Guard Oral Presentation, the National Student Design Contest, the Old Guard Technical Poster Contest and the Ingersoll-Rand Contest.
- The **SAE** (Society of Automotive Engineers) Student Chapter at NJIT ***took first place*** in the Spring of 2000 and placed fourth in the Spring of 1999 in the Aeroplane Design Competition held in Deland, Florida. The 2000 competition was among 79 teams from world over.

ACCREDITATION EXPERIENCE
CURRICULUM DEVELOPMENT LEADERSHIP INITIATIVES AND FUNDING

- **Institutional accreditation of BIUST**: Is leading the efforts at the present to renew the Accreditation of the Institution with Governmental Agencies in Botswana
- **Accreditation of the individual degree programs**: Is leading the efforts at the present to accredit the degree programs with Governmental Agencies in Botswana (BQA: Botswana Qualifications Authority) and to accredit the degree programs in the College of Engineering & Technology with the South African Engineering Accreditation Commission (ECSA) and the Engineering Recognition Board (ERB) in Botswana
- **ABET** Accreditation - Supervised and led the effort at the Petroleum Institute (PI) to accredit all the engineering degree programs at PI – October 1, 09 – October 1, 10.
- **ABET PEV** - Program Evaluator Training, Denver, Colorado, June 9-10, 2007.
- **ABET/ASME** Mechanical Engineering Program Evaluator, appointed/selected November 2006.
- **ABET/ASEE** Engineering Mechanics Program Evaluator, appointed/selected November 2006.
- ***All*** the ***programs*** in the College of Engineering at Wichita State have been ***accredited*** by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET) based on the new EC-2000 criteria starting on 9/1/2002 including ***two new programs*** "Computer Engineering" and "Manufacturing Engineering" reviewed for the first time in the Fall of 2001.
- Serving as PI obtained **$100,000** Department Reform Planning Grant from the National Science Foundation in partnership with
  - the College of Education.
  - The proposal calls for ***innovative curriculum development*** in Industrial and Manufacturing Engineering.
- Serving as PI obtained a 3 year grant for **$1,453,964** from the National Science Foundation (NSF) entitled "Innovation in Aircraft Manufacturing through System-Wide Virtual Reality Models and Curriculum Integration" with
  - Co-PI's from the College of Engineering and the College of Education and several ***industrial partners***.

  The research makes extensive use of the recently established Center for Virtual Reality, and is conducted in partnership with

- Boeing Aircraft Company, Raytheon and Cessna Aircraft.
- A major component of the proposal calls for ***curriculum development, and for the integration into the curriculum of the results of the research.***

o Serving as PI obtained supplemental funding of **$30,375** for the above project for undergraduate research students from NSF

o Developed plans and spearheaded the effort
- to implement ***wireless networking*** in the College, and
- to subsidize a ***wireless laptop for all the students*** in the College.
- ***Both initiatives are a first at Wichita State and the second is a first in Kansas.***

and have wider implications. In particular classroom delivery of the materials and teaching engineering classes will change drastically over a period of time to take full advantage of the technological initiatives.

o Was instrumental in launching the distance learning initiative at WSU led by CoE in partnership with Boeing Inc to build a global learning capability at Wichita State to deliver courses for credit leading to both undergraduate and graduate degrees ***to Boeing facilities all over the World.***

o As an important component of the "Global Learning Initiative"
- the concept and the design for a model ***"Global Learning Classroom"*** has been developed in the College of Engineering. The design allows multiple configurations of the classroom seating and takes full advantage of the latest teaching technology available both for distance and on campus learning:
- wireless networking
- a wireless laptop for each student
- interactive TV
- Vacom Cyntiq writing tablets
- smartboards

o Developed ***three new graduate courses*** and ***one new senior undergraduate/graduate course*** at Wichita State University:
- Modeling of Engineering Systems (ME750)
- Transport Processes in Engineering (ME850)
- Mechanics of Nanomaterials (ME850)
- Introduction to Biofluids (ME650)

o At NJIT, serving as PI contributed to the effort to obtain a major ***education initiative grant*** from the State of New Jersey The five year project was funded by the State ***for* $1, 3 *million***. The project focused on working with
- selected feeder high schools and
- two-year technical school counselors and science and math teachers as well as administrators
- to modify the curricula at the participating schools to make technical fields more attractive to high school seniors.
- A consortium of eight participating high schools including magnet schools was formed.
- Consortium partners included a large number of companies in New Jersey to provide internships to high schoolers during summers for technical training.

o Several transfer agreements with two-year technical schools were signed.

o Directed the ***complete revision of the M.E. undergraduate curriculum*** in 1998-1999.

o The required number of semester based credits for B.S. degree in M.E. at NJIT has been reduced from 136 to 128 without sacrificing the integrity of the curriculum and the quality of the education received by the students.
- A number of courses were phased out and
- New computer intensive, design experience-oriented courses have been introduced

to bring the curriculum in line with the drastically changed demands of the workplace, and the evolving needs of our students and of the industry and also to better address the requirements of ABET 2000 criteria.

o Developed ***a new undergraduate fluid mechanics and heat transfer*** laboratory and introduced a new course (ME 415) entitled "Fluid Dynamics and Heat Transfer Laboratory" in the Mechanical Engineering Department at Auburn University.

o Developed ***five new graduate courses*** at Auburn University:
- Advanced Fluid Mechanics I (ME640),
- Advanced Fluid Mechanics II (ME641),
- Non-Newtonian Fluid Mechanics (ME645),
- Intermediate Fluid Mechanics (ME540) and
- Introduction to Continuum Mechanics (ME531).

o Completely revamped the Graduate Fluid Mechanics course sequence in the Department of Mechanical Engineering at Auburn University by introducing a new sequence essentially made up of these courses.

o Changed the undergraduate course sequence in fluid mechanics by modifying the syllabi and introducing one new course.

o Was heavily involved in ABET related matters and was instrumental in the complete ME curriculum revision in 1996.

o Student evaluations of Dr. Siginer in the classes taught by Dr. Siginer have been consistently excellent. The averages of the questions in the questionnaire which pertain to the performance of Dr. Siginer have been consistently high in any evaluation in graduate and undergraduate classes alike. Anonymous student comments as well as evaluation sheets are on file. As a result of this consistently high performance it was particularly gratifying to be awarded
- ***the Henry Charles Ratcliff Award*** (1983) for ***Excellence in Teaching*** at the University of Alabama

- ***the Birdsong Award*** (1990)
- ***the Alumni Award*** (1992) for ***Excellence in Teaching*** at Auburn University
- ***Burlington Faculty Achievement Award*** (1993).
- ***Runner-up Alumni Teaching Award*** (1990).

o Served as advisor to the Chi Chapter at Auburn of Pi Tau Sigma, the National Honorary Mechanical Engineering Society during the period 1/1/1994-12/31/1997.
- His tenure established a tradition of participating regularly in the National Convention held each year, and
- Establishment of two Pi Tau Sigma scholarships.

o Served as Chairman of the Committee developing the new curriculum to be implemented as part of the transition at Auburn from the quarter to the semester system, 1997.

PROFESSIONAL AFFILIATION

o American Society of Mechanical Engineers
o American Physical Society
o American Academy of Mechanics
o The Society of Rheology
o American Association for the Advancement of Science
o Sigma Xi, the Scientific Research Society
o American Society of Engineering Education
o New York Academy of Sciences
o Society of Engineering Science
o Pi Tau Sigma, National Honorary ME Society

AREAS OF RESEARCH INTEREST

o Analytical and numerical fluid mechanics
o Rheology of nonlinear materials
o Constitutive equations
o Flow in porous media
o Heat transfer with non-Newtonian fluids
o Numerical simulation non-Newtonian flows

o ***Title of PhD Thesis*** (1982): The Free Surface on a Simple Fluid Between Eccentric Cylinders Rotating at Different Speeds: ***Advisor – Professor Daniel D. Joseph, Regents Professor*** (deceased), University of Minnesota, Twin Cities.

o ***Title of ScD Thesis*** (1972): Hydromechanics of Partially Penetrating Wells: ***Advisor – Professor K. Cecen*** (deceased), Chair of Hydromechanics, Technical University of Istanbul.

RESEARCH SUMMARY

The present research thrust is concentrated in the area of non-Newtonian flows and continuum mechanics, and in particular in ***non-isothermal viscoelastic fluid flows*** and ***magnetorheological fluid flows***, and ***interfacial mechanics***. Contributions cover investigations of new flow configurations to be used as rheometers, methods to compute interface shapes, solutions to some fundamental problems in non-Newtonian fluid mechanics which predict for the first time trends shown by the existing data without contradicting some aspect of it such as flow rate enhancement in pulsating flow, development of a ***new method to invert Fredholm integral equations of the first*** kind when the data is experimental and the discovery of ***novel effects in porous media*** flow. The former uses a new minimax method to optimize the solution in a well-defined space to circumvent the non-uniqueness inherent in the inversion of the Fredholm equations of the first kind when the data is experimental and obtain a unique kernel of the Fredholm equation as the result of the inversion. The latter shows for the first time that in a porous medium made up of layers in series of different permeabilities with or without the same porosity the energy requirements for the same flow rate of a viscoelastic liquid is much larger when the flow direction coincides with the direction of the permeability gradient than if the flow proceeds in the opposite direction. The latest research effort focuses on the physics of the secondary flows and heat transfer with viscoelastic fluids in tubes of unconventional shape and magnetorheological dampers. A ***novel*** analytical ***method*** is developed which allows the ***computation of secondary flows*** of ***viscoelastic fluids*** in laminar longitudinal flow in straight ***conduits of arbitrary shape*** with symmetry such as triangular, rectangular, hexagonal and teardrop as well as asymmetry such as L shaped. The method gives insight to the structure of these flows when even numerical methods fail to yield reliable results. ***Heat transfer*** in laminar flow of viscoelastic fluids in non-circular tubes is investigated analytically for the first time in both steady flows and quasi-steady flows. The trends in heat transfer with non-affine viscoelastic fluids are determined by the ***change of type of the vorticity*** equation which partitions the flow field into hyperbolic and elliptic regions. A ***heat transfer asymptote*** in laminar flow of viscoelastic fluids in conduits of arbitrary shape has been discovered for the first time. Another area of contributions concerns the ***stability*** of some popular ***constitutive equations for viscoelastic fluids*** as well as the stability of some non-affine visco-elasto-plastic constitutive equations with yield stress. The novel concept of the inverse problem with time varying yield stress fluids is introduced to optimize the performance of ***magnetorheological*** dampers. Given a desired response function the inverse problem of determining the constitutive parameters of the yield stress fluid in the damper to produce the desired response is solved with ***Bingham*** type of fluids with time dependent yield stress and ***Hershel-Bulkley*** type of fluids with additional time dependent constitutive parameters. Another recent area of interest is ***resonance mitigation***. A novel concept is introduced to reduce the amplitude of the oscillation and to replace the earthquake initiated forcing of high amplitude peaks with a sinusoidal function of orders of magnitude smaller amplitude. Other areas of interest and recent contribution include ***flow and heat transfer over stretching sheets***, flow in ***corrugated tubes*** and in ***rough microtubes***. ***Heat Transfer in macro and micro tubes*** with both ***constitutively linear*** (Newtonian) and ***non-linear*** (viscoelastic fluids) in both ***circular and non-circular tubes*** is another area of focus. In particular ***heat transfer in the thermally developing region of tubes with dissipation and axial conduction accounted for with viscoelastic and pressure dependent viscosity Newtonian fluids*** is a focus of investigation.

- Refereed archival journal papers: 116
- Book chapters: 8
- Refereed full-length conference papers: 136
- Extended abstracts and abstracts with presentations: 61
- h index: 22 (Google Scholar)
- i10 index: 43 (Google Scholar)
- Invited seminars and lectures: 79
- Books authored: 5
- Books translated: 1
- Books edited: 39
- Editorial Boards of two highly respected Journals:
  Journal of Applied Mechanics and Journal of Fluids Engineering
- Special Editor & Guest Editor: Journal of Applied Mechanics (3 issues), Journal of Fluids Engineering (4 issues), Journal of Heat Transfer (1 issue), Journal of Non-Newtonian Fluid Mechanics (1 issue)
- Research funding: $4,700,000
- Served as advisor to a career total of 22 graduate students
- Served on the Committees of 26 graduate students

TEACHING EXPERIENCE

- Served as advisor to a total of thirteen M.S. and nine Ph.D. students.
- Served on the Committees of 26 graduate students.
- Advised a total of forty-eight undergraduate senior design projects between 1984-1996.
- Taught a career total of 20 different courses.
- Developed ***four new graduate courses*** at Wichita State University; listed in the previous section.
- Developed ***five new graduate courses*** at Auburn University; listed in the previous section.
- Developed ***a new undergraduate laboratory*** and the related course at Auburn University; listed in the previous section.

Courses taught

o Advanced Fluid Mechanics I (Grad)	o Non-Newtonian Fluid Mechanics (Grad)
o Advanced Fluid Mechanics II (Grad)	o Dynamics (Undergrad)
o Introduction to Continuum Mechanics (Grad)	o Statics (Undergrad)
o Intermediate Fluid Mechanics (Grad)	o Heat Transfer (Undergrad)
o Matrix and Vector Analysis (Grad)	o Thermodynamics (Undergrad)
o Fluid Transients (Grad)	o Viscous Fluid Mechanics (Grad)
o Fluid Mechanics Lab. (Undergrad)	o Introduction to Biofluids (Grad)
o Continuum Mechanics I (Grad)	o Mechanics of Nanomaterials (Grad)
o Continuum Mechanics II (Grad)	o Modeling of Engineering Systems (Grad)
o Strength of Materials (Undergrad)	o Transport Processes in Engineering (Grad)

INTERNATIONAL COLLABORATION INITIATIVES

International Initiatives at the University level

- ***Instrumental*** in establishing strategic working relationships in research and exchange of faculty and students both at the undergraduate and graduate levels with international academic partners of the Botswana International University of Science and Technology, Botswana (2014-Present)
  - National University of Ireland, Dublin, Ireland
  - Gazi University, Ankara, Turkey

- ***Instrumental*** in establishing strategic working relationships in research and exchange of students both at the undergraduate and graduate levels with international academic partners of the Petroleum Institute, United Arab Emirates (2008 – 2011 inclusive)
  - China University of Petroleum in Beijing, China
  - Johannes Kepler University in Linz, Austria
  - Technical University of Munich in Munich, Germany
  - Stanford University
  - University of Texas at Austin
  - University of Maryland College Park

- Rice University
- University of Minnesota

o ***Liaison*** with the industrial partners of the Petroleum Institute ADNOC, TOTAL, SHELL, BP, and JODCO (2008-2011)
- ADNOC (Abu Dhabi National Oil Company)
- TOTAL (French Oil Company)
- SHELL (Royal Dutch Oil Company)
- BP (British Petroleum)
- JODCO (Japanese Oil Company)
- PARTEX (Portuguese Oil Company)
- EXXON-MOBILE
- BOREALIS (A polymer based products manufacturing company)

o ***Instrumental in establishing*** the BOREALIS Chair-Endowed Professorship at the Petroleum Institute (2009-2010)
o ***Instrumental in establishing*** the SHELL Chair-Endowed Professorship at the Petroleum Institute (2009-2010)
o ***Instrumental in establishing*** the PARTEX Chair-Endowed Professorship at the Petroleum Institute (2009-2010)
o ***Initiated international exchange programs*** for faculty and students of the Wichita State University with the University of Applied Sciences in Bingen, Germany and the Technical University of Ostrava in the Czech Republic (2002)

o ***Organized*** the visit of a group of senior undergraduate students from the Universidad de Huelva and Universidad de Sevilla to the New Jersey Institute of Technology for the full length of the Spring semester 2000.
o ***Instrumental*** in the signing of an MOU by the University of Applied Sciences Bingen in Germany and WSU (Wichita State University) (2002)
o ***Organized*** a short course by NJIT faculty at La Serena University in Chile (2000)
o ***Organized*** the visit of a team of faculty from La Serena University to NJIT (1999)
o ***Instrumental*** in the signing of an MOU by the Universidad de La Serena in Chile and NJIT (New Jersey Institute of Technology) (1999)
o ***Organized*** the visit of the President (Rector) Dr. Jaime Pozo Cisternas of the La Serena University in Chile to NJIT (1999)
o ***Instrumental*** in organizing the visit of several teams of Chilean scientists to Auburn University (1992-1997)
o ***Instrumental*** in organizing the visit of the Russian Minister of Education Academician Ivan Obratzsov to Auburn University (1994)
o ***Organized*** the visit of several teams of Russian scientists from the Institute of Mechanics of the Russian Academy of Sciences to Auburn University (1992-1995)
o ***Instrumental*** in the signing of an MOU by the Russian Academy of Sciences and Auburn University (1993)
o ***Instrumenta***l in the signing of an MOU by the Universidad de Santiago de Chile and Auburn University (1992)

<u>International Research Collaboration Initiatives focused on my Research Area</u>

o ***Agence Nationale de la Recherche, Paris, France***:
- Collaborator: Professeur des Universités Patrick Bourgin & Professeur Mireille Brangé
- Period: 2017-Present
- Purpose: Research & Grant Proposal Evaluation
- Outcomes: Membership on Proposal Evaluation Panels

o ***Azerbaijan National Academy of Sciences, Institute of Mathematics and Mechanics, Baku, Azerbaijan***:
- Collaborator: Academician Panakhov, Professor Eldar Abbasov
- Period: 2015-Present
- Purpose: Research
- Outcomes: Refereed archival papers, mutual visiting appointments

o ***Czech Academy of Sciences, Mathematical Institute, Prague, Czech Republic***:
- Collaborator: Professor Jiři Neustupa
- Period: 2010-Present
- Purpose: Research
- Outcomes: Refereed archival papers, mutual visiting appointments

o ***Gaziantep University, Department of Mathematics, Gaziantep, Turkey* (*until* 2016)** & ***Al-Imam University, Riyadh, Saudi Arabia* (2016 *to present*)**:

- Collaborator: Professor Fahir T. Akyildiz
- Period: 2014- Present
- Purpose: Research, refereed archival papers

o ***Institut National des Sciences Appliquées (INSA) de Lyon- CETHIL – Université de Lyon, France :***
- Collaborators: Maître de Conférences Mohamed Boutaous and Professeur des Universités Patrick Bourgin
- Period: 2004-Present
- Purpose: Research
- Outcomes: Mutual visits and lectures to further ongoing research efforts; participation in PhD Committees and "Habilitation" Committees; refereed archival papers & Conference papers

o ***Petroleum Institute, United Arab Emirates:***
- Collaborator: Dr. Lyes Khezzar
- Period: 2008-2012
- Purpose: Research
- Outcomes: Refereed archival papers & Conference papers

o ***École Centrale de Lyon, France:***
- Collaborator: Directeur de l'Ecole Professor des Universités Patrick Bourgin
- Period: 2004-2008
- Purpose: Research
- Outcomes: Refereed Conference papers & Organization of Symposia

o ***École Polytechnique de l'Université de Nantes, France:***
- Collaborators: Professor des Universités Hassan Peerhossaini and Professor Ahmed Ould El Moctar
- Period: 2005-2008
- Purpose: Research
- Outcomes: Refereed archival papers & Conference papers; visiting professor appointment, summer 2005.

o ***Seconda Università Napoli, Aversa, Italy:***
- Collaborator: Professor Biagio Morrone
- Period: 2005-2008; 2016- Present
- Purpose: Research
- Outcomes: Refereed archival papers & Conference papers

o ***Ondokuz Mayis University, Samsun, Turkey:***
- Collaborator: Dr. Alper Dogruer & Dr. Talay Akyildiz
- Period: 2004- 2011
- Purpose: Research
- Outcomes: Refereed archival papers & Conference papers

o ***University of Applied Sciences Bingen (Fachhochschule Bingen), Germany:***
- Collaborator: Dr. Barbel Sorensen, President, Fachhochschule Bingen
- Period: 2002-2004
- Purpose: Exchange of Faculty and Students & Research
- Outcomes: A memorandum of understanding and a detailed agreement for the exchange of faculty and students for both educational and research purposes.

o ***Universidad de Santiago de Chile in Santiago, Chile:***
- Collaborator: Professor Mario Letelier Sotomayor
- Period: 1994-Present
- Purpose: Research
- Outcomes: 21 archival journal papers jointly authored
  2 book chapters jointly authored
  45 full length conference papers jointly authored
  3 FONDECYT (Chilean equivalent of the National Research Foundation) research

Research Grants over the periods: 1997-2000, 2001-2004 and 2012-2015
Memorandum of understanding
Continuing mutual yearly visits of long duration

- ***Universidad de Huelva in Huelva, and Universidad de Sevilla in Sevilla, Spain***:
  - Collaborator: Professor Crispulo Gallegos (Provost)
  - Period: Spring 2000
  - Purpose: Graduate student recruitment, and student exchange
    A group of 6 undergraduate students made up of ChemE and ME seniors from the Universidad de Huelva and Universidad de Sevilla visited the New Jersey Institute of Technology for the full length of the Spring semester 2000 , and were hosted by the ME Department.

- ***Universidad de la Serena in La Serena, Chile***:
  - Period: 1997- 2001
  - Purpose: Help the Universidad de la Serena to develop further their undergraduate and graduate programs and curricula in the CoE , in particular in ME ,and to increase the percentage of the faculty in the CoE holding Ph.D.
  - Outcomes: The Rector of the Universidad de la Serena Jaime Pozo Cisternas visited the New Jersey Institute of Technology in February 1999 and signed a memorandum of understanding.
    Professors and senior students from the ME Department at the Universidad de la Serena visited NJIT in the spring semester of 2000.
    An ME professor from NJIT took up residence at the Universidad de la Serena in August 2000 to teach a compressed course and a short course

- ***University of the West Indies in St.Augustine, Trinidad-Tobago :***
  - Collaborator: Professor Harold Ramkissoon
  - Period: 1996-1998
  - Purpose: Research & lectures
  - Outcomes: Mutual short visits and lectures; served as World Bank lecturer at the University of the West-Indies in the Spring of 1997

- ***Institute of Applied Mechanics of the Russian Academy of Sciences in Moscow, Russia:***
  - Collaborator: Professor Yuri Yanovsky – Deputy Director of the Institute of Applied Mechanics of RAS
  - Period: 1991-1995
  - Purpose: Research
  - Outcomes: 3 archival journal papers jointly authored
    1 book chapter jointly authored
    4 full length conference papers jointly authored
    1 co-edited book
    1 international symposium organized in Moscow
    1 NATO Research Grant
    A memorandum of understanding
    Several mutual visits by groups of scientists of several weeks in duration

PUBLICATIONS

Full texts available online at: www.researchgate.net ; www.academia.edu

Books

- ***Siginer, D.A.***, Heat Transfer with Rheologically Complex Fluids in Conduits and Enclosures, *Monograph*, *forthcoming*, **Wiley**, 2021.
- ***Siginer, D.A.***, Heat Transfer with Non-Colloidal Suspensions in Conduits and Enclosures, *Monograph*, *forthcoming*, **Wiley**, 2021.
- ***Siginer, D.A.***, Developments in Drag Reduction, *Monograph*, *forthcoming*, **Springer Inc.**, New York, NY, 2020.
- ***Siginer, D.A.***, Dynamics of Tube Flow of Non-Colloidal Suspensions, *Monograph*, *forthcoming*, **Springer Inc.**, New York, NY, 2020.
- ***Siginer, D.A.***, Developments in Tube Flow of Complex Fluids, *Monograph*, **ISBN: 978-3-319-02425-7** (hardcover), **978-3-319-02426-4** (eBook), **Springer Inc.**, New York, NY, 2015.
- ***Siginer, D.A.,*** Stability of Non-linear Constitutive Formulations for Viscoelastic Fluids, *Monograph*, **ISBN: 978-3-319-02416-5** (hardcover), **978-3-319-02417-2** (eBook)**, Springer Inc.,** New York, NY, 2014.
- ***Siginer, D.A.,*** Handbook of Hydraulics, translated from French into Turkish, 520 pages, ***Technical University of Istanbul Press,*** 1970.
- ***Siginer, D.A.***, Hydromechanics of Partially Penetrating Wells, 113 pages, ***Technical University of Istanbul Press***, 1972.

Book Chapters

- ***Bakhtiyarov, S.I.,*** and ***Siginer, D.A.,*** Rheoprocessing of Semisolid Aluminum Alloys, chapter in the book ***"Encyclopedia of Aluminum and its Alloys***" (Metals and Alloys Encyclopedia Collection), Editors: George E. Totten, Murat Tiryakioglu, Olaf Kesslerp. 2395-2405, **CRC Press**, **Taylor & Francis Group**, New York, NY, published November 16, 2018. **ISBN 9781466510807; DOI: 10.1201/9781351045636-140000239**
- ***Bakhtiyarov, S.I., Overfelt, R.A.*** and ***Siginer, D.A.,*** Progress in an Industrial Application of Fluidized Beds: Advances in the Sand Core Making Process, chapter in the book ***"Transport Processes in Bubbles, Drops and Particles",*** **ISBN 1-56032-906-8**, p.187-222, **Taylor & Francis Inc.**, New York, NY, 2002. **DOI: 10.13140/RG.2.1.4908.3760**
- ***Letelier, M. F.,*** and ***Siginer, D.A.,*** Secondary Flows in Tubes of Arbitrary Shape, chapter in the book "***Advances in the Flow & Rheology of Non-Newtonian Fluids, Part A***", p. 179-208**,** editors Siginer, D.A., DeKee, D. and Chhabra, R.P., **Elsevier Science BV,** Amsterdam, the Netherlands, 1999. **DOI: 10.1016/S0169-3107(99)80031-8,**
- ***Bakhtiyarov, S.I.*** and ***Siginer, D.A.,*** A Note on the Laminar Core-Annular Flow of Two Immiscible Fluids in a Horizontal Tube, chapter in the book "***Liquid-Liquid Two Phase Flow and Transport Phenomena***", editor D. M. Maron, **ISBN 1-56700-111-4**, p. 107-111, **Begell House Inc**., New York, NY 1998; ICHMT Digital Library, **DOI: 10.1615/ICHMT.1997.IntSymLiqTwoPhaseFlowTranspPhen.110**
- ***Siginer, D.A., Yunling Li*** and ***Jacks, T.E.,*** Marangoni and Buoyancy Driven Flows of Non-Newtonian Fluids in Layered Fluid Systems, chapter in the book ***"Liquid-Liquid Two Phase Flow and Transport Phenomena",*** editor D.M. Maron, **ISBN 1-56700-111-4**, p. 165-176, **Begell House Inc**., New York, NY, 1998; ICHMT Digital Library, **DOI: 10.1615/ICHMT.1997.IntSymLiqTwoPhaseFlowTranspPhen.170**
- ***Siginer, D.A.*** and ***Korobko, E.,*** Electrorheological Fluids & Flows, chapter in ***"1997 Mc-Graw Hill Yearbook of Science & Technology"***, **ISBN 045410-8**, p. 191-194, **McGraw Hill Inc.**, 1996 **DOI: 10.13140/RG.2.1.4326.6169**
- ***Siginer, D.A.***, ***Basistov, Y.A.*** and ***Yanovsky, Y.G.,*** Minimax Method and Relaxation Spectra in Rheometry, in ***Advances in Structured and Heterogeneous Continua***, **ISBN No. 0-89864-071-7**, p. 277-286, **Allerton Press Inc.,** N. Y. , N.Y., 1994.
- ***Siginer, D.A.*** and ***Valenzuela-Rendón, A***., On the Free Convection and Instability of the Fluids of Grade Three, in ***Advances in Structured and Heterogeneous Continua***, **ISBN No. 0-89864-071-7**, p. 195-212, **Allerton Press Inc.,** New York, N.Y., 1994**.**
- ***Siginer, D.A.,*** On the Parallel and Orthogonal Superposition of Pure and Oscillatory Shear Flows of Simple Fluids, chapter in the book ***"Recent Developments in Structured Continua II"***, D. DeKee and P.N. Kaloni editors, Vol. II, p. 158-181, **Longman Scientific & Technical,** Pitman Research Notes in Mathematics Series; **Co-published in the United States with John Wiley & Sons, Inc., New York**, 1990. British Library ISBN: 0-582-05823-6; Library of Congress **ISBN Vol. II: 0-470-21587-9**; **DOI: 10.13140/RG.2.1.2876.2480**

Refereed Journal Papers

Full texts available online at: **www.researchgate.net ; www.academia.edu**

DRAFTS

- ***Boutaous, M., Siginer, D.A.,*** Heat and Mass Transfer with Rheologically Complex Fluids in Tubes: Inelastic, Power-Law Fluids, ***Applied Mechanics Reviews***, (Impact factor 2017: 7.848; 5-year impact factor: 3.928), 2020.
- ***Letelier, M. F., Siginer, D.A., Barrera, C., Gonzalez, A.*** and ***Stockle, J.,*** Heat and Mass Transfer with Rheologically Complex Fluids in Tubes: Non-Linear Viscoelastic Fluids, ***Applied Mechanics Reviews***, (Impact factor 2017: 7.848; 5-year impact factor: 3.928), 2020.
- ***Siginer, D.A***. and ***Boutaous, M.,*** Normal Stress Driven Motions of Rheologically Complex and Newtonian Fluids in Tubes, submitted, ***Applied Mechanics Reviews***, (Impact factor 2017: 7.848; 5-year impact factor: 3.928), 2020.
- ***Siginer, D.A.*** and ***Letelier, M. F.***, Unsteady Non-Viscometric Flows in Tubes Driven by Rotational Boundary Waves; Part II: Transversal Field, ***Int. J. Engineering Science***, 2019.
- ***Akyildiz, F. T***. and ***Siginer, D.A***., Spectral Approximation for an Oldroyd Liquid Draining Down a Porous Vertical Surface, submitted, ***Int. J. Numerical methods in Fluids*** (2013 Impact factor: 1.329), 2020
- ***Akyildiz, F. T***. and ***Siginer, D.A***., Drainage of Thin Viscoelastic Films, ***Acta Mechanica*** (2014 Impact factor: 1.465), 2020
- ***Karakus, A., Siginer, D.A.***, and ***Akyildiz, M. T.***, Structural Stability of the Modified Darcy Equations for Non-Isothermal Flow in Porous Media, ***Proc. Roy. Soc. London A***: Mathematical, Physical and Engineering Sciences, 2020
- ***Letelier, M.F., Siginer, D.A.*** and ***Stockle, J. S.,*** On the Magnetohydrodynamic Flow in Tubes of Arbitrary Contour, ***J. Fluids Engineering- Transactions of the ASME***, (Impact factor 2017: 1.915), 2020
- ***Letelier, M.F., Siginer, D.A.*** and ***Stockle, J. S.,*** On the Flow Control of Functional Fluids with Yield Stress in Conduits, ***J. Fluids Engineering- Transactions of the ASME***, (Impact factor 2017: 1.915), 2020
- ***Letelier, M.F., Siginer, D.A.*** and ***Stockle, J. S.,*** Tube Flow of Hershel-Bulkley Fluid with Time Variable Parameters, ***J. Fluids Engineering- Transactions of the ASME***, (Impact factor 2017: 1.915), 2020
- ***Letelier, M.F., Siginer, D.A.*** and ***Stockle, J. S.,*** Magnetically Induced Complex Pressure Pulses in Micro-channels, ***J. Fluids Engineering- Transactions of the ASME***, (Impact factor 2017: 1.915), 2020
- ***Akyildiz, F. T.***, and ***Siginer, D.A.***, Heat Transfer Enhancement in Corrugated Pipes with Viscous Dissipation, ***Int. J. Heat Mass Transfer***, (2015 Impact factor: 2.857; 5-year impact factor: 2.980), 2020
- ***Akyildiz, F. T***. and ***Siginer, D.A.***, A Low Dimensional Approach for Natural Convection in an Inclined Square Cavity Filled with a Porous Medium, ***Meccanica***, (2014 Impact factor: 1.949), 2020.
- ***Siginer, D.A***. and ***Morrone, B.,*** Flow and Heat Transfer in a Differentially Heated Three-Dimensional Inclined Box, Part I: Newtonian Fluids, ***Int. J. Heat Fluid Flow***, (Impact factor 2015: 1.737; 5-year impact factor: 2.112), 2020.
- ***Siginer, D.A***. and ***Morrone, B.,*** Flow and Heat Transfer in a Differentially Heated Three-Dimensional Inclined Box, Part II: Power Law Fluids, ***Int. J. Heat Fluid Flow***, (Impact factor 2015: 1.737; 5-year impact factor: 2.112), 2020.
- ***Panakhov, G. M., Abbasov, E. M., Bakhtiyarov, S. I.*** and ***Siginer, D.A***., A Note on the Two-Phase Gas-Oil Flow in a Pipeline, ***Energy Resources Technology - Transactions of the ASME***, (Impact factor 2017: 2.197), 2020
- ***Bakhtiyarov, S. I., Kutelia, E. R.,*** and ***Siginer, D.A***., Thermometric Studies of a Class of New Nanolubricants, ***Tribology International***, (Impact factor 2015: 2.259; 5-year impact factor: 2.352), 2020
- ***Bakhtiyarov, S.I., Siginer, D.A., Letelier, M.F.***, ***Barrera, C***. and ***Boutaous, M.,*** Rheoprocessing of Semisolid Metals and Alloys, ***Applied Mechanics Reviews***, (Impact factor 2016: 7.921), 2020
- ***Boutaous, M., Refaa, Z.*** and ***Siginer***, ***D. A.***, Analysis of the Effect of Pressure on the Crystallization Kinetics of Polymers During Processing, ***Int. J. Material Forming***, (Impact factor 2015: 1.978), 2020
- ***Akyildiz, F. T.***, ***Siginer, D.A.***, and ***Letelier, M. F.,*** Thermally Developing Heat Transfer in Tubes of Arbitrary Cross Section Including Axial Conduction and Viscous Dissipation**, *Int. J. Heat and Mass Transfer*** (2018 Impact factor: 3.891; 5-year impact factor: 3.950), 2020.

2020

- ***Letelier, M.F.***, ***Siginer, D.A.***, Inverse Modeling of Magnetorheological Dampers with Time Varying Fluid Properties and Resonance Control, submitted, ***Journal of Applied Mathematics and Mechanics - Zeitschrift für Angewandte Mathematik und Mechanik*** **(ZAMM)**, (2017 Impact factor: 1.296), 2020.
- ***Benayad A., Boutaous M., El Otmani R., El Hakimi A.***, ***Touache A., Kamal M., Derdouri S., Refaa Z.,*** and ***Siginer, D.A.***, Simulation of Crystallization Evolution of Polyoxymethylene During Microinjection Molding Cycle, ***Polymers for Advanced Technologies***, (2018 IF: 2.162), published online, December 4, 2019; Vol. 31, Issue 4, pp. 838-852, April 2020 **https://doi.org/10.1002/pat.4819**
- ***Letelier, M.F.***, ***Barrera, C***., ***Siginer, D.A., González, A.*** and ***Boutaous, M.***, Forced Convection in Non-Circular Tubes with Non-linear Viscoelastic Fluids Including Viscous Dissipation, ***Int. J. Thermal Sciences***, (2019 IF: 3.488; 5-year IF: 3.623), published online, 26 December 2019; Vol. 150, April 2020, article 106122. **https://doi.org/10.1016/j.ijthermalsci.2019.106122**
- ***Liu, X***., ***Boutaous, M., Xin, S.*** and ***Siginer***, ***D. A.***, Balling Phenomenon in Metallic Laser Based 3D Printing Process, accepted, ***Int. J. Thermal Sciences***, (2019 IF: 3.488; 5-year IF: 3.623), 2020

- ***Akyildiz, F. T.***, and ***Siginer, D.A.***, Start-up Electroosmotic Flow of Generalized Maxwell Fluids in Triangular Microducts, submitted, ***J. Fluids Engineering-Transactions of the ASME***, (2018 IF: 1.915), 2020
- ***Siginer, D.A., Letelier, M.F., Jacobs, P., Aguirre, A.*** and ***Boutaous, M.***, Forced Convection of Elastoviscoplastic Fluids in Non-Circular Tubes, ***Chemical Engineering Science*** (2018 Impact Factor: 3.372; 5-Year Impact Factor: 3.366), published online October 26, 2019; Vol. 213, 23 February 2020, article 115318 **https://doi.org/10.1016/j.ces.2019.115318**

2019

- ***Letelier, M.F.***, ***Siginer, D.A.***, ***Almendra, D.***, and ***Stockle, J.,*** Resonance in Laminar Pipe Flow of Non-Linear Viscoelastic Fluids, ***Int. J. Non-Linear Mech.***, (2018 Impact factor: 2.225; 5-year impact factor: 2.287), Vol. 115, pp. 53-60, October 2019 **https://doi.org/10.1016/j.ijnonlinmec.2019.03.015**
- ***Siginer, D.A., Akyildiz, F. T.*** and ***Boutaous, M.***, Unsteady Gaseous Poiseuille Slip Flow in Rectangular Microchannels, ***J. Brazilian Society of Mechanical Sciences and Engineering*** (2018 Impact Factor: 1.743), First online 14 June 2019, Vol. 41:286, Issue 7, July 2019, **https://doi.org/10.1007/s40430-019-1723-x**
- ***Siginer, D.A.***, ***Letelier, M.F.***, ***Barrera, C.***, and ***González, A.***, Transversal Field and Heat Transfer in the Flow of Non-linear Viscoelastic Fluids in Tear-Drop Shaped Tubes Including Viscous Dissipation, ***Int. J. Thermal Sciences***, (2016 Impact factor: 3.615; 5-year impact factor: 4.041), **https://doi.org/10.1016/j.ijthermalsci.2019.03.019**, Vol. 141, July 2019, pp. 150-159, 2019.
- ***Akyildiz, F. T.***, and ***Siginer, D.A.***, Laminar Forced Convection in Transversely Corrugated Tubes, ***J. Heat Transfer-Transactions of the ASME***, (2017 Impact factor: 1.602), 141(3): pp. 031702-031702-10, 2019. **https://doi.org/10.1115/1.4042331**
- ***Akyildiz, F. T.***, ***Siginer, D.A.*** and ***Boutaous, M.,*** Unsteady Flow of Power Law Fluids with Wall Slip in Microducts, ***J. Fluids Engineering-Transactions of the ASME***, (2017 Impact factor: 1.915), 141(8), pp 081107-081107-6 (published online Feb 19, 2019) 2019. **https://doi.org/10.1115/1.4042558**
- ***Neustupa, J.*** and ***Siginer, D.A.***, Structure of the Set of Stationary Solutions to the Equations of Motion of a Class of Generalized Newtonian Fluids, ***Nonlinear Analysis: Real World Applications***, (2017 Impact factor: 2.012; 5-Year Impact Factor: 2.317), available online 13 August 2018, Vol. 45, Issue 2 (February 2019) pp. 704-720, 2019. **https://doi.org/10.1016/j.nonrwa.2018.07.029**

2018

- ***Refaa, Z.***, ***Boutaous, M.*** and ***Siginer, D. A.***, PLA Crystallization Kinetics and Morphology Development, ***Int. Polymer Processing J. of the Polymer Processing Society***, (2017 Impact factor: 0.634), Vol. 33, No. 3, pp. 336-344, 2018. **https://doi.org/10.3139/217.3525 ; ISSN 0930-777X**
- ***Letelier, M.F.***, ***Barrera, C.***, ***González, A.*** and ***Siginer, D.A.,*** Elastoviscoplastic Fluid Flow in Non-Circular Tubes: Transversal Field and Interplay of Elasticity and Plasticity, ***Applied Mathematical Modeling***, (2016 Impact factor: 2.350; 5-year impact factor: 2.768), published online October 16, 2017; Vol. 54, pp. 768–781, 2018, **https://doi.org/10.1016/j.apm.2017.10.008**
- ***Siginer, D.A.***, ***Akyildiz, F. T.*** and ***Boutaous, M.,*** Thermally Developing Heat Transfer for Newtonian and Non-Linear Viscoelastic Fluids with Pressure Dependent Viscosity Including Viscous Dissipation, ***J. Heat Transfer-Transactions of the ASME***, (2016 Impact factor: 1.866), Vol. 140, Issue 10, pp. 101701-1/101701-7, 2018. **https://doi.org/10.1115/1.4040153**
- ***Letelier, M.F.***, ***Barrera, C.***, ***Siginer, D.A., Stockle, J.***, ***Godoy, F.*** and ***Rosas, C.***, Bingham Fluids: Deformation and Energy Dissipation in Triangular Cross Section Tube Flow, ***Meccanica,*** (Impact factor 2016: 2.196), published online June 30, 2017, Vol. 53, Issue 1–2, pp 161–173, 2018 **https://doi.org/10.1007/s11012-017-0716-z**

2017

- ***Liu, X.***, ***Boutaous, M., Xin, S.*** and ***Siginer, D. A.***, Multiphysical Modeling of the Heating Phase in the Polymer Powder Bed Fusion Process, ***Additive Manufacturing***, (2015 Impact factor: 6.38), Vol. 18, pp. 121–135, 2017. **https://doi.org/10.1016/j.addma.2017.10.006**
- ***Liu, X., Boutaous, M., Xin, S.*** and ***Siginer, D.A.***, Numerical Modeling of the Heating Phase of the Selective Laser Sintering Process, ***Int. J. Thermal Sciences*** (2016 Impact factor: 3.615; 5-year impact factor: 4.041), Vol. 120, pp. 50-62, 2017. **https://doi.org/10.1016/j.ijthermalsci.2017.05.017**
- ***Akyildiz, F. T.*** and ***Siginer, D.A.***, Exact Solution for Forced Convection Gaseous Slip Flow in Corrugated Microtubes, ***Int. J. Heat Mass Transfer***, (2016 Impact factor: 3.458; 5-year impact factor: 3.552), 112 (Sept.), 553–558, 2017. **http://dx.doi.org/10.1016/j.ijheatmasstransfer.2017.01.101**
- ***Letelier, M.F.***, ***Hinojosa, C. B.***, and ***Siginer, D.A.***, Analytical solution of the Graetz Problem for non-linear viscoelastic fluids in tubes of arbitrary cross-section, ***Int. J. Thermal Sciences,*** (2016 Impact factor: 3.615; 5-year impact factor: 4.041), published online October 2016; Vol. 111C, pp. 369-378, 2017 **https://doi.org/10.1016/j.ijthermalsci.2016.05.034**
- ***Letelier, M.F.***, ***Siginer, D.A.***, and ***González, A.***, Elasto-Viscoplastic Fluid Flow in Tubes of Arbitrary Cross-Section, ***Applied Mathematical Modeling***, (2016 Impact factor: 2.350; 5-year impact factor: 2.768), published online 25 Jan., 2017, Vol. 46, p. 572–580, 2017. **https://doi.org/10.1016/j.apm.2017.01.058**
- ***Letelier, M.F.***, ***Siginer, D.A.*** and ***Hinojosa, C. B.,*** On the Physics of Viscoplastic Fluid Flow in Non-Circular Tubes, ***Int. J. Non-Linear Mech.***, (2016 Impact factor: 2.074; 5-year impact factor: 2.127), published online October 2016, Vol. 88, pp. 1–10, 2017. **https://doi.org/10.1016/j.ijnonlinmec.2016.09.012**

- ***Refaa, Z., Boutaous, M., Xin, S.*** and ***Siginer, D.A.***, Thermophysical Analysis and Modeling of the Crystallization and Melting Behavior of PLA with Talc: Kinetics and Crystalline Structures, ***J. Thermal Analysis and Calorimetry*** (2014 Impact factor: 2.042; 2015 Impact factor: 1.781), published online 11.26.2016, Vol. 128, Issue 2, pp. 687–698, May 2017 **https://doi.org/10.1007/s10973-016-5961-1**

2016

- ***Saghir, Z., Siginer, D.A.,*** and ***Kulacki, F.***, Special Section on the International Conference on Thermal Engineering and Applications, ***ASME J. Heat Transfer***, Vol. 138, No. 9, p. 090301, 2016, **https://doi.org/10.1115/1.4033324**
- ***Letelier, M.F.***, ***Siginer, D.A.*** and ***Stockle, J. S.,*** Resonance Modeling and Control via Magnetorheological Dampers, ***Journal of Applied Mathematics and Physics- Zeitschrift für Angewandte Mathematik und Physik*** **(ZAMP)**, (2015 Impact factor: 1.560), 2016, **https://doi.org/10.1007/s00033-016-0674-7**, Vol. 67, No. 4 (August), p. 1-7, 2016. Download from **http://rdcu.be/j7Ll**
- ***Akyildiz, F. T.*** and ***Siginer, D.A.***, A Note on the Steady Flow of Newtonian Fluids with Pressure Dependent Viscosity in a Rectangular Duct, PII: S0020-7225(16)30035-0; **https://doi.org/10.1016/j.ijengsci.2016.04.004** , ***Int. J. Engineering Sci.***, (2015 Impact factor: 3.165; 5-year impact factor: 2.884), Vol. 104, No. 7 (July), p. 1- 4, 2016.
- ***Akyildiz, F. T., Siginer, D.A., Vajravelu, K.*** and ***Van Gorder, R. A.***, Erratum to: "Natural Convection Heat Transfer of a Viscous Fluid in a Vertical Porous Channel", **https://doi.org/10.1007/s10665-016-9844-z** , ***J. Engineering Mathematics***, (Impact factor 2010: 0.799), Vol. 96, No.1, 2016.
- ***Barrera, C.***, ***Letelier, M.F.***, ***Siginer, D.A.***, and ***Stockle, J.,*** Graetz Problem in Tubes of Arbitrary Cross-section, **https://doi.org/10.1007/s00707-015-1540-y** **,** ***Acta Mechanica,*** (2014 Impact factor: 1.465), published online January 14, 2016, Vol. 227, No. 1, p. 1-8, January 2016.

2015

- ***Mohammed, A., Siginer, D.A.***, and ***Akyildiz, F. T.***, Eigenvalues of Holomorphic Functions for the Third Boundary Condition with General Coefficient, ***Quarterly of Applied Mathematics***, Vol. LXXIII (73), No. 3, pp. 553-574, 2015. **Online ISSN 1552-4485; Print ISSN 0033-569X**
- ***Neustupa, J.*** and ***Siginer, D.A.***, Existence and Structure of Steady Solutions of the Bénard Problem in a Two-Dimensional Quadrangular Cavity, ***Non-Linear Analysis Series A: Theory, Methods & Applications*** (2013 Impact factor: 1.612; 5 year impact factor: 1.755), Vol. 123-124, p. 68-88, 2015**. https://doi.org/10.1016/j.na.2015.03.024**

2012

- ***Filali, A., Lyes, K., Siginer, D.A.*** and ***Nemouchi, Z.***, Graetz Problem with Non-Linear Viscoelastic Fluids in Non-Circular Tubes, ***Int. J. Thermal Sciences***, (Impact factor 2010: 1.667; 2011: 2.142; 5-year impact factor: 2.390), **http://dx.doi.org/10.1016/j.ijthermalsci.2012.06.011**, published online, July 21, 2012; Vol. 61, pp. 50-60, October 2012.
- ***Lyes, K., Siginer, D.A.***, and ***Vinogradov, I.***, Natural Convection of Power-Law Fluids in Inclined Cavities, ***Int. J. Thermal Sciences***, (Impact factor 2010: 1.667; 2011: 2.142; 5-year impact factor: 2.390), Vol. 53, p. 8-17, March 2012. **https://doi.org/10.1016/j.ijthermalsci.2011.10.020**
- ***Akyildiz, F. T.***, ***Siginer, D.A.***, and ***H. Kaplan***, Spectral Approximation for a Non-linear Partial Differential Equation Arising in Thin Film Flow of a Non-Newtonian Fluid, ***Communications in Non-linear Science and Numerical Simulation***, (Impact factor 2010: 2.697), Vol. 17, No. 1, p. 35-44, 2012. **https://doi.org/10.1016/j.cnsns.2011.04.009**
- ***Siginer, D.A.***, Isothermal Tube Flow of Non-Linear Viscoelastic Fluids, Part I: Constitutive Instabilities and the Longitudinal Field, ***Int. J. Engineering Science***, (Impact factor 2011: 1.194; 2012: 1.691; 2013: 2.291), **http://dx.doi.org/10.1016/j.ijengsci.2011.10.005**, published online, April 9, 2012; Vol. 56, p. 111-126, July 2012.
- ***Akyildiz, F. T.***, ***Neustupa, J.*** and ***Siginer, D.A.***, A Steady Weak Solution of the Equations of Motion of a Viscous Incompressible Fluid through Porous Media in a Domain with a Non–Compact Boundary, ***Acta Applicandae Mathematicae***, (Impact factor 2010: 0.979), **http://dx.doi.org/10.1007/s10440-011-9659-x** , published online, December 14, 2011; Vol. 119, No. 1, p. 23-42, 2012
- ***Akyildiz, F. T.*** and ***Siginer, D.A.***, Discussion on "Effects of Corrugated Roughness on Developed Laminar Flow in Microtubes", ***J. Fluids Engineering- Transactions of the ASME***, (Impact factor 2011: 0.747), Vol. 134, No. 8, p. 084502, 2012. **http://doi.org/10.1115/1.4006746**
- ***Letelier, M.F.***, ***Siginer, D.A.*** and ***Stockle, J. S.,*** Erratum to: "Laminar flow of non-linear viscoelastic fluids in straight tubes of arbitrary contour" [Int. J. Heat Mass Transfer 54 (2011) 2188–2202], ***Int. J. Heat Mass Transfer***, (Impact factor 2012: 2.407; 5-year impact factor: 2.913), **http://doi.org/10.1016/j.ijheatmasstransfer.2011.07.034**, Vol. 55, No. 1, p. 2731–2745, 2012.
- ***Akyildiz, F. T.*** and ***Siginer, D.A.***, Spectral Approximation for Drainage of an Elastico-Viscous Liquid and Error Analysis, ***Numerical Methods for Partial Differential Equations*** (Impact factor 2010: 1.427), **http://dx.doi.org/10.1002/num.20630**, published online, October 25, 2010; Vol. 28, Issue 2, p. 492-505, 2012.
- ***Lyes, K.*** and ***Siginer, D.A.*** and ***Vinogradov, I.***, Natural Convection in Inclined Two-Dimensional Rectangular Cavities, ***Heat and Mass Transfer*** (***Wärme-und Stoffübertragung***), (Impact factor 2009: 0.786; impact factor 2010: 0.667), **http://dx.doi.org/ 10.1007/s00231-011-0876-7**, published online August 5, 2011; Vol. 48, p. 227-239, 2012.
- ***Akyildiz, F. T., Siginer, D.A., Vajravelu, K.*** and ***Van Gorder, R. A.***, Natural Convection Heat Transfer of a Viscous Fluid in a Vertical Porous Channel, ***J. Engineering Mathematics***, (Impact factor 2010: 0.799), **http://dx.doi.org/ 10.1007/s10665-011-9489-x**, published online September 8, 2011; Vol. 74, No.1, p. 61-71, 2012.

2011

- ***Siginer, D.A.***, Isothermal Tube Flow of Non-Linear Viscoelastic Fluids, Part II: Transversal Field, ***Int. J. Engineering Science***, (Impact factor 2011: 1.194; 2012: 1.691; 2013: 2.291), Vol. 49, No. 6, p. 443-465, 2011. **http://doi.org/10.1016/j.ijengsci.2010.11.001**
- ***Akyildiz, F. T.*** and ***Siginer, D.A.***, Fully Developed Laminar Slip and No-Slip Flow in Rough Microtubes, ***Journal of Applied Mathematics and Physics - Zeitschrift für Angewandte Mathematik und Physik*** (**ZAMP**), (Impact factor 2010: 1.29), Vol. 62, No. 4, p. 741-748, 2011. **http://doi.org/10.1007/s00033-011-0144-1**
- ***Vinogradov, I., Lyes, K.,*** and ***Siginer, D.A.***, Heat Transfer of Non-Newtonian Dilatant Power Law Fluids in Square and Rectangular Cavities, ***J. Applied Fluid Mech.***, Vol. 4, No.3, p. 37-42, 2011. **ISSN 1735-3572, EISSN 1735-3645**
- ***Akyildiz, F. T.*** and ***Siginer, D.A.***, Non-Linear Forchheimer Effect on the Forced Convection in Saturated Porous Ducts of Rectangular Cross-Section, ***J. Porous Media***, **https://doi.org/10.1615/JPorMedia.v14.i1.70** (Impact factor 2009: 0.684), Vol. 14, No. 1, p.81-90, 2011.
- ***Akyildiz, F. T.***, ***Siginer, D.A.*** and ***Lyes, K.***, Energy Losses and Heat Transfer Enhancement in Transversally Corrugated Pipes, ***Int. J. Heat Mass Transfer***, (Impact factor 2011: 2.407; 5-year impact factor: 2.913), Vol. 54, Issues 15-16, p.3801-3806, 2011. **http://doi.org/10.1016/j.ijheatmasstransfer.2010.11.007**
- ***Siginer, D.A.,*** and ***Letelier, M.F.***, Laminar Flow of Non-Linear Viscoelastic Fluids in Straight Tubes of Arbitrary Contour, ***Int. J. Heat Mass Transfer***, (Impact factor 2011: 2.407; 5-year impact factor: 2.913), Vol. 54, No. 9-10, p. 2188-2202, 2011**,** **http://doi.org/10.1016/j.ijheatmasstransfer.2010.11.007** and Vol. 55, Issues 9-10, p. 2731–2745, 2012. **http://doi.org/10.1016/j.ijheatmasstransfer.2011.07.035**

2010

- ***Siginer, D.A.,*** and ***Letelier, M.F.***, Heat Transfer Asymptote in Laminar Flow of Non-Linear Viscoelastic Fluids in Straight Non-Circular Tubes, ***Int. J. Engineering Science***, (Impact factor 2009: 1.360; 2011: 1.194; 2012: 1.691; 2013: 2.291), Vol. 48, No. 11, p. 1544 -1562, 2010. **http://doi.org/10.1016/j.ijengsci.2010.07.010**
- ***Akyildiz, F. T.*** and ***Siginer, D.A.***, Existence Results and Numerical Simulation of Magnetohydrodynamic Viscous Flow over a Shrinking Sheet with Suction, ***Mathematical and Computer Modeling***, (Impact Factor 2009:1.032), Vol. 52, No. 1-2, p. 346-354, 2010. **http://doi.org/10.1016/j.mcm.2010.02.049**
- ***Sharma, S., Siginer, D.A.,*** Permeability Measurement Methods in Porous Media of Fiber Reinforced Composites, ***Applied Mechanics Reviews***, (Impact factor 2009: 2.25), Vol. 63, No. 2, p. 020802-1/020802-19, **http://dx.doi.org/10.1115/1.4001047**, 2010.
- ***Akyildiz, F. T., Siginer, D.A.***, ***Vajravelu***, ***K.***, ***Cannon***, ***J. R.***, and ***Van Gorder***, ***R. A.***, Similarity Solutions of the Boundary Layer Equations for a Non-Linearly Stretching Sheet, ***Mathematical Methods in the Applied Sciences*** (Impact factor 2007: 1.671), Vol. 33, No. 5, p. 601-606, 2010. **http://doi.org/10.1002/mma.1181**
- ***Akyildiz, F. T., Siginer, D.A.***, ***Vajravelu***, ***K.*** and ***VanGorder, R.A.***, Analytical and Numerical Results for the Swift-Hohenberg Equation, ***Applied Mathematics and Computation***, (Impact factor 2009: 0.961; five-year impact factor: 1.124), Vol.216. No.1, p. 221-226, 2010 **http://doi.org/10.1016/j.amc.2010.01.041**
- ***Akyildiz, F. T.*** and ***Siginer, D.A.***, Galerkin-Legendre Spectral Method for the Velocity and Thermal Boundary Layers over a Non-Linearly Stretching Sheet, ***Non-Linear Analysis: Real World Applications***, (Impact Factor 2009: 1.778), Vol. 11, No. 2, p. 735-741, 2010. **http://doi.org/10.1016/j.nonrwa.2009.01.018**

2009

- ***Sharma, S., Siginer, D.A., Dukipatti, R. K., Soschinske, K., A.,*** Effect of Fiber Sizing-Test Fluid Interaction on the Unsaturated and Saturated Flow in the VARTM Process, ***J. Composite Materials*** (Impact factor 2009: 1.2), Vol.43, No.15, p.1589-1601, 2009. **http://doi.org/10.1177/0021998308337898**
- ***Bakhtiyarov, S. I.,*** and ***Siginer, D.A.***, Electromagnetic Levitation, Part III: Thermophysical Property Measurements in Microgravity, ***invited paper, Fluid Dynamics and Materials Processing***, Vol.5, No. 1, p. 1-23, 2009. **http://doi.org/10.3970/fdmp.2009.005.001**

2008

- ***Siginer, D.A.,*** Editorial, special issue on Fluid Mechanics and Rheology of Complex Fluids and Electric, Magnetic and Thermal Effects at the Micro and Nano Scale, ***ASME J. Fluids Eng.*** , Vol.130, No. 8, p. 080201 (2 pages), 2008 **http://doi.org/10.1115/1.2967344**
- ***Bakhtiyarov, S. I.,*** and ***Siginer, D.A.***, Electromagnetic Levitation, Part II: Thermophysical Property Measurements in Terrestrial Conditions, ***invited paper, Fluid Dynamics and Materials Processing***, Vol.4, No. 3, p. 163-184, 2008. **http://doi.org/10.3970/fdmp.2008.004.163**
- ***Bakhtiyarov, S. I.,*** and ***Siginer, D.A.***, Electromagnetic Levitation, Part I: Theoretical and Experimental Considerations, ***invited paper, Fluid Dynamics and Materials Processing***, Vol.4, No. 2, p. 99-112, 2008. **http://doi.org/0.3970/fdmp.2008.004.099**

2007

- ***Letelier, M.F.*** and ***Siginer, D.A.***, On the Flow of a Class of Viscoinelastic-Viscoplastic Fluids in Tubes of Non-Circular Contour, ***Int. J. Engineering Science***, Vol.45, No.11, p. 873-881, 2007. **http://doi.org/10.1016/j.ijengsci.2007.07.002**

- ***Siginer, D.A.,*** Editorial, special issue on the Magnetic and Electric Field Effects at the Micro and Nano Scale Systems and Flows in Material Processing, ***ASME J. Fluids Engineering*** , Vol. 129, No. 4, p. 377-378, 2007, **http://doi.org/10.1115/1.2713113**

2006

- ***Siginer, D.A.*** and ***Thangam, S.,*** In Memoriam - Charles Gregory Speziale, ***J. Applied Mech.***, Vol. 73, No. 3, p. 353, 2006. **http://doi.org/10.1115/1.2173604**
- ***Siginer, D.A.*** and ***Thangam, S.,*** Editorial, special memorial issue - Charles Gregory Speziale, ***J. Applied Mech.***, Vol. 73, No. 3, p. 354-359, 2006, **http://doi.org/10.1115/1.2173676**
- ***Siginer, D.A.,*** Editorial, Special Section on the Fluid Mechanics and Rheology of Nonlinear Materials at the Macro, Micro, and Nano Scale, ***ASME J. Fluids Engineering***, Vol. 128, No. 1, p. 1-5, 2006, **http://doi.org/10.1115/1.2163070**
- ***Siginer, D.A.,*** Editorial, Thermal Science and Engineering With Emphasis on Porous Media, ***ASME J. Applied Mech.***, Vol. 73, No. 1, p. 1-4, 2006, **http://doi.org/10.1115/1.2136921**

2005

- ***Letelier***, ***M.F.*** and ***Siginer***, ***D.A***., On the Steady Flow of Magnetorheological Fluids in Pipes, ***Int. J. Applied Mech. and Engineering***, Vol.10, No.3, p.463- 474, 2005, **bwmeta1.element.baztech-article-BPZ2-0015-0006**
- ***Siginer, D.A.*** and ***Letelier, M.F.***, Heat Transfer in Laminar Flow of Viscoelastic Fluids in Straight Tubes of Arbitrary Shape, ***Annual Transactions of the Nordic Rheology Society***, Vol. 13, p. 137-145, 2005.
- ***Siginer, D.A.,*** The State of Engineering Education in the US, ***EEC* (*Energy, Environment and Communication*) *Innovation***, Vol. 2, No.2&3, p. 88-114, 2005.
- ***Letelier, M.F.*** and ***Siginer, D.A.***, On the Fully Developed Tube Flow of a Class of Non-Linear Viscoelastic Fluids, ***Int. J. Non-Linear Mech.***, Vol.40, 4, p. 485- 493, 2005. **http://doi.org/10.1016/j.ijnonlinmec.2004.07.009**

2004

- ***Siginer, D.A.,*** On the Nearly Viscometric Torsional Motion of Viscoelastic Liquids Between Shrouded Rotating Discs, ***ASME J. Applied Mech.***, Vol.71, No. 3, p. 305-313, 2004. **http://doi.org/10.1115/1.1651538**
- ***Siginer, D.A.,*** Editorial, special issue, ***ASME J. Fluids Engineering***, Vol. 126, No. 2, p. 1-3, 2004.

2003

- ***Siginer, D.A.,*** and ***Letelier, M.F.***, Secondary Flows of Viscoelastic Liquids in Straight Tubes, (special issue of ***IJSS*** entitled "Mechanics Pan America" **dedicated to selected refereed papers** presented at the VII PACAM held in Temuco, Chile on January 3-6,2002), ***Int. J. Solids Structures,*** Vol. 40, 19, p. 5081-5095, 2003. **http://doi.org/10.1016/S0020-7683(03)00256-7**

2002

- ***Letelier, M.F., Siginer, D.A.***, and ***Caceres, R.C.,*** Pulsating Viscoelastic Flow in Straight Tubes of Arbitrary Cross-Section, Part I : Longitudinal Field, **http://doi.org/10.1016/S0020-7462(01)00046-4** **,** ***Int. J. Non-Linear Mech.,*** Vol.37 , 2 , p.369-393, 2002.
- ***Siginer, D.A.*** and ***Letelier, M.F.***, Pulsating Viscoelastic Flow in Straight Tubes of Arbitrary Cross-Section, Part II : Secondary Flows, **http://doi.org/10.1016/S0020-7462(01)00047-6** , ***Int. J. Non-Linear Mech.,*** Vol.37 , 2 , p.395-407, 2002.

2001

- ***Siginer, D.A.*** and ***Bakhtiyarov, S.I.,*** Flow in Porous Media of Variable Permeability and Novel Effects, ***ASME J. Applied Mech.,*** Vol.68 , No. 2 , p.312-319 , 2001. **https://doi.org/10.1115/1.1349120**

2000

- ***Siginer, D.A.*** and ***Valenzuela-Rendón, A.***, On the Laminar Free Convection and Instability of Grade Fluids in Enclosures, ***Int. J. Heat Mass Transfer***, Vol. 43, 18, p. 3391-3405, 2000. **https://doi.org/10.1016/S0017-9310(99)00357-9**

1999

- ***Letelier, M.F.*** and ***Siginer, D.A.***, Secondary Flows in Tubes of Arbitrary Shape, chapter in the book ***"Advances in the Flow & Rheology of Non-Newtonian Fluids"***, **ISBN 0-444-82679-3**, p. 179-208, **Elsevier Science BV**, Amsterdam, the Netherlands, 1999.
- ***DeKee D., Stastna, J.*** and ***Siginer, D.A.,*** Editorial, special issue on "Mechanics of Non-linear Materials**"**, ***J. Non-Newt. Fluid Mech.***, 86 (1-2), p. 1- 2, 1999 **PII: S0377-0257(98)00198-0**
- ***Andrienko, Y.A., Siginer, D.A.*** and ***Yanovsky, Y.G.***, Resonance Behavior of Viscoelastic Fluids in Poiseuille Flow and Application to Flow Enhancement, ***Int. J. Non-Linear Mech.***, 35, p. 95-102, 1999 **https://doi.org/10.1016/S0020-7462(98)00090-0**

1998

- ***Siginer, D.A.*** and ***Bakhtiyarov, S.I.,*** Flow of Drilling Fluids in Eccentric Annuli, ***J. Non-Newtonian Fluid Mech.,*** 78, Issues 2-3, p. 119-132, 1998. **https://doi.org/10.1016/S0377-0257(97)00101-8**

1996

- ***Bakhtiyarov, S.I.*** and ***Siginer, D.A.,*** Fluid Displacement in a Horizontal Tube, ***J. Non-Newt. Fluid Mech.***, Vol. 65, Issue 1, p. 1-15, 1996 **https://doi.org/10.1016/0377-0257(96)01444-9**

- ***Siginer, D.A.***, ***Yanovsky, Y.G.*** and ***Basistov, Y.A.,*** Linear Inverse Problems in Viscoelastic Continua and a Minimax Method for Fredholm Equations of the First Kind, ***Int. J. Engineering Science,*** Vol. 34, 11, p. 1221-1245, 1996. **https://doi.org/10.1016/0020-7225(96)00025-0**
- ***Siginer, D.A.,*** and ***Bakhtiyarov, S.I.,*** Flow in Non-Homogeneous Porous Media and Novel Effects, ***Annual Transactions of the Nordic Rheology Society***, Vol. 4, p. 44-46, 1996. **ISBN: 8778341523**
- ***Siginer, D.A.,*** Fluid Displacement in a Horizontal Tube, ***Annual Transactions of the Nordic Rheology Society***, Vol. 4, p. 63-65, 1996. **ISBN: 8778341523**

1995

- ***Siginer, D.A.*** and ***Valenzuela-Rendón, A.,*** Unsteady Non-Viscometric Flows in Tubes Driven by Rotational Boundary Waves, Part I: Longitudinal Field, ***Int. J. Engineering Science,*** Vol. 33, 5, p. 731-756, 1995, **https://doi.org/10.1016/0020-7225(94)00090-7**

1993

- ***Siginer, D. A.***, Memory Integral Constitutive Equations in Periodic Flows and Rheometry, ***Int. J. Polymeric Materials and Polymeric Biomaterials***, Vol. 21, p. 45-56, 1993 **https://doi.org/10.1080/00914039308048511**
- ***Siginer, D.A.*** and ***Knight, R.W.,*** Swirling Free Surface Flow in Cylindrical Containers, ***J. Engineering Math.,*** Vol. 27, No. 3, p. 245-264, 1993 **https://doi.org/10.1007/BF00128966**
- ***Siginer, D.A.*** and ***Valenzuela-Rendón, A.,*** Energy Considerations in the Flow Enhancement of Viscoelastic Liquids, ***ASME J. Applied Mech.,*** Vol. 60, 2, p. 344-352, 1993 **https://doi.org/10.1115/1.2900799**

1992

- ***Siginer, D.A.,*** On the Effect of Boundary Vibration on Poiseuille Flow of an Elastico-Viscous Liquid, ***J. Fluids and Structures***, Vol. 6, p. 719-748, 1992. **https://doi.org/10.1016/0889-9746(92)90005-N**
- ***Siginer, D.A.,*** On the Buckling of Columns of Variable Flexural Rigidity, ***ASCE J. Engineering Mech.,*** Vol. 118, 3, p. 640-645, 1992. **http://dx.doi.org/10.1061/(ASCE)0733-9399(1992)118:3(640)**

1991

- ***Siginer, D.A.,*** Anomalous Steady Flows in a Tube, ***Rheologica Acta,*** Vol. 30, 5, p. 474-479, 1991. **https://doi.org/10.1007/BF00396531**
- ***Siginer, D.A.,*** Oscillating Flow of a Simple Fluid in a Pipe, ***Int. J. Engineering Science,*** Vol. 29, 12, p. 1557-1567, 1991. **https://doi.org/10.1016/0020-7225(91)90126-N**
- ***Siginer, D.A.,*** On Some Nearly Viscometric Flows of Viscoelastic Liquids, ***Rheologica Acta,*** Vol. 30, 5, p. 447-473, 1991. **https://doi.org/10.1007/BF00396530**
- ***Siginer, D.A.,*** Multiple Integral Constitutive Equations in Unsteady Motions and Rheometry, ***ASME Applied Mechanics Reviews,*** Vol. 44, 11, part 2, p. 232-245, 1991. **https://doi.org/10.1115/1.3121360**
- ***Siginer, D.A.,*** Viscoelastic Swirling Flow with Free Surface in Cylindrical Chambers, ***Rheologica Acta,*** Vol. 30, 2, p. 159-174, 1991. **https://doi.org/10.1007/BF01134605**
- ***Siginer, D.A.,*** On the Pulsating Pressure Gradient Driven Flow of Viscoelastic Liquids, ***J. Rheology,*** Vol. 35, 2, p. 270-312, 1991. **http://dx.doi.org/10.1122/1.550215**

1990

- ***Siginer, D.A.,*** Weissenberg Effect Generated by a Torsionally Oscillating Rod in a Layered Medium, ***Developments in Theoretical and Applied Mechanics,*** Vol. XII, p. 149-163, 1990.

1989

- ***Siginer, D.A.,*** Free Surface on a Viscoelastic Liquid in a Cylinder with Spinning Bottom, ***Die Macromolekulare Chemie – Macromolecular Symposia,*** 23, p. 73-90, 1989. **https://doi.org/10.1002/masy.19890230108**
- ***Siginer, D.A.,*** On the Superposition of Oscillatory and Shear Flows of Viscoelastic Liquids, ***Die Macromolekulare Chemie- Macromolecular Symposia,*** 23, p. 91-113, 1989. **https://doi.org/10.1002/masy.19890230107**
- ***Siginer, D.A.***, Manual for the Fluid Mechanics and Heat Transfer Laboratory, 100 pages, published by the ASME Student Chapter at Auburn University, 1989.

1988

- ***Siginer, D.A.,*** and ***Knight, R.W.,*** Free Surface Flow in a Tank with Spinning Bottom, ***Developments in Theoretical and Applied Mechanics,*** Wang, Hackett, Deleeuw and Smith Editors, Vol. XIV, p. 191-199, University of Mississippi, 1988.

1987

- ***Siginer, D.A.,*** Interface Shapes in a Torsionally Oscillating Layered Medium of Viscoelastic Liquids, ***Acta Mechanica,*** 66, 1, p. 233-249, 1987. **https://doi.org/10.1007/BF01184296**

1986

- ***Siginer, D.A.,*** Torsional Oscillations of a Rod in a Layered Medium of Simple Fluids, ***Int. J. Engineering Science,*** Vol.24, 4, p. 631-640, 1986. **https://doi.org/10.1016/0020-7225(86)90051-0**

1984

- ***Siginer, D.A.,*** General Weissenberg Effect in Free Surface Rheometry, Part I: Analytical Considerations, ***J. Applied Math. Physics*** **(ZAMP),** Vol. 35, 4, p. 545-558, 1984. **https://doi.org/10.1007/BF00945074**

- ***Siginer, D.A.,*** General Weissenberg Effect in Free Surface Rheometry, Part II: Experiments, ***J. Applied Math. Physics* (ZAMP),** Vol. 35, 5, p. 618-633, 1984. **https://doi.org/10.1007/BF00952108**
- ***Siginer, D.A.,*** Free Surface on a Simple Fluid Between Rotating Eccentric Cylinders, Part I: Analytical Solution, ***J. Non-Newtonian Fluid Mech.,*** 15, p. 93-109, 1984. **https://doi.org/10.1016/0377-0257(84)80031-2**
- ***Siginer, D.A.,*** and ***Beavers, G. S.,*** Free Surface on a Simple Fluid Between Rotating Eccentric Cylinders, Part II: Experiments, ***J. Non-Newtonian Fluid Mech.,*** 15, p.109-122, 1984. **https://doi.org/10.1016/0377-0257(84)80032-4**
- ***Siginer, D.A.,*** Partially Penetrating Wells, ***Technical Bulletin of the Turkish Association of Civil Engineers,*** no. 3, p. 61-76, 1972.
- ***Siginer, D.A.,*** On the Darcy Law and the Tensor Form of Hydraulic Conductivity, ***Bulletin of the Technical University of Istanbul,*** Vol. 25, no. 2, p. 126-135, 1972.

Archival Volumes Edited

- ***Siginer, D.A., Guest Editor, J. Heat Transfer*** (Transactions of the ASME), **special section** dedicated to selected papers presented at the 7th International Conference on Thermal Engineering in Marrakech, Morocco on May 6-8, 2014; Vol. 138, Issue 9, 2016. **ISSN: 0022-1481**
- ***Siginer, D.A., Guest Editor, J. Fluids Engineering*** (Transactions of the ASME), **special issue** on "Fluid Mechanics and Rheology of Complex Fluids and Electric, Magnetic and Thermal Effects at the Micro and Nano Scale" dedicated to selected papers presented at the IMEC&E'06 and FEDSM'07, Vol.130, No.8, **ISSN: 0098-2202**..... August 2008
- ***Siginer, D.A., Guest Editor, J. Fluids Engineering*** (Transactions of the ASME), **special issue** on "Electric and Magnetic Field Effects at the Micro and Nano Scale Systems and Flows in Material Processing" dedicated to selected papers presented at the IMEC&E'05 and FEDSM'06, Vol.129, No.4, **ISSN: 0098-2202**.....April 2007
- ***Siginer, D.A., Guest Editor, J. Applied Mech.*** (Transactions of the ASME), **special memorial issue** to honor Professor Charles Speziale dedicated to selected papers presented at the FEDSM-JSME'03 in Hawaii, July10-15, 2003, Vol.73, No.3, **ISSN: 0021-8936**.....May 2006
- ***Siginer, D.A., Guest Editor, J. Fluids Engineering*** (Transactions of the ASME), **special issue** on "Fluid Mechanics and Rheology of Nonlinear Materials at the Macro, Micro and Nano Scale" dedicated to selected papers presented at the IMEC&E'04 in Anaheim, CA, Vol.128, No.1, .. **ISSN: 0098-2202**..... January 2006
- ***Siginer, D.A., Guest Editor, J. Applied Mech.*** (Transactions of the ASME), **special issue** dedicated to selected papers presented at the International Conference on Thermal Engineering, Beirut, Lebanon, May 31-June 4, 2004, Vol.73,No.1, **ISSN: 0021-8936** .....January 2006
- ***Siginer, D.A.,*** and ***Khusid, B.***, editors, Electric and Magnetic Phenomena in Micro and Nano Scale Systems, ASME IMEC&E 2005 DVD Proceedings, Vol. 1, **ISBN: 0-7918-3790-4**, ***ASME Press,*** New York, NY,..... 2006
- ***Siginer, D.A.***, Editor, Rheology and Fluid Mechanics of Nonlinear Materials, ASME IMEC&E 2005 DVD Proceedings, Vol. 1, **ISBN: 0-7918-3790-4**, ***ASME Press,*** New York, NY,.....2006
- ***Siginer, D.A.,*** and ***Khusid, B.***, editors, Electric and Magnetic Phenomena in Micro and Nano Scale Systems, ASME IMEC&E 2005 DVD Proceedings, Vol. 1, **ISBN: 0-7918-3769-6**, ***ASME Press,*** New York, NY, ...2005
- ***Siginer, D.A.***, editor, Rheology and Fluid Mechanics of Non-linear Materials, ASME IMEC&E 2005 DVD Proceedings, Vol. 1, **ISBN: 0-7918-3769-6**, ***ASME Press,*** New York, NY, ... 2005
- ***Siginer, D.A.***, ***Guest Editor, J. Fluids Engineering*** (Transactions of the ASME)-**special issue** dedicated to selected papers presented at the IMEC&E'02 in New Orleans, Vol. 126, No. 2,.. ..... March 2004
- ***Siginer, D.A.*** and ***Khusid, B.***, editors, Electric and Magnetic Phenomena in Micro and Nano Scale Systems, ASME IMECE 2004 CD Proceedings, Vol. 1, **ISBN: 0-7918-4178-2**, ***ASME Press***, New York, NY.....2004
- ***Siginer, D.A.***, editor, Rheology and Fluid Mechanics of Non-linear Materials, ASME IMEC&E 2004 CD Proceedings, Vol. 1, **ISBN: 0-7918-4178-2**, ***ASME Press,*** New York, NY, ... 2004
- ***Siginer, D.A.***, editor, Transport Phenomena in Materials Processing and Manufacturing, 2004 ASME Heat Transfer/Fluids Engineering Summer Conference CD Proceedings, **ISBN: 0-7918-3740-8**, ***ASME Press,*** New York, NY, ,..... 2004
- ***Siginer, D.A.***, and ***Sumer, M.***, Problems in Hydraulics, used by most Engineering Schools in Turkey, 410 pages, second edition by ***Birsen Publishing House*** 1984, ninth printing, ...2004
- ***Siginer, D.A.***,***Khusid, B.*** and ***Lloyd J.***, editors, Electric and Magnetic Phenomena in Micro and Nano Scale Systems, ASME IMEC&E 2003 CD Proceedings, Vol. 3, **ISBN: 0-7918-4665-2**, ***ASME Press,*** New York, NY.....2003
- ***Siginer, D.A.*** and ***Bakhtiyarov, S.I.***, editors, Rheology and Fluid Mechanics of Non-linear Materials, ASME IMEC&E CD Proceedings, Vol. 1, **ISBN: 0-7918-4663-6**, ***ASME Press,*** New York, NY.....2003
- ***Siginer, D.A.*** and ***Bakhtiyarov, S.I.,*** editors, Advances in Processing Science, ASME IMEC&E 2003 CD Proceedings, Vol. 1&3, **ISBN: 0-7918-4663-6 & 0-7918-4665-2**, ***ASME Press,*** New York, NY,..... 2003
- ***Siginer, D.A.***, ***Watanabe, K.***, ***Iwamoto, J.***, ***Bourgin, P.***, and ***Bakhtiyarov, S.I.***, editors, Flows in Manufacturing Processes, 210 pages, CD Proceedings, **ISBN No. 0-7918-3673-8**, ***ASME Press,*** New York, NY, 2003.
- ***Siginer, D.A.***, ***Thangam, S.***, ***Berger, S.***, editors, Modeling and Simulation of Turbulent Flows, CD Proceedings**, ISBN No. 0-7918-3673-8**, ***ASME Press,*** New York, NY, 2003.
- ***Siginer, D.A.***, ***Bakhtiyarov, S. I.***, ***Khusid, B.*** and ***DeKee, D.***, editors, Rheology and Fluid Mechanics of Non-linear Materials, p. 171-346, **ISBN No. 0-7918-3657-6**, ***ASME Press,*** New York, NY, 2002.

- ***Siginer, D.A.,*** and ***Bakhtiyarov, S.I.***, and ***Coulter, J.,*** editors, Advances in Processing Science, p.551-620, **ISBN No.0-7918 3657-6**, ***ASME Press,*** New York, NY, 2002.
- ***Siginer, D.A***. and ***Bourgin, P.***, editors, Flows in Manufacturing Processes, p.1-76, **ISBN No. 0-7918-3616-9**, ***ASME Press,*** New York, NY, 2002.
- ***Siginer, D.A***. and ***Bakhtiyarov, S.I.***, editors, Rheology and Fluid Mechanics of Non-linear Materials, 187 pages, **ISBN No. 0-7918-3568-5**, ***ASME Press*** **,** New York, NY, 2001.
- ***Siginer, D.A***., and ***DeKee, D***., editors, Rheology and Fluid Mechanics of Non-linear Materials, 164 pages, **ISBN No.0-7918-1918-3**, ***ASME Press,*** New York, NY, 2000.
- ***Siginer, D.A., DeKee, D***. and ***Chhabra, R.P.*** editors, Advances in the Flow & Rheology of Non-Newtonian Fluids, Part A, p. 1-636 & Part B, p. 637-1515, **ISBN No. 0-444-82679-3**, ***Elsevier Science BV,*** Amsterdam, the Netherlands, 1999.
- ***Siginer, D.A.***, editor, Rheology and Fluid Mechanics of Nonlinear Materials-1999, 183 pages, **ISBN No. 0-7918-1658-3**, ***ASME Press,*** New York, NY, 1999.
- ***Siginer, D.A.*** and ***DeKee, D.*** editors**,** Rheology and Fluid Mechanics of Non-linear Materials, 197 pages, **ISBN No. 0-7918-1592-7, *ASME Press,*** New York, NY, 1998.
- ***Advani, S.C.*** and ***Siginer, D.A.*** editors, Rheology and Fluid Mechanics of Non-linear Materials, 216 pages, **ISBN No. 0-7918-1825-X**, ***ASME Press***, New York, NY, 1997.
- ***Siginer, D.A.*** and ***Advani, S.C.*** editors, Rheology and Fluid Mechanics of Non-linear Materials, 315 pages, **ISBN No. 0-7918-1526-9**, ***ASME Press***, New York, NY, 1996.
- ***Siginer, D.A.,*** and ***Wang, H.P.*** editors**,** Developments and Applications of Non-Newtonian Flows - 1995, 285 pages, **ISBN No. 0-7918-1742-3**, ***ASME Press,*** New York, NY, 1995.
- ***Siginer, D.A.,*** and ***Dulikravich, G.E.*** editors**,** Developments in Electrorheological Fluids - 1995, 95 pages, **ISBN No. 0-7918-1742-5**, ***ASME Press,*** New York, NY, 1995.
- ***Siginer, D.A.***, and ***Yanovsky, Y.G.*** editors**,** Advances in Structured and Heterogeneous Continua, 550 pages, **ISBN No. 0-89864-071-7**, ***Allerton Press, Inc.,*** New York, NY, 1994.
- ***Siginer, D.A.,*** and ***Bechtel, S.E.*** editors**,** Developments in Non-Newtonian Flows - 1994, 178 pages, **ISBN No. 0-7918-1439-4**, ***ASME Press***, New York, NY, 1994.
- ***Siginer, D.A., Kim, J.H., Sherif, S.A.*** and ***Coleman, H.W.*** editors**,** Developments in Electrorheological Flows and Measurement Uncertainty - 1994, 187 pages, **ISBN No. 0-7918-1438-6**, ***ASME Press,*** New York, NY, 1994.
- ***Siginer, D.A., Narain, A.*** and ***Kelkar, K.M.*** editors**,** Two Fluid Flows-With or Without Phase Change, 107 pages, **ISBN No. 0-7918-1405-X**, ***ASME Press,*** New York, NY, 1994.
- ***Vradis, G.C.*** and ***Siginer, D.A.*** editors**,** Numerical Methods for Non-Newtonian Fluid Dynamics, 111 pages, **ISBN No. 0-7918-1362-2**, ***ASME Press,*** New York, NY, 1994.
- ***Siginer, D.A., Thompson, R.L.*** and ***Trefethen, L.M.*** editors**,** Fluid Mechanics Phenomena in Microgravity, 183 pages, **ISBN No. 0-7918-1037-2**, ***ASME Press,*** New York, NY, 1993.
- ***Siginer, D.A., Van Arsdale, W.E., Altan, M.C.*** and ***Alexandrou, A.N.*** editors**,** Developments in Non-Newtonian Flows, 243 pages, **ISBN No. 0-7918-1038-0**, ***ASME Press,*** New York, NY, 1993.
- ***Siginer, D.A., Kim, J.H.,*** and ***Bajura, R.A.*** editors**,** Electrorheological Flows, 157 pages, **ISBN No. 0-7918-0972-2**, ***ASME Press,*** New York, NY, 1993.
- ***Siginer, D.A.*** *editor***,** Recent Advances in Non-Newtonian Flows, 151 pages, **ISBN No. 0-7918-1121-2**, ***ASME Press,*** New York, NY, 1992.
- ***Siginer, D.A.,*** and ***Weislogel, M.M.*** editors**,** Fluid Mechanics Phenomena in Microgravity, 161 pages, **ISBN No. 0-7918-1122-0**, ***ASME Press,*** New York, NY, 1992.
- ***Siginer, D.A.,*** and ***Dhaubhadel, M.N.*** editors**,** Recent Developments in Non-Newtonian Flows and Industrial Applications, 81 pages**, ISBN No. 0-7918-0850-5**, ***ASME Press,*** New York, NY, 1991.
- ***Siginer, D.A., editor***, Developments in Theoretical and Applied Mechanics, Vol. XII (selected papers from the Proceedings of SECTAM XII held in Callaway Gardens, Georgia in May 1984), ***Auburn University Press***, 1990.

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2019

- ***Zheng, X***., ***Boutaous, M., Xin, S., Siginer, D.A., Hagani, F.*** and ***Knikker, R.,*** A New Approach to the Numerical Modelling of the Viscoelastic Rayleigh-Bénard Convection, **ASME IMECE,** Paper No. IMECE2019-11675, V007T08A028; 7 pages, Salt Lake City, Utah, November 8-14, 2019**,** published online January 21, 2020 **https://doi.org/10.1115/IMECE2019-11675**
- ***Letelier, F. M., Siginer, D.A***., ***Diego***, ***A.***, and ***Stockle, J.***, Secondary Flows in Eccentric-Annular Tubes, **ASME IMECE**, Paper No. IMECE2019-11548, V007T08A027; 3 pages, Salt Lake City, Utah, November 8-14, 2019**,** published online January 21, 2020 **https://doi.org/10.1115/IMECE2019-11548**

- ***Letelier, F. M., Siginer, D.A.***, ***Merino, P.,*** and ***Stockle, J.***, Prediction of Transversal Flow in Non-Circular Tubes with a Higher Order Constitutive Equation, **ASME IMECE,** Paper No. IMECE2019-12062**,** V007T08A030; 3 pages, Salt Lake City, November 8-14, 2019, published online January 21, 2020 **https://doi.org/10.1115/IMECE2019-12062**

2018

- ***Hagani, F., Boutaous, M., Knikker, R., Xin, S.,*** and ***Siginer, D.A.***, Numerical Modeling of Phan-Thien-Tanner Viscoelastic Fluid Flow Through a Square Cross–Section Duct: Heat Transfer Enhancement Due to Shear–Thinning Effects, **ASME IMECE**, Paper No. IMECE2018-87568**,** Pittsburg, Pennsylvania, November 9-15, 2018**.** **https://doi.org/10.1115/IMECE2018-87568**
- ***Boutaous, M., Mokrane, A., Xin, S.*** and ***Siginer, D.A.***, 3D Modeling of Thermal Phenomena During Laser Melting of Polymers, **ASME IMECE,** Paper No. IMECE2018-87549, Pittsburg, Pennsylvania, November 9-15, 2018**.** **https://doi.org/10.1115/IMECE2018-87549**
- ***Letelier, F. M., Siginer, D.A.*** and ***Diego***, ***A.***, Resonance Effects in Pulsating Flow of a Non-linear Viscoelastic Fluid in Circular Tubes, **ASME IMECE**, Paper No. IMECE2018-87973**,** Pittsburg, Pennsylvania, November 9-15, 2018**.** **https://doi.org/10.1115/IMECE2018-87973**

2017

- ***Letelier, F. M., Siginer, D.A.***, ***Contreras, D.***, ***Jacobs***, ***P.***, and ***Barrera***, ***C.***, Heat Transfer in Laminar Flow with Elastoviscoplastic Fluids in Non-Circular Tubes, **ASME IMECE,** Paper No. IMECE2017-71001**,** Tampa, Florida, November 3-9, 2017**.** **https://doi.org/10.1115/IMECE2017-71001**
- ***Letelier, F. M., Siginer, D.A.***, ***Arriagada***, ***G.***, and ***González, A.***, Heat Transfer Optimization in Laminar Flow of Non-Linear Viscoelastic Fluids in Asymmetric Straight Ducts With Inclusions, **ASME IMECE,** Paper No. IMECE2017-70994**,** Tampa, Florida, November 3-9, 2017. **https://doi.org/10.1115/IMECE2017-70994**
- ***Bakhtiyarov***, ***S.***, and ***Siginer, D.A.***, Rheometric Studies of a New Class of Ionic Liquid Nanolubricants, **ASME IMECE,** Paper No. IMECE2017-72545**,** Tampa, Florida, November 3-9, 2017**.** **https://doi.org/10.1115/IMECE2017-72545**
- ***Bakhtiyarov***, ***S.***, ***Oxley***, ***J. C.***, ***Smith***, ***J. L.***, ***Baldovi***, ***P. M.*** and ***Siginer, D.A.***, Rheometric Studies of Functional Polyurethane Foam Composite, **ASME IMECE,** Paper No. IMECE2017-72547**,** Tampa, Florida, November 3-9, 2017**.** **https://doi.org/10.1115/IMECE2017-72547**

2016

- ***Refaa, Z., Boutaous, M., Xin, S.*** and ***Siginer, D.A.***, Understanding the Crystallization of PLA: Effects of Temperature and Shearing Conditions, **ASME IMECE,** Paper No. IMECE2016-68213**,** Phoenix, Arizona, November 11-17, 2016**.** **https://doi.org/10.1115/IMECE2016-68213**
- ***Letelier, F. M., Siginer, D.A.***, ***Gutiérrez, S., Arratia, P.*** and ***González, A.***, Viscoelastic Flow in Teardrop-shaped Tubes: Analysis of Transversal Flow, **ASME IMECE**, Paper No. IMECE2016-65436, Phoenix, Arizona, November 11-17, 2016. **https://doi.org/10.1115/IMECE2016-65436**
- ***Panakhov, G. M., Abbasov, E. M., Bakhtiyarov, S. I.*** and ***Siginer, D.A.***, The Effect of Gas Evolution on Hydraulic Characteristics of Fluid Flow in Pipeline, **ASME IMECE**, Paper No. IMECE2016-65068, Phoenix, Arizona, November 11-17, 2016. **https://doi.org/10.1115/IMECE2016-65068**
- ***Bakhtiyarov, S. I., Kutelia, E. R.,*** and ***Siginer, D.A.***, Thermometric Studies of Newly Developed Nanolubricants, **ASME IMECE**, Paper No. IMECE2016-65040, Phoenix, Arizona, November 11-17, 2016. **https://doi.org/10.1115/IMECE2016-65040**
- ***Letelier, F. M., Diaz, N., Siginer, D.A.***, and ***Báez, E.,*** Effect of Elasticity on Viscoplastic Flow, **ASME IMECE**, Paper No. IMECE2016-65025, Phoenix, Arizona, November 11-17, 2016. **https://doi.org/10.1115/IMECE2016-65025**
- ***Liu, X., Boutaous, M., Xin, S.*** and ***Siginer, D.A.***, Numerical Simulation of Balling Phenomenon in Metallic Laser Melting Process, **ASME 2016 HT/FEDSM/ICNMM** (Heat Transfer Conference/Fluids Engineering Division Summer Meeting/ International Conference on Nanochannels, Microchannels and Minichannels), Paper No. HTFEICNMM2016-1070, pp. V002T22A003; 7 pages, Washington, DC, July 10-14, 2016, **https://doi.org/10.1115/HT2016-1070, ISBN: 978-0-7918-5033-6**
- ***Letelier, F. M., Siginer, D.A., Godoy, F.,*** and ***Rosas, C.***, Herschel-Bulkley Viscoplastic Flow in Tubes of Non-circular Cross-section, **ASME 2016 HT/FEDSM/ICNMM** (Heat Transfer Conference/Fluids Engineering Division Summer Meeting/ International Conference on Nanochannels, Microchannels and Minichannels), Vol. 1B, Paper No. FEDSM2016-1069, pp. V01BT34A001; 5 pages, Washington, DC, July 10-14, 2016 **https://doi.org/10.1115/FEDSM2016-1069, ISBN: 978-0-7918-5029-9**

2015

- ***Akyildiz***, ***F. T.***, ***Siginer, D.A.***, and ***Boztepe M.***, A Low Dimensional Approach for Natural Convection in an inclined Square Cavity Filled with a Porous Medium, CD Proceedings, **ISBN 1-926769-38-7**, **8th International Conference on Thermal Engineering**: **Theory and Applications**, Amman-Jordan, May 18-21, 2015.

2014

- ***Barrera, C. H.***, ***Letelier, F. M.***, and ***Siginer, D.A.***, A Solution of the Graetz Problem in Tubes of Arbitrary Cross-Section for Viscoelastic Fluids, **https://doi.org/10.1115/IMECE2014-36245**, **ASME IMECE**, Paper No. IMECE2014-36245, pp. V007T09A032; 8 pages, Montréal, Canada, November 14-20, 2014, **ISBN: 978-0-7918-4954-5**

- ***Letelier, F. M.***, ***Siginer, D.A.***, ***Godoy, F.***, Velocity Field and Energy Dissipation in Viscoplastic Flow in Tubes of Non-Circular Cross-Section, **https://doi.org/10.1115/IMECE2014-36246**, **ASME IMECE**, Paper No. IMECE2014- 36246, pp. V007T09A033; 6 pages, Montréal, Canada, November 14-20, 2014, **ISBN: 978-0-7918-4954-5**
- ***Barrera, C. H.***, ***Letelier, F. M.*** and ***Siginer, D.A.***, The Graetz Problem in Tubes of Arbitrary Cross-Section, **Proceedings of 14th Pan-American Congress of Applied Mechanics - PACAM XIV, https://doi.org/10.13140/RG.2.1.2413.7767,** Santiago, Chile, March 24-28, 2014.

2013

- ***Letelier, F. M.*** and ***Siginer, D.A.***, Secondary Flows in Straight Non-Circular Tubes: Giesekus Fluid, **https://doi.org/10.1115/IMECE2013-62340**, **ASME IMECE**, paper IMECE2013- 62340, pp. V07AT08A023; 4 pages, San Diego, California, Nov. 15-21, 2013, **ISBN: 978-0-7918-5631-4**
- ***Letelier, F. M.***, ***Gonzalo, U.***, and ***Siginer, D.A.***, Plastic Flow Establishment in Tubes: A Comparison of Pressure Gradient and Yield Stress Change Effects, **https://doi.org/10.1115/IMECE2013-62344**, **ASME IMECE**, Paper No. IMECE2013-62344, pp. V07AT08A024; 4 pages, San Diego, California, Nov. 15-21, 2013 **ISBN: 978-0-7918-5631-4**

2012

- ***Filali, A., Khezzar, L.***, ***Siginer, D.A.***, ***Nemouchi, Z.***, Graetz Problem Using FENE-P Fluids Without Viscous Dissipation, **https://doi.org/10.1115/IMECE2012-89194**, **ASME IMECE**, paper IMECE2012 - 89194, pp. 1141-1148; 8 pages, Houston, Texas, Nov. 9-15, 2012, **ISBN: 978-0-7918-4523-3**
- ***Letelier, F. M.***, ***Zapata, F. N.***, ***Siginer, D.A.*** and ***Stockle, J.S.***, Analysis of Secondary Flows and Heat Transfer in Viscoelastic Flow with Viscous Dissipation in Non-Circular Tubes, **https://doi.org/10.1115/IMECE2012-85403**, **ASME IMECE**, Paper No. IMECE2012- 85403, pp. 1017-1021; 5 pages, Houston, Texas, Nov. 9-15, 2012, **ISBN: 978-0-7918-4523-3**
- ***Letelier, F. M.***, ***Siginer, D.A.***, ***Ahumada, J. L.*** and ***Stockle, J.S.***, Dynamics of Plug Zones in Elasto-Plastic Unsteady Flows in Circular Tubes, **https://doi.org/10.1115/IMECE2012-85404**, **ASME IMECE**, paper IMECE2012- 85404, pp. 1023-1028; 6 pages, Houston, Texas, Nov. 9-15, 2012, **ISBN: 978-0-7918-4523-3**

2011

- ***Letelier, F. M.***, ***Stockle, J.S.*** and ***Siginer, D.A.***, Conduit Flow Control through Magnetorheology, **ASME IMECE**, paper IMECE2011- 63489, pp. 211-216; 6 pages, Denver, Colorado, Nov. 11-17, 2011 **https://doi.org/10.1115/IMECE2011-63489**, **ISBN: 978-0-7918-5492-1**
- ***Letelier, F. M.***, ***Svensson, P.***, ***Siginer, D.A.*** and ***Stockle, J.S.***, Analysis of Plug Zones in Steady Flow in Undulating Channels, **https://doi.org/10.1115/IMECE2011-63504**, **ASME IMECE**, Paper No. IMECE2011- 63504, pp. 217-222; 6 pages, Denver, Colorado, Nov. 11-17, 2011, **ISBN: 978-0-7918-5492-1**
- ***Filali, A., Khezzar, L.***, ***Siginer, D.A.*** and ***Nemouchi, Z.***, Graetz Problem in Ducts of Circular and Some Non-Circular Cross-Sections With Viscoelastic Fluids, **https://doi.org/10.1115/IMECE2011-62210**, **ASME IMECE**, Paper No. IMECE2011 - 62210, Denver, Colorado, Nov. 11-17, 2011.
- ***Siginer, D.A. & Letelier F. M.***, Interplay of Viscoelasticity and Inertia: Heat Transfer Asymptote in Laminar Tube Flow with Constant Boundary Heat Flux, **27th Meeting of the Polymer Processing Society (PPS-27)**, Marrakech, Morocco, May 10-14, 2011.

2010

- ***Letelier, F. M.***, ***Siginer, D.A.***, ***Stockle, J.S.***, ***Huilcan, A.***, Laminar Flow Model in Tubes of Circular Cross-section with Arbitrary Axial Variation, **https://doi.org/10.1115/IMECE2010-40383**, **ASME IMECE**, Paper No. IMECE2010-40383, pp. 619-625, **ISBN: 978-0-7918-4444-1**, Vancouver, British Columbia, Nov. 12-18, 2010.
- ***Letelier, F. M.***, ***Siginer, D.A.***, ***Stockle, J.S.***, and ***Herrera, C.***, Resonance Modeling and Control in Structures by means of Magnetorheological Dampers, **ASME IMECE**, paper IMECE2010-40380, pp. 609-618, **ISBN: 978-0-7918-4444-1**, Vancouver, British Columbia, Nov. 12-18, 2010. **https://doi.org/10.1115/IMECE2010-40380**
- ***Stockle, J.S.***, ***Letelier, F. M.***, ***Siginer, D.A.***, and ***Maria, J.***, Plastic Flow Establishment in Circular Pipes under the Effect of a Magnetic Field, **https://doi.org/10.1115/IMECE2010-4038**, **ASME IMECE**, paper IMECE2010-40385 , pp. 627-633, **ISBN: 978-0-7918-3891-4**, Vancouver, British Columbia, Nov. 12-18, 2010.
- ***Siginer, D.A., Vinogradov, I.*** and ***Khezzar, L.***, Inelastic and Newtonian Flow Instabilities and Related Heat Transfer in Inclined Boxes, **ASME IMECE**, paper IMECE2010-38712, **ISBN: 978-0-7918-3891-4,** Vancouver, British Columbia, Nov. 12-18, 2010.
- ***Siginer, D.A.***, Heat Transfer Asymptote in Laminar Tube Flows of Non-Linear Viscoelastic Fluids, **https://doi.org/10.1115/IHTC14-23224**, **14th *International Heat Transfer Conference* (IHTC-14)**, Vol. 2, **ISBN: 978-0-7918-4937-8**, Paper No. IHTC14-23224, pp. 839-852, Washington, D. C., August 8-13, 2010.
- ***Siginer, D.A. & Akyildiz F.T.***, Heat Transfer Enhancement in Corrugated Pipes, **https://doi.org/10.1115/IHTC14-23225**, **14th *International Heat Transfer Conference* (IHTC-14)**, Vol. 2, **ISBN: 978-0-7918-4937-8**, Paper No. IHTC14-23225, pp. 853-860, Washington, D. C., August 8-13, 2010.
- ***Siginer, D.A.*** and ***Lyes, K.***, Flow Instabilities and Heat Transfer in Buoyancy Driven Flows of Inelastic Non-Newtonian Fluids in Inclined Rectangular Cavities, **ASME 3rd *Joint US-European Fluids Engineering Summer Meeting***, paper No. FEDSM-ICNMM2010-30243, **ISBN: 978-0-7918-3880-8**, Montreal, Canada, August 1- 4, 2010. **https://doi.org/10.1115/FEDSM-ICNMM2010-30243**

- ***Siginer, D.A. & Akyildiz F.T.***, Flow and Heat Transfer in Wavy Tubes, **5th *International Conference on Thermal Engineering and Applications***, DVD Proceedings, Marrakech, Morocco, May 10-14, 2010.
- ***Vinogradov, I., Lyes, K.*** and ***Siginer, D.A.***, Heat Transfer with Non-Newtonian Dilatant Power-Law Fluids in Square and Rectangular Cavities, **2nd *International Conference on Energy Conversion and Conservation***, DVD Proceedings, Hammamet, Tunisia, April 22-25, 2010.

2009

- ***Sharma, S.*** and ***Siginer, D.A.,*** VARTM Process Improvement for Repeatable and Improved Mechanical Properties of Composite Laminates, **ASME IMEC&E**, paper IMECE2009-12593, Vol. 9, pp. 45-50, **ISBN: 978-0-7918-3863-1 | eISBN: 978-0-7918-3863-1**, Lake Buena Vista, Florida, Nov. 13-19, 2009. **https://doi.org/10.1115/IMECE2009-12593**
- ***Letelier F.M.***, ***Siginer, D.A.***, ***Vera C.*** and ***Stockle***, ***J.***, Friction Law for the Flow of Bingham Fluids in Channels of Arbitrary Cross-Sectional Shapes, **ASME IMECE**, paper IMECE2009-11044, Vol. 9, pp. 121-127, **ISBN: 978-0-7918-3863-1 | eISBN: 978-0-7918-3863-1,** Lake Buena Vista, Florida, Nov. 13-19, 2009. **https://doi.org/10.1115/IMECE2009-11044**
- ***Lyes, K.*** and ***Siginer, D.A.***, Natural Convection With Non-Newtonian Shear-Thinning Power Law Fluids in Inclined Two Dimensional Rectangular Cavities, **ASME IMECE**, paper IMECE2009-12748, Vol. 9, pp. 141-145, **ISBN: 978-0-7918-3863-1 | eISBN: 978-0-7918-3863-1**, Lake Buena Vista, Florida, Nov. 13-19, 2009. **https://doi.org/10.1115/IMECE2009-12748**
- ***Letelier F.M.***, ***Siginer, D.A.*** and ***Stockle***, ***J.***, Magnetically Induced Complex Pressure Pulses in Micro-Channels, **ASME IMECE**, paper IMECE2009-10473, Vol. 9, pp. 81-90, **ISBN: 978-0-7918-3863-1 | eISBN: 978-0-7918-3863-1**, Lake Buena Vista, Florida, Nov. 13-19, 2009. **DOI: 10.1115/IMECE2009-10473**
- ***Sharma, S.*** and ***Siginer, D.A.***, An Acoustical Method of Predicting Permeability of Orthotropic Fibers, 24th *Annual Technical Conference of the* ***American Society for Composites***-ASC 2009 and 1st Joint Canadian-American Technical Conference on Composites, Proceedings, DEStech Publications, Inc., Editors: John W. Gillespie Jr. & Suong V. Hoa, Vol. 2, p. 903-908, Newark, Delaware, September 15-17, 2009. **ISBN: 978-1-61567-603-3**
- ***Sharma, S.***, ***Siginer, D.A.***, ***Dukipatti, R. K.,*** and ***Soschinske***, ***K., A.,*** Unsaturated and Saturated Flow in the VARTM Process-An Investigation, 24th *Annual Technical Conference of the* ***American Society for Composites***-ASC 2009 and 1st Joint Canadian-American Technical Conference on Composites, Proceedings, DEStech Publications, Inc., Editors: John W. Gillespie Jr. & Suong V. Hoa, Vol. 2, p. 867-872, Newark, Delaware, September 15-17, 2009. **ISBN: 978-1-61567-603-3**
- ***Lyes, K.*** and ***Siginer, D.A.***, Natural Convection in Inclined Two-Dimensional Rectangular Cavities, **FEDSM'09**, paper FEDSM2009-78566, pp. 1223-1229, **ISBN: 978-0-7918-4372-7 | eISBN: 978-0-7918-3855-6**, Vail, Colorado, Aug. 2-6, 2009. **DOI: 10.1115/FEDSM2009-78566**
- ***Sharma, S.*** and ***Siginer, D.A.***, Determination of Physical Properties of Isotropic Porous Materials by Impedance Tube, **FEDSM'09**, Paper No. FEDSM2009-78568, Vol. 1, pp. 1235-1237, **ISBN: 978-0-7918-4372-7 | eISBN: 978-0-7918-3855-6**, Vail, Colorado, Aug. 2-5, 2009. **DOI: 10.1115/FEDSM2009-78568**
- ***Sharma, S.*** and ***Siginer, D.A.***, Permeability Measurement of Orthotropic Fibers under an Acoustic Force Field, **FEDSM'09**, Paper No. FEDSM2009-78567, Vol. 1, pp. 1231-1233, **ISBN: 978-0-7918-4372-7 | eISBN: 978-0-7918-3855-6**, Vail, Colorado, Aug. 2-5, 2009. **DOI: 10.1115/FEDSM2009-78567**

2008

- ***Letelier, F.M.***, ***Siginer, D.A.*** and ***Moraga***, ***C.***, Magnetohydrodynamic Flow in Tubes of Arbitrary Contour, **ASME IMECE**, **DOI: 10.13140/RG.2.1.4272.5520**, Paper No. IMECE2008-66629, **ISBN: 978-0-7918-3840-2**, Boston, Massachusetts, Oct. 31-Nov. 6, 2008.
- ***Sharma, S.*** and ***Siginer, D.A.,*** Permeability Measurement Methods in Porous Media: A Review, **ASME IMEC&E**, Paper No. IMECE2008-68543, Vol. 10, pp. 179-200, **ISBN: 978-0-7918-3840-2 | eISBN: 978-0-7918-3840-2**, Boston, Massachusetts, Oct. 31- Nov. 6, 2008 **DOI: 10.1115/IMECE2008-68543**
- ***Letelier F.M.***, ***Siginer, D.A.*** and ***Stockle***, ***J.***, An Inverse Approach to Magnetorheological Damper Design: Hershel-Bulkley Model, **FEDSM'08** held in conjunction with **2008 ASME *Heat Transfer/Fluids/Solar/Nano Conferences***, paper FEDSM2008-55058, Vol. 1, pp. 201-206**, ISBN: 0-7918-3832-3 | eISBN: 0-7918-3832-3,** Jacksonville, Florida, August 10-14, 2008. **DOI: 10.1115/FEDSM2008-55058**
- ***Siginer, D.A.,*** Interplay of Inertia and Elasticity, Enhanced Heat Transfer and Change of Type of Vorticity in Tube Flow of Nonlinear Viscoelastic Fluids, **XV**th ***International Congress on Rheology***, AIP Conference Proceedings, Vol. 1027, **CD-ROM ISBN: 978-0-7354-0550-9**, p. 78-80, **Book ISBN: 978-0-7354-0549-3**, Monterey, California, August 3-8, 2008.
- ***Siginer, D.A.*** and ***Letelier F. M.,*** Interplay of Elasticity and Inertia and the Role of Vorticity Type Change in Enhancing Heat Transfer in Tube Flow of Non-linear Viscoelastic Fluids, **24th *Annual Meeting of the Polymer Processing Society*** (PPS-24), paper S08-102, Salerno, Italy, June 15-19, 2008.
- ***Siginer, D.A*** and ***Letelier F. M.,*** Inverse Modeling of Magneto-Rheological Dampers: Bingham Model, **24th *Annual Meeting of the Polymer Processing Society*** (PPS-24), Salerno, Italy, June 15-19, 2008.
- ***Siginer, D.A.,*** Heat Transfer Enhancement, Secondary Flows and Change of Type of Vorticity Transport in Non-Circular Tube Flow of Non-linear Viscoelastic Fluids, **5th *European Thermal Sciences Conference,*** CD Proceedings, paper FCV-13, **ISBN: 978-90-386-1274-4**, Eindhoven, the Netherlands, May 18-22, 2008. **DOI: 10.13140/RG.2.1.1990.4248**
- ***Siginer, D.A.,*** Change of type of Vorticity and the Physics of Heat Transfer Enhancement in Non-Circular Tube Flow of Viscoelastic Fluids, **6th *International Conference on Mechanics of Time-Dependent Materials***, Monterey CA, March 30 - April 4, 2008, Proceedings published by Curran Associates, Inc., March 2008. **ISBN-10: 1605601128**

2007

- ***Asmatulu, R.*** and ***Siginer, D.A.,*** Manipulation of Organic and Inorganic Colloidal Particles by Dielectrophoretic Forces, **ASME IMEC&E**, Paper No. IMECE2007-44093, Vol. 11: Micro and Nano Systems, p. 81-84, **ISBN: 0-7918-3812-9**, Seattle, Washington, November 10-15, 2007. **DOI: 10.1115/IMECE2007-44093**
- ***Letelier F.M., Stockle, J***. and ***Siginer, D.A.***, Magnetorheological Flow in Pipes: An Exploration of the Time Variation of Herschel-Bulkley Parameters, **ASME IMEC&E**, Paper No. IMECE2007-43915, Vol. 8, p. 1947-1952, **ISBN: 0-7918-3812-9**, **eISBN: 0-7918-3812-9**, Seattle, Washington, November 10-15, 2007. **DOI: 10.1115/IMECE2007-43915**
- ***Siginer, D.A., Letelier F.M.***, ***Jean Paul Ruliez*** and ***Omar F. Corral,*** An Inverse Method for Material Characterization of Magnetorheological Dampers, **5th *Joint ASME/JSME Fluids Engineering Conference***, Paper No. FEDSM2007-37305, Vol. 1, pp. 1731-1736, **ISBN: 0-7918-3805-6 | eISBN: 0-7918-3805-6,** San Diego, California, July 30- August 2, 2007. **DOI: 10.1115/FEDSM2007-37305**

2006

- ***Siginer, D.A***., Heat Transfer in Internal Flows of Non-Linear Fluids: A Review, **ASME IMECE**, Paper No. IMECE2006 - 16077, pp. 935-945, **ISBN: 0-7918-3790-4**, Chicago, Illinois, November 5-10, 2006. **DOI: 10.1115/IMECE2006-16077**
- ***Bakhtiyarov***, ***S.I.***, ***Shakhverdiev, A.***, ***Panakhov***, ***G.***, ***Siginer***, ***D.A.*** and ***Abbasov***, ***E.***, In-Situ Carbon Dioxide Generation for Oil Recovery: Experimental Study of Pressure and Temperature Variations during Stoichiometric Reaction, **ASME IMECE**, Paper No. IMECE2006-15708, pp. 895-898, **ISBN: 0-7918-3790-4**, Chicago, Illinois, November 5-10, 2006. **DOI: 10.1115/IMECE2006-15708**
- ***Letelier F.M.*** and ***Siginer***, ***D.A.***, Oscillatory Flow of Magnetorheological Fluids in Pipes, **ASME IMEC&E**, paper IMECE2006-13088, pp. 837-840, **ISBN: 0-7918-4770-5 | eISBN: 0-7918-3790-4**, Chicago, Illinois, November 5-10, 2006. **DOI: 10.1115/IMECE2006-13088**
- ***Coskun, O., Grigg, R., Svec, R., Bakhtiyarov, S.I.*** and ***Siginer, D.A.,*** The Effect of Salinity on In-Situ Generated CO_2 Gas: Simulations and Experiments, **ASME *Int. Mechanical Engineering Congress & Exposition***, paper IMECE2006-15703, pp. 887-894**, ISBN: 0-7918-3790-4**, Chicago, Illinois, November 5-10, 2006. **DOI: 10.1115/IMECE2006-15703**
- ***Siginer, D.A.,*** and ***Letelier F.M.,*** Heat Transfer in Laminar Tube Flow of a Class of Non-Affine Viscoelastic Fluids, **2nd *Joint US–European Fluids Engineering Conference***, Paper No. FEDSM2006-98314, pp. 1459-1466, **ISBN: 0-7918-3783-1 | eISBN: 0-7918-3783-1**, Miami, Florida, July 17- 20, 2006. **DOI: 10.1115/FEDSM2006-98314**

2005

- ***Letelier F.M.***, ***Siginer, D.A.***, ***Jean Paul Ruliez*** and ***Omar F. Corral,*** Mathematical Modeling of Magneto-Hydrodynamic Dampers With Time Varying Fluid Properties, **ASME *Int. Mechanical Engineering Congress & Exposition***, Paper No. IMECE2005 - 81172, pp. 913-918, **ISBN: 0-7918-4219-3 | eISBN: 0-7918-3769-6,** Orlando, Florida, November 5-11, 2005. **DOI: 10.1115/IMECE2005-81172**
- ***Siginer, D.A., Plenary Lecture***, Heat Transfer Enhancement in Laminar Flow of Viscoelastic Fluids in Straight Tubes of Arbitrary Shape, Proceedings, **4th *Pacific Rim Conference on Rheology* (PRCR4)**, Shanghai, China, August 7-11, 2005. Published in: Advances in Rheology and its Applications, pp.776-781, 2005.
- ***Siginer, D.A.,*** and ***Morrone, B.,*** Natural Convection in Inclined Two-Dimensional Rectangular Cavities, **XXIII *Congresso Nazionale UIT sulla Trasmissione del Calore*** (23rd Italian Union of Thermal Fluid Dynamics-UIT National Heat Transfer Conference), University of Parma, Parma, Italy, June 20-22, 2005.
- ***Siginer, D.A.,*** and ***Morrone, B.,*** Numerical Investigation of Three-Dimensional Natural Convection in Tilted Cavities, **XXIII *Congresso Nazionale UIT sulla Trasmissione del Calore*** (23rd Italian Union of Thermal Fluid Dynamics-UIT National Heat Transfer Conference), University of Parma, Parma, Italy, June 20-22, 2005.
- ***Siginer, D.A.,*** Heat Transfer in Laminar Flow of Viscoelastic Fluids in Straight Tubes of Arbitrary Shape, Proceedings, 10 pages, **14th *Nordic Rheology Conference***, Tampere University of Technology, Tampere, Finland, June 1-3, 2005.

2004

- ***Letelier F.M.***, ***Madariaga***, ***N.*** and ***Siginer, D.A.***, Unsteady Flow of a Non-Linear Viscoelastic Fluid in Pipes, **ASME IMEC&E**, Paper No. IMECE2004 - 59693, Vol. 1, **ISBN: 0-7918-4178-2**, Anaheim, California, November 13-19, 2004. **DOI: 10.1115/IMECE2004-59693**

2003

- ***Letelier F.M.,*** and ***Siginer, D.A.***, Steady Flow of Visco-Plasto-Elastic Fluids in Pipes, **ASME IMEC&E**, Paper No. IMECE2003-43683, Vol. 1, pp. 789-792, **ISBN: 0-7918-4663-6**, Washington D.C., November 16-21, 2003. **DOI: 10.1115/IMECE2003-43683**
- ***Letelier F.M., Raul Gaete*** and ***Siginer, D.A.***, Steady Flow of Viscoelastic Fluids in Channels with Arbitrarily Varying Cross-Section Shape, ***ASME Int. Mechanical Engineering Congress & Exposition***, Paper No. IMECE2003- 43954, Vol. 1, pp. 815-819, **ISBN: 0-7918-4663-6**, Washington D.C., November 16-21, 2003. **DOI: 10.1115/IMECE2003-43954**
- ***Siginer, D.A.***, Review of Secondary Flows of Viscoelastic Fluids, ***FEDSM-JSME*** 2003, Symposium in Honor and Memory of the late Professor Charles Speziale, Paper No.FEDSM2003-45327, Vol.2, pp. 1843-1854, **ISBN: 0-7918-3697-5, eISBN No. 0-7918-3673-8**, Honolulu, Hawaii , July 6-10, 2003. **DOI: 10.1115/FEDSM2003-45327**

2002

- ***Letelier F.M., Siginer, D.A.*** and ***Mardonez, A.***, Heat Transfer in Steady Flow of Viscoelastic Fluids in Pipes of Complex Shapes , ***ASME IMEC&E***, Paper No. IMECE2002-32232, FED-Vol. 258, pp.283-289, New Orleans, LA, November 17-22, 2002. **DOI: 10.1115/IMECE2002-32232**

- ***Letelier F.M., Acosta M.***, ***Córdova, J***. and ***Siginer, D.A.***, Steady Secondary Flows of Phan-Thien-Tanner Fluids in the Vicinity of a Corner, ***ASME IMEC&E***, Paper No. IMECE2002-32233, FED-Vol. 258, pp.291-295, New Orleans, LA, November 17-22, 2002 **DOI: 10.1115/IMECE2002-32233**
- ***Siginer, D.A.*** and ***Letelier, M.F.,*** Secondary Flows of Viscoelastic Fluids in Tubes, ***7th Pan American Congress of Applied Mechanics***, sponsored by the American Academy of Mechanics, Proceedings: Applied Mechanics in the Americas, Vol.9, pp.261-264, Temuco, Chile, January 2-4, 2002. **DOI: 10.13140/RG.2.2.12025.88163**
- ***Letelier, M.F., Rojas, R.*** and ***Siginer, D.A.,*** Flujo en Medios Porosos Confinados con Permeabilidad Variable, ***7th Pan American Congress of Applied Mechanics***, sponsored by the American Academy of Mechanics, Proceedings: Applied Mechanics in the Americas,Vol.9, pp.289-293,Temuco, Chile, January 2-4, 2002. **DOI: 10.13140/RG.2.2.13074.45769**

2001

- ***Letelier F.M., Olguin M.A.*** and ***Siginer, D.A.***, Steady Secondary Flows of Phan-Thien-Tanner Fluids in Pipes of Complex Shapes, ***ASME IMEC&E***, FED-24909, Vol. 255, pp.65-70, New York, NY, November 11-16, 2001. **DOI: 10.13140/RG.2.1.3038.1840**
- ***Bakhtiyarov, S.I.*** and ***Siginer, D.A.***, CFD Simulations of Flow Dynamics in Porous Media of Variable Permeability Arranged in Series, **DOI: 10.13140/RG.2.1.1989.6086**, ***ASME IMEC&E***, FED-Vol. 255, pp. 25-28, New York, NY, November 11-16, 2001.

2000

- ***Siginer, D.A.,*** The Physics of the Secondary Flows of Viscoelastic Fluids in Straight Tubes, ***ASME Fluids Engineering Division Lecture***, **DOI: 10.13140/RG.2.1.3698.6645**, ***ASME IMEC&E***, FED-Vol.252, pp.1-17, Orlando, Florida, November 5-10, 2000.
- ***Letelier, M.F.*** and ***Siginer, D.A.***, Friction Effects in Pipe Flow of Phan-Thien Tanner Fluids, ***ASME Int. Mechanical Engineering Congress & Exposition***, **DOI: 10.13140/RG.2.1.4354.0245**, FED-Vol.252, pp.113-117, Orlando, FL, November 5-10, 2000.
- ***Siginer, D.A.,*** The Mechanics of the Secondary Flows of Viscoelastic Fluids in Non-Circular Straight Tubes and the Mean Transversal Field in Pulsating Flows, **DOI: 10.13140/RG.2.1.1863.6562**, ***ASME IMEC&E***, Symposium on Recent Advances in the Mechanics of Structured Continua, AMD-Vol.244, MD-Vol.92, pp.75-89, Orlando, Florida, November 5-10, 2000.
- ***Rockland, H.R., Siginer, D.A.*** and ***Bloom, J.,*** Secondary and Post-Secondary Partnering: Enhancing the Pre-engineering Curriculum, ***International Congress on Engineering Education (ICEE),*** Taipei, Taiwan, August 14-16, 2000.

1999

- ***Siginer, D.A.*** and ***Letelier, M.F***., Longitudinal and Secondary Flow Fields in the Pulsating Pressure Gradient Driven Motion of Non-Newtonian Fluids in Tubes of Unconventional Shapes, ***The Sixth Pan American Congress of Applied Mechanics***, sponsored by the American Academy of Mechanics, Proceedings: Applied Mechanics in the Americas, Vol. 6, pp. 159-162, Rio de Janeiro, Brazil, January 4-7, 1999.

1998

- ***Bakhtiyarov, S.I.*** and ***Siginer, D.A.,*** Interfacial Velocity in the Core-Annular Flow in a Tube***, ASME IMEC&E,*** FED-Vol. 246, MD-Vol. 81, pp. 33-36, Anaheim, CA, November 15-20, 1998.
- ***Siginer, D.A.,*** Natural Convection and Thermocapillary Flow of Non-Newtonian Fluids in Layered Systems Heated From the Side in Reduced Gravity, ***ASME IMECE,*** FED-Vol. 246, MD-Vol. 81, pp. 27-32, Anaheim, CA, November 15-20, 1998.
- ***Sanders, C., Bakhtiyarov, S.I.*** and ***Siginer, D.A.***, Rheological Characterization of High Percent Solids Kraft Black Liquor, **https://doi.org/10.13140/RG.2.1.1121.4486*****, ASME IMEC&E,*** FED-Vol. 246, MD-Vol. 81, pp. 137-144, Anaheim, CA, November 15-20, 1998.
- ***Letelier, M.F.*** and ***Siginer, D.A.***, Oscillatory Viscoelastic Flow in Rectangular Tubes, ***ASME Int. Mechanical Engineering Congress & Exposition,*** FED-Vol. 246, MD-Vol. 81, pp. 19-26, **https://doi.org/10.13140/RG.2.1.4529.3202,** Anaheim, CA, November 15-20, 1998.
- ***Siginer, D.A.*** and ***Letelier, M.F.***, Secondary Flows of a Viscoelastic Fluid in Pipes of Complex Cross-sectional Shapes, ***ASME IMEC&E,*** FED-Vol. 246, MD-Vol. 81, pp. 47-52, Anaheim, CA, November 15-20, 1998.
- ***Letelier, M.F.*** and ***Siginer, D.A.***, Applications of Natural Coordinates to Non-Newtonian Flows in Non-Circular Pipes, ***Chilean Congress of Mechanical Engineering***, Proceedings, pp. 56-64, Concepción, Chile, October 27-30, 1998.
- ***Letelier, M.F.*** and ***Siginer, D.A.***, An Extension of Duhamel's Method to Viscoelastic Flow Characterized by Integral and Differential Constitutive Equations in Non-Circular Pipes, **https://doi.org/10.13140/RG.2.1.4143.0168**, ***Chilean Congress of Mechanical Engineering***, Universidad de Concepción, Proceedings, pp. 162-171, Chile, October 27-30, 1998.

1997

- ***Siginer, D.A.*** and ***Jacks, T.E.***, Thermocapillary Convection of Viscoinelastic Fluids in Layered Fluid Systems, ***ASME Int. Mechanical Engineering Congress & Exposition***, **https://doi.org/10.13140/RG.2.1.3102.3765**, Symposium on the Rheology & Fluid Mechanics of Non-linear Materials, FED-Vol. 248, MD-Vol. 78, pp. 229-242 Dallas, TX, November 16-21, 1997.
- ***Siginer, D.A.*** and ***Yunling, L.***, Non-Viscometric Flows of Viscoelastic Fluids in Round Tubes Driven by Transversal Boundary Waves, **https://doi.org/10.13140/RG.2.1.2303.6562*****, ASME IMEC&E***, 4th Int. Symposium on Fluid-Structure

Interactions, Aeroelasticity and Flow-Induced Vibration & Noise, Vol. II, AMD-Vol. 53-2. pp. 19-27, Dallas, TX, November 16-21, 1997.

- ***Letelier***, ***M.F.*** and ***Siginer, D.A***., Pulsating Viscoelastic Flow in Tubes of Arbitrary Cross-section Shapes, **https://doi.org/10.13140/RG.2.1.2041.5122**, ***ASME IMEC&E***, FED-Vol 243, MD-Vol. 78, pp. 221-228, Dallas, TX, November 16-21, 1997.
- ***Siginer, D.A., Yunling, L.*** and ***Jacks, T.E.,*** Marangoni and Buoyancy Driven Flows of Non-Newtonian Fluids in Layered Fluid Systems, ***Int. Symp. on Liquid-Liquid Two Phase Flow and Transport Phenomena - LLFT97***, ICHMT Digital Library, **https://doi.org/10.1615/ICHMT.1997.IntSymLiqTwoPhaseFlowTranspPhen.170**, pp. 165-176, Antalya, Turkey, November 3-7, 1997.
- ***Bakhtiyarov, S.I.*** and ***Siginer, D.A.***, A Note on the Laminar Core-Annular Flow of Two Immiscible Fluids in a Horizontal Tube, ***Int. Symp. on Liquid-Liquid Two Phase Flow and Transport Phenomena - LLFT97***, ICHMT Digital Library, **https://doi.org/10.1615/ICHMT.1997.IntSymLiqTwoPhaseFlowTranspPhen.110**, pp. 107-11, Antalya, Turkey, November 3-7, 1997.

1996

- ***Siginer, D.A.*** and ***Bakhtiyarov, S.***, Displacement of one Fluid by another in Tubes, ***ASME IMEC&E***, AMD-Vol. 217, pp. 85-93, Atlanta, GA, November 17-22, 1996.
- ***Siginer, D.A.*** and ***Bakhtiyarov, S.***, Novel Effects in the Flow of Viscoelastic Fluids in Non-Homogeneous Porous Media, **XIIth** ***Int. Congress on Rheology***, Proceedings (**ISBN: 2-9805109-0-4**) Editors A. Ait-Kadi *et al*., pp. 379-381, Québec City, Canada, August 18-23, 1996.
- ***Siginer, D.A.*** and ***Bakhtiyarov, S.***, Fluid Displacement in Horizontal Tubes, ***5th Annual Meeting of the Nordic Rheology Society***, Annual Transactions of the Nordic Rheology Society, Vol. 4, pp. 63-66, Stavanger, Norway, June 12-15, 1996.
- ***Siginer, D.A.*** and ***Bakhtiyarov, S.***, Viscoelastic Fluid Flow in Nonhomogeneous Porous Media, ***5th Annual Meeting of the Nordic Rheology Society***, Annual Transactions of the Nordic Rheology Society, Vol. 4, p. 44-47, Stavanger, Norway, June 12-15, 1996.
- ***Siginer, D.A.*** and ***Bakhtiyarov, S.***, Flow of Drilling Fluids Between Eccentric Rotating Cylinders, ***5th Annual Meeting of the Nordic Rheology Society***, Annual Transactions of the Nordic Rheology Society, Vol. 4, p. 59-62, Stavanger, Norway, June 12-15, 1996.
- ***Siginer, D.A.*** and ***Bakhtiyarov, S.,*** Viscoelastic Fluid Flow in Inhomogeneous Porous Media, ***Energy Week'96 Conference & Exhibition*** Proceedings: organized by ***ASME Petroleum Division*** and ***API American Petroleum*** Institute, PennWell Conferences & Exhibitions, Book III, p. 313-318, Houston, Texas, January 29-February 2, 1996.

1995

- ***Siginer, D.A.***, ***Basistov, Y.A.*** and ***Yanovsky, Y.G.***, A Minimax Method for the Inversion of Fredholm Equations of the First Kind and the Determination of Linear Relaxation Spectra, ***ASME Int. Mechanical Engineering Congress & Exposition***, FED-Vol. 231, MD-Vol. 66, p. 39-52, San Francisco, CA, November 12-17, 1995.
- ***Siginer, D.A.***, and ***Bakhtiyarov, S.,*** Flow of Linear Fluidity Fluids in Eccentric Annuli, ***ASME IMEC&E,*** Symposium on Developments and Applications of Non-Newtonian Flows 1995, FED-Vol. 231, MD-Vol. 66, p. 135-140, San Francisco, CA, November 12-17, 1995.
- ***Siginer, D.A.***, ***Yanovsky, Y.G.*** and ***Andrienko, Y.A.,*** Resonance-like Behavior of Viscoelastic Fluids in Periodically Driven Tube Flows, ***ASME IMEC&E***, FED-Vol. 231, MD-Vol. 66, p. 217-224, San Francisco, CA, November 12-17, 1995.

1994

- ***Siginer, D.A.,*** On the Instability of the Fluids of Second Grade in Nearly Viscometric Motions, ***ASME IMEC&E***, Symposium on Developments in Non-Newtonian Flows, AMD-Vol. 191, FED -Vol. 206, p. 17-30, Chicago, Illinois, November 6-11, 1994.
- ***Siginer, D.A., Basistov, Y.A.*** and ***Yanovsky, Y.G.,*** Relaxation Functions of Linear Viscoelasticity Via Minimax Method, ***Pacific Conference on Rheology and Polymer Processing***, Proceedings, pp. 21-23, Kyoto, Japan, September 26-30, 1994.
- ***Siginer, D.A., Basistov, Y.A.*** and ***Yanovsky, Y.G.,*** A Minimax Method for the Determination of Relaxation Spectra, ***Progress and Trends in Rheology IV*: *Proceedings of the Fourth European Rheology Conference,*** Sevilla, Spain**,** September 4 - 9, 1994, Editor: C. Gallegos, pp. 463-466, Steinkopff Verlag, Darmstadt - 1994. **ISBN: 3-7985-1005-9; https://doi.org/10.13140/RG.2.2.30556.18567**
- ***Siginer, D.A.*** and ***Valenzuela-Rendón, A.,*** Natural Convection of Viscoelastic Liquids, ***ASME Fluids Engineering Division Summer Meeting***, Symposium on "Numerical Methods for Non-Newtonian Fluid Dynamics", FED-Vol. 179, pp. 31-41, Lake Tahoe, Nevada, June 19-23, 1994. **https://doi.org/10.13140/RG.2.2.13003.18721**

1993

- ***Siginer, D.A.*** and ***Yanovsky, Y.G.***, A Constitutive Theory for Macromolecular Media, ***ASME Winter Annual Meeting,*** AMD-Vol. 175, New Orleans, Louisiana, Nov. 28 - Dec. 3, 1993. **https://doi.org/10.13140/RG.2.2.19356.90247**
- ***Siginer, D.A.***, ***Basistov, Y.A.*** and ***Yanovsky, Y.G.***, Minimax Method and Relaxation Spectra in Rheometry, ***Symp. on Advances in Structured and Heterogeneous Continua***, Proceedings, p. 277-286, (Allerton Press, Inc., New York, NY, 1994), Moscow, Russia, August 22-26, 1993.
- ***Siginer, D. A.,*** A Constitutive Theory for Polymeric Liquids, ***invited paper***, joint meeting of the ***ASME Applied Mechanics*** and Bioengineering Divisions, ***ASCE Engineering Mechanics Division*** and the ***Society of Engineering Science*** (SES), AMD-Vol. 168, p. 81-92, University of Virginia, Charlottesville, VA, June 6-9, 1993.

- ***Siginer, D.A.,*** and A. ***Valenzuela-Rendón, A.,*** Energy Considerations in the Flow Enhancement of Viscoelastic Liquids, joint meeting of ***ASME Applied Mechanics*** and ***Bioengineering*** Divisions, ***ASCE Mechanics*** Division and the ***Society of Engineering Science*** (SES), ASME paper 93-APM-11, University of Virginia, Charlottesville, VA, June 6-9, 1993.
- ***Siginer, D. A.***, A New Constitutive Equation for Concentrated Polymer Solutions and Melts, ***invited plenary paper***, ***Symp. on Recent Developments in Structured Continua III***, Montreal, Canada, May 26-28, 1993.
- ***Siginer, D.A.,*** and ***Valenzuela-Rendón, A.,*** Buoyancy Driven Flows of Viscoelastic Liquids in Enclosures, ***The Third Pan American Congress of Applied Mechanics,*** sponsored by the American Academy of Mechanics, Sao Paulo, Brazil, p. 335-339, January 4-8, 1993.

1992

- ***Siginer, D.A.,*** Periodically Driven Viscoelastic Flows and Energy Savings, ***invited plenary paper, Int. Symp.*** on "Current Problems of Rheology, Biomechanics and Biorheology" organized by the ***Russian Academy of Sciences***, Proceedings, p. 57-65, Moscow, Russia, August 31 - September 3, 1992.
- ***Siginer, D.A. and Valenzuela-Rendón, A.,*** Buoyancy-Driven Non-Newtonian Flows in Enclosures, ***ASME Winter Annual Meeting,*** Symposium on Recent Advances in Non-Newtonian Flows, AMD-Vol. 153 & FED-Vol. 141, p. 67-75, Anaheim, CA, November 8-13, 1992. **https://doi.org/10.13140/RG.2.2.27200.74248, ISBN-10: 079181121, ISBN-13: 978-0791811214,**

1991

- ***Siginer, D.A., plenary paper,*** Multiple Integral Constitutive Equations in Unsteady Flows and Rheometry, ***Int. Symp.*** on "Some Current Problems of Rheology, Biomechanics and Biorheology", ***Academy of Sciences of the USSR,*** Moscow, USSR, August 19-25, 1991, (printed in the International Journal of Polymeric Materials, 1993).
- ***Siginer, D.A.,*** On the Nearly Viscometric Flows of Viscoelastic Liquids Driven by Periodic Forcing, ***The Second Pan American Congress of Applied Mechanics,*** sponsored by the National Science Foundation and the American Academy of Mechanics, p. 448-452, Valparaiso, Chile, January 2-5, 1991.

1990

- ***Siginer, D.A.,*** On a Class of Unsteady Motions of Elastico-Viscous Liquids, ***ASME Winter Annual Meeting,*** FED-Vol. 102, p. 35-37, Dallas, Texas, November 25-30, 1990. **ISBN 0-7918-0578-6**
- ***Siginer, D.A.,*** Unsteady Shear Flows of Viscoelastic Liquids Driven by Periodic Forcing, ***Third European Rheology Conference***, ***Elsevier Applied Science***, p. 447-450, Edinburgh, Scotland, September 3-7, 1990.
- ***Siginer, D.A., plenary paper,*** On the Parallel and Orthogonal Superposition of Pure and Oscillatory Shear of Simple Fluids, ***Symposium on the "Recent Developments in Structured Continua II",*** p. 158-182, Université de Sherbrooke, Sherbrooke, Canada, May 23-25, 1990. **https://doi.org/10.13140/RG.2.1.2876.2480**
- ***Siginer, D.A.,*** Unsteady Shear Flows of Viscoelastic Liquids, ***IASTED Int. Conference on Modeling and Simulation,*** Montreal, Canada, May 22-24, 1990.
- ***Siginer, D.A.,*** Non-linear Effects of Boundary Vibration on the Flow of Viscoelastic Liquids, ***Int. Congress on Recent Developments in Air and Structure Borne Sound and Vibration,*** Vol. 2, p. 819-826, Auburn University, Alabama, March 6-8, 1990.
- ***Siginer, D.A., Cecen, K.,*** and ***Omay, E.,*** The Study of Collector Wells by Means of Viscous Flow Analogy, ***Proceedings of the 13th Congress of the International Association for Hydraulic Research (IAHR),*** V. 4, Subject D, p. 1-10, Kyoto, Japan, August 31-September 5,1972.

Conference Papers: Extended Abstracts and Abstracts; Seminars

2018

- ***Siginer, D.A.***, ***Invited Speaker***, Tube Flow of Elasto-Viscoplastic Phase Change Materials, 9th International Workshop on Advanced Materials Science and Nanotechnology, IWAMSN 2018, *Ninh Binh City, Vietnam*, November 7-11, 2018

2015

- ***Siginer, D.A.***, ***Keynote***, Normal Stress Driven Motions of Newtonian and Complex Fluids, 2nd International Conference on Rheology and Modeling of Materials, **https://doi.org/10.13140/RG.2.1.5160.2643**, http://www.ic-rmm2.eu/ , *Miskolc-Lillafüred, Hungary*, October 5-9, 2015
- ***Siginer, D.A.***, ***Keynote*** , Normal Stress Driven Motions of Newtonian and Complex Fluids, ICTEA 2015 - 8th International Conference on Thermal Engineering Theory and Applications, **https://doi.org/10.13140/RG.2.1.3562.2568** http://www.ictea.ca/2015/keynote.html , *Amman, Jordan*, May 18- 21, 2015
- ***Siginer, D.A.***, ***Invited Seminar***, Normal Stress Driven Motions of Newtonian Fluids and Non-Colloidal Suspensions in Tubes, Department of Mathematics, Gaziantep University, *Gaziantep*, *Turkey*, May 15, 2015
- ***Siginer, D.A.***, ***Invited Lecture,*** International Comparative Overview of Faculty Promotion Regulations and Practices, Universidad de Santiago de Chile, *Santiago*, *Chile*, January 6, 2015

2013

- ***Siginer, D.A.***, ***Plenary***, Heat Transfer Asymptote in Laminar Tube Flow of Non-linear Viscoelastic Fluids, 1st International Conference on Rheology and Modeling of Materials, **https://doi.org/10.13140/RG.2.1.5160.2643**, http://www.ic-rmm1.eu/ , *Miskolc-Lillafüred, Hungary*, October 7-11, 2013

2012

- ***Siginer, D.A.***, The Challenge of CFD in Rheological Fluid Mechanics, **ASME IMECE**, DVD Proceedings, Paper No. IMECE2012-94155, *Houston, Texas*, Nov. 9-15, 2012.

2011

- ***Siginer, D.A.***, ***Invited Seminar***, Heat Transfer Asymptote in Laminar Flow of Non-Linear Viscoelastic Fluids in Ducts and Industrial Applications, http://me.yeditepe.edu.tr/seminer-oku.asp?seminarid=165, *Yeditepe University*, *Istanbul*, *Turkey*, June 11, 2011.

2010

- ***Khusid B., Shen Y., Elele E., Palle P.*** and ***Siginer, D.A.***, Electro-hydrodynamic Drop-on-Demand Printing of Personalized Medicines on Porous Film, **ASME IMECE**, paper IMECE2010-38140, *Vancouver, British Columbia*, Nov. 12-18, 2010.
- ***Siginer, D.A.*** and ***Akyildiz, F. T.***, Analytical Solution for Laminar Flow in Transversally Corrugated Microtubes, **ASME IMECE**, DVD Proceedings, Paper No. IMECE2010-38717, *Vancouver, British Columbia*, Nov. 12-18, 2010.
- ***Siginer, D.A.*** and ***Letelier, M.***, Heat Transfer Asymptote in Laminar Flow in Straight Ducts, **ASME IMECE**, DVD Proceedings, Paper No. IMECE2010-38684, *Vancouver, British Columbia*, Nov. 12-18, 2010.
- ***Siginer, D.A.*** and ***Akyildiz, F. T.***, Drainage of Thin Viscoelastic Films, **ASME IMECE**, DVD Proceedings, paper IMECE2010-38717, *Vancouver, British Columbia*, Nov. 12-18, 2010.

2009

- ***Akyildiz, F. T.*** and ***Siginer, D.A.***, Natural Convection and Heat Transfer of a Newtonian Fluid in Vertical Porous Channels and Second Order Non-Linear Systems, ***5th Int. Conf on Dynamical Systems and Applications***, Ovidius University of Constanta, *Constanta, Romania*, June 15-18, 2009.

2008

- ***Siginer, D.A.***, Inverse Modeling of Magneto-Rheological Dampers: Bingham and Herschel-Bulkley Models, ***61st APS Annual Fluid Dynamics Division Meeting***, Abstract **ID: BAPS.2008.DFD.MT.2**, *San Antonio, Texas*, November 23-25, 2008. http://meetings.aps.org/Meeting/DFD08/Session/MT.2
- ***Siginer, D.A., Invited Seminar,*** Heat Transfer Asymptote in Laminar Flow of Non-Linear Viscoelastic Fluids in Straight Non-Circular Tubes and Interplay of Elasticity and Inertia in Heat Transfer Enhancement, Michigan Technological University, Department of Mechanical Engineering-Engineering Mechanics, *Houghton, Michigan*, Nov. 20, 2008, http://www.me.mtu.edu/seminar/2008-2009/siginer-seminar.pdf
- ***Siginer, D.A*** and ***Letelier F. M.,*** The Physics of the Heat Transfer Enhancement with Complex Fluids in Non-Circular Tubes, ***First American Academy of Mechanics Conference***, *New Orleans, Louisiana*, June 17-20, 2008.
- ***Siginer, D.A*** and ***Letelier F. M.,*** Inverse Modeling of Magneto-Rheological Dampers: Bingham Model, ***First American Academy of Mechanics Conference***, *New Orleans, Louisiana*, June 17-20, 2008.

2007

- ***Siginer, D.A.,*** Interplay of Inertia and Elasticity, Enhanced Heat Transfer and Change of Type of Vorticity in Tube Flow of Nonlinear Viscoelastic Fluids, **60th *APS Annual Fluid Dynamics Division Meeting***, paper DFD07-2007-001592, Abstract ID: BAPS.2007.DFD.AB.5, http://meetings.aps.org/Meeting/DFD07/Session/AB.5, *Salt Lake City, Utah*, November 18-21, 2007.
- ***Siginer, D.A., Invited talk,*** Change of Type of Vorticity Transport in the Flow of Viscoelastic Fluids in Non-Circular Tubes and Heat Transfer, ***Colloquium in Honor of Professor Jean Bataille***, Ecole Centrale de *Lyon, France*, June 19-20, 2007.
- ***Siginer, D.A., Keynote talk,*** Enhanced Heat Transfer and Change of Type of Vorticity in Tube Flow of Constitutively Non-linear Fluids, **3rd *Int. Conference on Thermal Engineering***, *Amman, Jordan*, May 21-23, 2007.

2006

- ***Siginer, D.A.,*** Laminar Tube Flow of Complex Fluids and Heat Transfer Enhancement, **59th *APS Annual Fluid Dynamics Division Meeting***, http://meetings.aps.org/Meeting/DFD06/Session/OI.3, paper DFD06-2006-001353, Abstract **ID: BAPS.2006.DFD.OI.3**, *Tampa, Florida*, November 19-21, 2006.
- ***Siginer, D.A.,*** Heat Transfer Enhancement in Internal Flows of Complex Fluids, **43rd *Technical Meeting of the Society of Engineering Science-SES***, Pennsylvania State University, State College, PA, August 13-16, 2006.
- ***Siginer, D.A., Keynote talk,*** Heat Transfer Enhancement in Internal Flows of Non-Linear Fluids, **2nd *International Conference on Thermal Engineering***, Al Ain, United Arab Emirates, January 3-6, 2006.

2005

- ***Siginer, D.A.,*** Natural Convection of Viscoelastic Fluids in Rectangular Cavities, ***ASME Int. Mechanical Engineering Congress & Exposition***, paper IMECE2005 - 83056, Orlando, Florida November 5-11, 2005.
- ***Kook Long, Cheong*** and ***Siginer, D.A***, Natural Convection of Newtonian Fluids with Linear Density-Temperature Assumption- ***Undergraduate Research Forum***, Wichita State University, Wichita, KS, April 29, 2005.

2004

- ***Siginer, D.A***, Secondary Flows of Viscoelastic Fluids in Laminar Flow in Straight Tubes of Arbitrary Shape and Heat Transfer - ***invited talk, 41st Technical Meeting of the Society of Engineering Science-SES***, University of Nebraska, Lincoln, NE, October 10-13, 2004.
- ***Siginer, D.A., Plenary Lecture,*** Heat Transfer with Viscoelastic Fluids in Laminar Flow, ***International Conference on Thermal Engineering Theory and Applications,*** Beirut, Lebanon, May 31-June 4, 2004.

2003

- ***Siginer, D.A***., Heat Transfer Effects due to Secondary Flows of Viscoelastic Fluids in Straight Pipes of Arbitrary Shape-***invited talk, ASME Int. Mechanical Engineering Congress & Exposition***, Recent Advances in the Mechanics of Non-Newtonian Fluids, ASME IMEC&E, Washington D.C, November16-21, 2003.

2002

- ***Siginer, D.A.,*** Secondary Flows of Viscoelastic Fluids, **14th *US National Congress of Theoretical and Applied Mechanics***, Virginia Polytechnic Institute, Blacksburg, VA, June 23-28, 2002.

1999

- ***Siginer, D.A.*** and ***Letelier, M.F.,*** Secondary Flows in Pulsating Viscoelastic Flow, ***ASME/JSME Joint Fluids Engineering Conference***, Forum on Functional Fluids, San Francisco, CA, July 18-22, 1999.

1998

- ***Siginer, D.A., Yunling, L.*** and ***Jacks, T.E.,*** Marangoni and Buoyancy Driven Flows of Non-Newtonian Fluids in Layered Fluid Systems, **13th *U.S. National Congress of Applied Mechanics,*** Gainesville, Florida, June 21-26, 1998.

1997

- ***Bakhtiyarov, S.I.*** and ***Siginer, D.A.,*** New Flow Phenomena in Nonhomogeneous Porous Media, ***The* 2nd *Pacific Rim Conference on Rheology***, Melbourne, Australia, July 27-31, 1997.
- ***Andrienko, Yu. A., Siginer, D.A.*** and ***Yanovsky, Yu. G.,*** Resonance Behavior of Viscoelastic Fluids in Poiseuille Flow and Application to Flow Enhancement, ***The* 2nd *Pacific Rim Conference on Rheology***, Melbourne, Australia, July 27-31, 1997.
- ***Siginer, D.A.*** and ***Bakhtiyarov, S.I.,*** Flow of Non-Newtonian Fluids Between Rotating Eccentric Cylinders, ***The* 2nd *Pacific Rim Conference on Rheology***, Melbourne, Australia, July 27-31, 1997.
- ***Siginer, D.A.*** and ***Yunling, L.***, Marangoni and Buoyancy Driven Flows in Layered Liquid-Liquid Systems, ***IUTAM Symp. on Rheology and Computation***, The University of Sydney, Sydney, Australia, July 20-25, 1997.
- ***Siginer, D.A.***, ***plenary lecture***, University Research and its Impact on Higher Education, ***Annual Meeting of the Caribbean Academy of Sciences***, Barbados, April 23-25, 1997.
- ***Siginer, D.A.*** and ***Bakhtiyarov, S.***, Flow in Nonhomogeneous Porous Media and New Effects, **68th *Meeting of the Society of Rheology***, Galveston, TX, February 16-20, 1997.
- ***Siginer, D.A.*** and ***Bakhtiyarov, S.***, Displacement of One Fluid by Another in a Straight Tube, **68th *Meeting of the Society, of Rheology***, Galveston, TX, February 16-20, 1997.
- ***Siginer, D.A.*** and ***Bakhtiyarov, S.***, Flow Between Eccentric Rotating Cylinders, **68th *Meeting of the Society, of Rheology***, Galveston, TX, February 16-20, 1997.
- ***Siginer, D.A.*** and ***Jacks, T.E.***, Marangoni Convection of Viscoinelastic Fluids in Layered Systems, **68th *Meeting of the Society, of Rheology***, Galveston, TX, February 16-20, 1997.

1995

- ***Siginer, D.A.*** Viscoelastic Fluid Flow in Nonhomogeneous Porous Media, ***invited paper,*** **32nd *Meeting of the Society of Engineering Science,*** Proceedings, D. Hui and S. Michaelides editors, p. 549-550, New Orleans, LA, October 29 - November 1, 1995.

1994

- ***Siginer, D.A., Basistov, Y.A.*** and ***Yanovsky, Y.G.,*** Linear Relaxation Spectra in Rheometry and the Minimax Method, **66th *of the Society of Rheology***, Philadelphia, PA, October 2-6, 1994.
- ***Siginer, D.A., plenary lecture*** , A New Minimax Based Method to Determine the Relaxation Spectrum of Viscoelastic Materials***, Annual Meeting of the Korean Society of Rheology,*** Taejon, Korea, September 29, 1994.
- ***Siginer, D.A.***, Natural Convection of Viscoelastic Liquids, **11th *Canadian Symposium on Fluid Dynamics***, University of Alberta, Edmonton, Alberta, Canada, June 10-12, 1994.

1993-1971

- ***Siginer, D.A.*** and ***Yanovsky, Y.G.,*** A Constitutive Theory for Macromolecular Media, **65th *Meeting of the Society of Rheology*** Boston, MA, October 17-21, 1993.
- ***Siginer, D.A.*** and ***Valenzuela-Rendón, A.,*** Natural Convection of Viscoelastic Liquids, **65th *Meeting of the Society of Rheology*** Boston, MA, October 17-21, 1993.

1991

- ***Siginer, D.A.,*** Loss of Stability and Bifurcations in Disk-Cylinder Systems, **63rd *Meeting of the Society of Rheology,*** Rochester, New York, October 20-24, 1991.
- ***Siginer, , D.A.,*** An Algorithm to Determine the Constitutive Constants of the Integral Fluid of Order Three via Free Surface Rheometry, ***invited paper***, ***ASME Applied Mechanics Conference,*** Columbus, Ohio, June 16-19, 1991.

1990

- ***Siginer, D.A.,*** On Some Unsteady Periodic Motions of Viscoelastic Liquids, **9th *Canadian Symposium on Fluid Dynamics,*** University of Western Ontario, London, Ontario, Canada, June 11-13, 1990.
- ***Siginer, D.A.,*** On the Superposition of Pure and Oscillatory Shear of Viscoelastic Liquids Driven by Quasi-Periodic Forcing, ***62nd Meeting of the Society of Rheology*** (joint meeting with the Society for Engineering Sciences), Santa Fe, New Mexico, October 21-26, 1990.

1989

- ***Siginer, D.A.,*** On the Motion of Viscoelastic Liquids in Disk-Cylinder Systems, **60th *Meeting of the Society of Rheology,*** Gainesville, Florida, February 12-15, 1989.

1988

- ***Siginer, D.A.,*** Boundary Driven Flow in Disk-Cylinder Enclosures, Proceedings of the **8th *Canadian Symposium on Fluid Dynamics,*** p. 76-78, Carleton University, Ottawa, Canada, June 6-8, 1988.
- ***Siginer, D.A.,*** and ***Spain, J.D.,*** Oscillating Viscoelastic Flows, XIV ***Southeastern Conference on Theoretical and Applied Mechanics,*** p. 253, conducted by the University of Mississippi, Biloxi, April 18-19, 1988.

1986

- ***Siginer, D.A.,*** Anomalous Features in the Flow of a Simple Fluid with a Pulsating Pressure Gradient and Vibrating Boundaries, ***2nd Conference of European Rheologists,*** Proceedings, p. 45, Institute of Hydrodynamics and Group of Rheology of the Czechoslovak Academy of Sciences, Prague, Czechoslovakia, June 17-20, 1986.
- ***Siginer, D.A.,*** Flow of Simple Fluids in Circular Pipes Under Vibratory Effects, **7th *Canadian Symposium on Fluid Dynamics,*** Proceedings, p. 83, Mount Allison University, New Brunswick, Canada, June 2-4, 1986.
- ***Siginer, D.A.,*** Flow of a Viscoelastic Liquid Under the Effect of a Variable Pressure Gradient and Vibrating Walls, Proceedings of the joint meeting of the ***Euromech Colloquium* 206** and the ***International Conference on Viscoelasticity of Polymeric Liquids,*** organized on behalf of CNRS, Groupe Francais de Rhéologie and Groupe Francais des Polymères, p. 101-103, Institut de Mécanique de Grenoble, Grenoble, France, January 13-16, 1986.

1985

- ***Siginer, D.A.,*** Influence of Vibrating Pipe Wall on the Mean Rate of Discharge of a Viscoelastic Liquid, **22nd *Meeting of the Society of Engineering Science,*** The Pennsylvania State University, October 7-9, 1985.
- ***Siginer, D.A.,*** Pulsating Flow of a Viscoelastic Liquid in a Circular Pipe, **19th *Midwestern Mechanics Conference,*** Proceedings, p. 165-166, The Ohio State University, September 9-11, 1985.
- ***Siginer, D.A.,*** Torsional Oscillations of a Semi-Cylinder in a Layered Medium of Viscoelastic Liquids, ***10th Canadian Congress of Applied Mechanics,*** Proceedings, V. 2, p. B-99-100, The University of Western Ontario, London, Ontario, Canada, June 2-7, 1985.
- ***Siginer, D.A.,*** Stokes' Second Problem for a Simple Fluid, **10th *Canadian Congress of Applied Mechanics,*** Proceedings, V. 2, p. B-97-98, The University of Western Ontario, London, Ontario, 1985.

1984

- ***Siginer, D.A.,*** Some New Results Concerning Free Surface Phenomena in Rheological Fluid Mechanics, the **XIVth *Int. Congress of Theoretical and Applied Mechanics of IUTAM,*** The Technical University of Denmark, August 19-25, 1984.

1983

- ***Siginer, D.A.,*** Free Surface Flow of Two Immiscible Simple Fluids Driven by an Oscillating Rod, **20th *Meeting of the Society of Engineering Science,*** Proceedings, p. 312-313, University of Delaware, August 22-24, 1983.
- ***Siginer, D.A.,*** Flow and Free Surface of a Non-Newtonian Fluid Between Concentric Cylinders Maintained at Unequal Temperatures, **20th *Meeting of the Society of Engineering Science,*** Proceedings, p. 121-122, University of Delaware, August 22-24, 1983.
- ***Siginer, D.A.,*** The Free Surface Viscometer: Flow of a Simple Fluid Between Rotating Eccentric Cylinders, ***9th Canadian Congress of Applied Mechanics,*** Proceedings, p. 553-554, University of Saskatchewan, Canada, May 30 - June 3, 1983.
- ***Siginer, D.A.,*** Rotating Rod in a Large Vat with Two Layers of Simple Fluids: Theory and Experiments, **9th *Canadian Congress of Applied Mechanics,*** Proceedings, p. 555-556, University of Saskatchewan, Canada, May 30 - June 3,1983.
- ***Siginer, D.A.,*** An Algorithm for the Solution of a Three-Dimensional Stokes' Flow in Bipolar Coordinates, **9th *Canadian Congress of Applied Mechanics,*** Proceedings, p. 751-752, University of Saskatchewan, Canada, May 30 - June 3, 1983.

1982-1971

- ***Siginer, D.A.,*** Some New Results in Rheological Fluid Mechanics Concerning Free Surface Viscometry, **19th *Meeting of the Society of Engineering Science,*** Proceedings, p. 302, University of Missouri - Rolla, October 27-29, 1982
- ***Siginer, D.A.,*** and ***Orhon, D.,*** Segregated Reaction in Activated Sludge Process, **5th *Congress of the Scientific and Technical Research Council of Turkey,*** April 1975.
- ***Siginer, D.A.,*** Flow to a Partially Penetrating Well in an Unconfined Aquifer, **3rd *Congress of the Scientific and Technical Research Council of Turkey,*** University of Ankara, 1971.
- ***Siginer, D.A.,*** On the Hydraulic Conductivity Tensor, **3rd *Congress of the Scientific and Technical Research Council of Turkey,*** University of Ankara, 1971.

BIOGRAPHICAL LISTINGS

- Listed in ***"Who's Who in the World"*** since 1994
- Listed in ***"Who's Who in America"*** since 1995
- Listed in ***"Who's Who in Science and Engineering"*** since 1992
- Listed in ***"Who's Who in American Education"*** since 1990
- Listed in ***"Who's Who Worldwide" Registry*** since 1996

HONORS & AWARDS

- ***Invited speaker***, 9th International Workshop on Advanced Materials Science and Nanotechnology, IWAMSN 2018, Ninh Binh City, Vietnam..... November 7-11, 2018
- ***Member of the International Panel to select the winners of the competition*** "***NCU-Nouveaux Cursus à l'Université***" with a budget of 250 M€; an initiative of the **French Government** administered by the ***Agence Nationale de la Recherche*** - 2017
- ***International Editorial Board***, Transactions of the Azerbaijan National Academy of Sciences (Issue Mechanics), published by the Institute of Mathematics and Mechanics of Azerbaijan NAS. ..... 2016- Present
- ***Plenary***, 2nd International Conference on Rheology and Modeling of Materials, Miskolc, Hungary ..... October 5-9, 2015
- ***International Organization Board***, 2nd International Conference on Rheology and Modeling of Materials (ic-rmm2), Miskolc-Lillafüred, Hungary ..... October 5-9, 2015
- ***International Steering Committees***, 7th and 8th International Conferences on Thermal Engineering Theory and Applications, Marrakech, Morocco and Amman, Jordan, respectively, ... May 10-14, 2014 and May 18-21, 2015
- ***Keynote lecture***, 8th International Conference on Thermal Engineering Theory and Applications, Amman, Jordan..... May 18-21, 2012
- ***Plenary***, 1st International Conference on Rheology and Modeling of Materials, Miskolc, Hungary ..... October 9-11, 2013
- ***Steering Committee member***, *ibidem*.
- ***Keynote lecture***, 6th International Conference on Thermal Engineering Theory and Applications, Istanbul, Turkey..... May 29-June 1, 2012
- ***Steering Committee member***, *ibidem.*
- ***Keynote lectures***, International Computational Modeling Validation Conference, Sydney, Australia ..... January 14-15, 2012
- ***Vice-Chair***, **ASME** *Technical Committee on* ***Publications &Communications*** (TCPC)..... August 2011-Present
- ***Member***, **ASME** *Board on* ***Technical Knowledge Dissemination*** (BTKD)..... August 2011-2012
- ***Member***, Comité Stratégique de Recherche de l'Ecole Centrale de Lyon, Lyon, France 2011
- ***Honorary Research Professor***, Centro de Investigatión en Creatividad y Educación Superior-CICES, Universidad de Santiago de Chile, Santiago, Chile ..... October 2010-Present
- ***Invited External "Habilitation" Committee Member***, INSA de Lyon, Lyon, France..... December 2, 2010
- ***Member-at-Large,* ASME *Basic Engineering Group Operating Board***..... 2009-2012
- ***Member,* ASME** *Technical Committee on* ***Publications and Communications*** 2009-2012
- ***Chair, Nadai Medal Committee***, **ASME *Society Level Award,*** administered by the ***Materials Division***..... 2009
- ***Chair,* ASME** Sia Nemat-Nasser Early Career Award Committee 2008-2009
- ***Chair,* ASME** Orr Early Career Award Committee..... 2008-2009
- **ASME *Distinguished Dedicated Service Award***..... 2008
- ***Guest Editor, Journal of Fluids Engineering*** (Transactions of the ASME), Vol.130, No. 8, August 2008
- ***Chair***, **ASME *Materials Divisi***on 7/1/2008-6/30/2009
- ***Vice-Chair***, **ASME *Materials Division*** 7/1/2007-6/30/2008
- ***Nadai Award Selection Committee***, **ASME *Society Level Award***, administered by the Materials Division. 7/1/2007-Present
- ***Scientific Committee***, 6th UAE MATHDAY, Abu Dhabi, United Arab Emirates ..... April 26 & 27, 2008
- ***Steering Committee member***, 3rd International Conference on Thermal Engineering Theory and Applications, Amman, Jordan..... May 21-23, 2007
- ***Keynote lecture***, ibidem.
- ***Guest Editor, Journal of Fluids Engineering*** (Transactions of the ASME), Vol.129, No. 4, April 2007
- ***Technical Program Chair,* ASME *Materials Division*** 7/1/2006-6/30/2007
- ***International Advisory Board, Jordan Journal of Mechanical and Industrial Engineering (JJMIE)*** ..... 2006 - Present
- **ABET/ASME** Mechanical Engineering Program Evaluator, selected /appointed November..... 2006
- ***Fellow* AAM**, elected November..... 2006
- ***Secretary and Treasurer,* ASME *Materials Division*** ..... 7/1/ 2005 – 6/30/2006
- ***Executive Committee,* ASME *Materials Division*** ..... 7/1/ 2005 – 6/30/2009
- ***Guest Editor, Journal of Applied Mechanics*** (Transactions of the ASME), Vol.73, No.3 ..... May 2006 (Commemorative Issue dedicated to the Memory and in Honor of the late Professor Charles Speziale)
- ***Guest Editor, Journal of Fluids Engineering*** (Transactions of the ASME), Vol.128, No.1 ..... January 2006
- ***Guest Editor, Journal of Applied Mechanics*** (Transactions of the ASME), Vol.73,No.1..... January 2006

- ***Steering Committee***, Second International Conference on Thermal Engineering Theory and Applications**,** Al Ain, United Arab Emirates .....January 3-6, 2006
- ***Keynote lecture***, *ibidem.*
- ***Invited External PhD Committee Member***, INSA de Lyon – Site de Plasturgie, Lyon, France.....2005
- ***Life Fellow ASME*** 2005
- ***Keynote Lecture***, 4th Pacific Rim Conference on Rheology (PRCR4), Shanghai, China..... .August 7-11, 2005
- ***International Advisory Board,*** 4th Pacific Rim Conference on Rheology, Shanghai, China.....August 7-11, 2005
- ***External Evaluator,*** NSF Project DUE A & I 0410469 to Florida International University 2005-2006
- ***Vice Chair, Permanent Executive Committee***, International Conference on Thermal Engineering Theory and Applications; a biannual Conference rotating among the countries in the Mediterranean basin and the Middle East.....August 2004-Present
- ***Advisory Board,* NASA-NSF *Center*** on Information Systems Engineering and Management, Tennessee State University, Nashville, Tennessee.....August 2004-Present
- ***International Scientific Committee***, International Conference on Thermal Engineering Theory and Applications**,** Beirut, Lebanon ..... May 31/June 4, 2004
- ***Plenary Lecture***, International Conference on Thermal Engineering Theory and Applications**,** Beirut, Lebanon, May 31-June 4.....2004
- ***Special Editor& Guest Editor***, ***Journal of Applied Mechanics*** (Transactions of the ASME)..... 8/1/2003- Present
- ***Associate Editor, Journal of Fluids Engineering*** (Transactions of the ASME) 1/1/2003- 1/1/2009
- **INEER *Delegation*** to the SSTU-INEER Engineering Education Partnership Workshop, Saratov State Technical University (SSTU), Saratov, Russia, September 16-19.....2004
- ***Guest Editor, Journal of Fluids Engineering*** (Transactions of the ASME), Vol.126, No. 2 .....March 2004
- ***Advisory Board***, Department of Mechanical and Materials Engineering, Florida International University ..... January 2004 – 2008
- ***Advisory Board,* ASME *Fluids Engineering Division*** .....November 2003 – Present
- **ASME *Materials Division Certificate of Appreciation*** 2003
- ***Associate Editor, Journal of Applied Mechanics*** (Transactions of the ASME)..... 7/1/1997-6/30/2003
- ***Wichita State University Global Learning College Leadership Excellence Award*** .....November, 2002
- ***Certificate of Appreciation - American Society for Quality*** given in Wichita, Kansas on.....November, 2002
- ***Commendation by the American Society for Quality for leadership, commitment, conscientiousness, and caring attitude towards the students*** .....November, 2002
- **ASME *Fluids Engineering Division Lecture:*** ASME IMEC&E in Orlando, FL, November…….....2000
- **ASME *Materials Division Certificate of Appreciation:*** ASME IMEC&E'98 in Anaheim, CA, November 1998
- ***World Bank Lecturer*** 1997
- **ASME *Materials Division Certificate of Appreciation*** 1997
- **ASME *Materials Division Certificate of Appreciation*** 1996
- **ASME *Materials Division Certificate of Appreciation:*** ASME IMEC&E'95 in San Francisco, CA, November 1995
- ***Fellow* ASME**, elected 1995
- ***Runner-up, Pi Tau Sigma* - ASME *National Charles Russ Richards Memorial Award***..... 1995
- A graduate student advised by Dr. Siginer, Ms. Zhanbei Xuan, selected "***Outstanding Graduate Student***" in the College of Engineering, Auburn University.....1995
- ***Plenary Lecture,*** Annual Meeting of the Korean Society of Rheology, ***Taejon, Korea,*** Sept. 30.....1994
- **ASME *Materials Division Certificate of Appreciation:*** Winter Annual Meeting, New Orleans on November 29 – December 4.....1993
- ***Burlington*** Northern Foundation Faculty Achievement Award 1993
- ***1992* ASEE *Research Paper Prize:***.....1992
  Each University was allowed to submit <u>one</u> paper for the competition. These papers were independently reviewed and ranked at McGill University in Montreal, Canada, U. of Illinois at Urbana-Champaign, and Case Western Reserve University in Cleveland, Ohio.
- ***Alumni Teaching Excellence Award*** in Auburn in University wide competition.....1992
- **NASA-ASEE *Summer Faculty Fellow,*** NASA Lewis Res. Center, Cleveland, Ohio, Summer 1992
- ***Nominated*** for the ***ASME Robert T. Knapp*** and ***Lewis F. Moody Research Awards***.....1992
- **NASA-ASEE *Summer Faculty Fellow,*** NASA Lewis Res. Center, Cleveland, Ohio, Summer 1991
- ***Birdsong*** Teaching Award in the College of Engineering, Auburn University 1991
- ***Honorary Member, elected*** by the Chi Chapter of ***Pi Tau Sigma,*** the National Honorary Mechanical Engineering Society, February.....1990
- ***Henry Charles Ratcliff Award for Excellence in Teaching*** in the College of Engineering at UA..... 1983
- ***Fellowship*** of the Scientific and Technical Research Council of Turkey 1968-1972
- Graduated with ***Honors*** from The Technical University of Istanbul; ***ranked first in the class of 1970*** 1970

PROFESSIONAL COMMUNITY SERVICE

- ***Reviewer for the following Journals*** (alphabetically ordered)
  1. Applied Mechanics Reviews (ASME)
  2. Canadian Aeronautics and Space Journal
  3. Canadian Journal of Physics
  4. Chemical Engineering Communications
  5. Chemical Engineering Science
  6. Colloids and Surfaces A
  7. Computers & Fluids
  8. Computers & Mathematics with Applications
  9. European Journal of Mechanics / B Fluids
  10. Experimental Thermal and Fluid Science
  11. Heat and Mass Transfer (formerly: Wärme-und Stoffübertragung)
  12. Fluid Dynamics and Materials Processing
  13. Industrial & Engineering Chemistry Research (American Chemical Society)
  14. Inverse Problems in Science & Engineering
  15. International Journal of Engineering Science
  16. International Journal of Heat and Mass Transfer
  17. International Journal of Multiphase Flow
  18. International Journal for Numerical Methods in Fluids
  19. International Journal for Thermal Sciences
  20. Journal of Aerospace Engineering (ASCE)
  21. Journal of Applied Mechanics (ASME)
  22. Journal of Applied Polymer Science
  23. Journal of Dynamic Systems Measurement and Control (ASME)
  24. Journal of Heat Transfer (ASME)
  25. Journal of Fluids Engineering (ASME)
  26. Journal of Mechanical Design (ASME)
  27. Journal of the Franklin Institute
  28. Journal of Non-Newtonian Fluid Mechanics
  29. Journal of Nanoscience and Nanotechnology
  30. Journal of Physics D: Applied Physics
  31. Journal of Porous Media
  32. Journal of Thermal Science and Engineering Applications (ASME)
  33. Microchemical Journal
  34. Microsystem Technologies
  35. Physics of Fluids
  36. Rheologica Acta
  37. Science
  38. Theoretical and Computational Fluid Dynamics
  39. Zeitschrift für Naturforschung A - A Journal of Physical Sciences
- ***Reviewer for the following funding Agencies*** (alphabetically ordered)
  1. Agence Nationale de la Recherche - France
  2. Louisiana Board of Regents
  3. International Science Foundation
  4. NSERC – The Natural Sciences and Engineering Research Council of Canada
  5. NSF - National Science Foundation
  6. Petroleum Foundation
- ***Reviewer for Promotion and Tenure****:* Served as external reviewer for about thirty Universities during the last two decades some of which are Washington State University (2006), Florida International University (2005), Michigan Technological University (2004, 2005), Texas A&M University (2003), University of Oklahoma (2003), Lehigh University in Bethlehem, Pennsylvania (2000,1999), University of Western Ontario (1999), University of Idaho in Moscow, Idaho (1999,1998), Indiana University-Purdue University at Indianapolis (1996), University of Oklahoma in Norman, Oklahoma (1994), Case Western Reserve University in Cleveland, Ohio (1993), Pennsylvania State University in College Park, Pennsylvania (2002, 2000, 1992), University of Windsor in Windsor, Ontario (1991).
- ***Member,*** Several National Science Foundation Review Panels during the last decade.
- ***Reviewed several books*** for Oxford University Press, West Educational Publishing,World Scientific Publishing Co., Inc., Taylor & Francis, Inc. and ASME Books since 1991.

PROFESSIONAL SOCIETY SERVICE

- ***Vice-Chair***, **ASME** *Technical Committee* on ***Publications &Communications***.....August 2011-2017
- ***Member***, **ASME** *Board on* ***Technical Knowledge Dissemination***.....August 2011- July 2014
- ***Member-at-Large***, *Publications &Communications*, **ASME *Basic Engineering Group Operating Board*** ... 2009-July 2014
- ***Member,* ASME** *Technical Committee on* ***Publications and Communications*** 2009-2012
- ***Chair, Nadai Medal Committee***, **ASME *Society Level Award*** 2009
- ***Member***, Nadai Medal Committee, **ASME *Society Level Award***.....2009-2013
- ***Chair,* ASME** Sia Nemat-Nasser Early Career Award Committee 2008-2009
- ***Chair,* ASME** Orr Early Career Award Committee.....2008-2009
- ***Chair,* ASME *Materials Division*** 7/1/2008-6/30/2009
- **ASME *International Congress*** (IMECE) ***Steering Committee*** 2008
- ***Vice - Chair,* ASME *Materials Division*** 7/1/2007-6/30/2008
- ***Member, Honors & Awards Committee,* ASME *Materials Division*** 7/1/2007-6/30/2008
- **ABET/ASME** Mechanical Engineering Program Evaluator, selected /appointed November.....2006
- **ABET/ASEE** Engineering Science Program Evaluator, selected /appointed November.....2006
- ***Chair***, ASME Fluids Engineering Division Advisory Board 2006-Present
- ASME Materials Division IMECE2007 Technical ***Program Representative*** 7/1/2006-6/30/2007
- ASME Materials Division ***Treasurer*** and Secretary.....7/12005-6/30/2006
- ***Member***, ASME Materials Division Executive Committee 2005-2011
- ***Member***, ASME Fluids Engineering Division Advisory Board 2003-2006
- ***Chair***, ASME-MD Technical Committee on Materials Processing.....2004 - 2006
- ***Chair***, ASME-FED Technical Committee on Emerging Topics 1996-2006
- ***Member*** of the Fluid Mechanics Technical Committee of the Fluids Engineering Division of ASME 1990-Present
- ***Member*** of the Fluid Mechanics Technical Committee of the Applied Mechanics Division of ASME 1990-Present
- ***Member*** of the Multiphase Flow Technical Committee of the Fluids Engineering Division of ASME.....1992-Present
- ***Member*** of the Polymers Technical Committee of the Materials Division of ASME.....1992-Present
- ***Member*** of the Materials Processing Technical Committee of the Materials Division of ASME 1996-Present
- ***Member***, Organizing Committee, 60th Meeting of the Society of Rheology, Gainesville, Florida, February 12 – 15.....1989
- ***Program Chairman***, ASME Chattahoochee Section.....1984-1985

PROFESSIONAL MEETINGS ORGANIZED

- ***Topic Organizer & Chair,*** Symposium on "Fluid Mechanics & Rheology of Complex Fluids and Non-linear Materials", ASME IMEC&E 2019, Salt Lake City, Utah, November 8-14,.....2019
- ***Topic Organizer & Chair,*** Symposium on "Electric, Magnetic and Thermal Phenomena in Micro and Nano Scale Systems ", ASME IMEC&E 2019, Salt Lake City, Utah, November 8-14,.....2019
- ***Topic Organizer & Chair,*** Symposium on "Fluid Mechanics & Rheology of Complex Fluids and Non-linear Materials", ASME IMEC&E 2018, Pittsburg, Pennsylvania, November 9-15, ...2018
- ***Topic Organizer & Chair,*** Symposium on "Electric, Magnetic and Thermal Phenomena in Micro and Nano Scale Systems ", ASME IMEC&E 2018, Pittsburg, Pennsylvania, November 9-15, ...2018
- ***Topic Organizer & Chair,*** Symposium on "Fluid Mechanics & Rheology of Complex Fluids and Non-linear Materials", ASME IMEC&E 2017, Tampa, Florida, November 3-9,.....2017
- ***Topic Organizer & Chair,*** Symposium on "Electric, Magnetic and Thermal Phenomena in Micro and Nano Scale Systems ", ASME IMEC&E 2017, Tampa, Florida, November 3-9,.....2017
- ***Topic Organizer & Chair,*** Symposium on "Fluid Mechanics & Rheology of Complex Fluids and Non-linear Materials", ASME IMEC&E 2016, Phoenix, Arizona, November 11-17,.....2016
- ***Topic Organizer & Chair,*** Symposium on "Advances in Materials Processing Science and Manufacturing", ASME IMEC&E 2016, Phoenix, Arizona, November 11-17 2016
- ***Track Chair,*** 15th Symposium on "Transport Phenomena in Materials Processing & Manufacturing Processes", Heat Transfer, Fluids Engineering, & Nanochannels, Microchannels, and Minichannels Conferences, Washington, D.C., July 10-14,.....2016
- ***Topic Organizer & Chair,*** Symposium on "Fluid Mechanics & Rheology of Complex Fluids and Non-linear Materials", ASME IMEC&E 2015, Houston, Texas, November 13-19,.....2015
- ***Topic Organizer & Chair,*** Symposium on "Electric, Magnetic and Thermal Phenomena in Micro and Nano Scale Systems ", ASME IMEC&E 2015, Houston, Texas, November 13-19, ...2015
- Symposium on "Rheological Fluid Mechanics": 2nd International Conference on Rheology and Modeling of Materials, Miskolc-Lillafüred, *Hungary*, October 5-9,..... 2015

- ***Topic Organizer & Chair,*** Symposium on "Fluid Mechanics & Rheology of Complex Fluids and Non-linear Materials", ASME IMEC&E 2014, Montréal, Québec Canada, November 14-20,.....2014
- ***Topic Organizer & Chair,*** Symposium on "Electric, Magnetic and Thermal Phenomena in Micro and Nano Scale Systems ", ASME IMEC&E 2014, Montréal, Québec, Canada, November 14-20,.....2014
- ***Track Chair,*** 13th Symposium on Transport Phenomena in Materials Processing & Manufacturing Processes, 4th Joint US-European Fluids Engineering Summer Meeting, Chicago, Illinois, August 3-7,.....2014
- ***Topic Organizer & Chair,*** Symposium on "Fluid Mechanics & Rheology of Complex Fluids", (25 papers presented) ASME IMEC&E 2013, San Diego, CA, November 15-21,.....2013
- ***Topic Organizer & Chair,*** Symposium on "Electric, Magnetic and Thermal Phenomena in Micro and Nano Scale Systems ", (20 papers presented), ASME IMEC&E 2013, San Diego, CA, November 15-21,.....2013
- Symposium on "Rheological Fluid Mechanics": 1st International Conference on Rheology and Modeling of Materials, Miskolc-Lillafüred, *Hungary*, October 9-11 2013
- ***Track Chair,*** 12th Symposium on Transport Phenomena in Materials Processing & Manufacturing Processes, ASME Fluids Engineering Summer Meeting, Incline Village, Lake Tahoe, Nevada, July 7-11,.....2013
- ***Topic Organizer & Chair,*** Symposium on "Advances in Materials Processing Science", (11 papers presented) ASME IMEC&E 2012, Houston, Texas, November 9-15 2012
- ***Topic Organizer & Chair,*** Symposium on "Fluid Mechanics & Rheology of Complex Fluids", (40 papers presented) ASME IMEC&E 2012, Houston, Texas, November 9-15,.....2012
- ***Topic Organizer & Chair,*** Symposium on "Electric, Magnetic and Thermal Phenomena in Micro and Nano Scale Systems ", (25 papers presented), ASME IMEC&E 2012, Houston, Texas, November 9-15,.....2012
- ***Track Chair,*** 11th Symposium on Transport Phenomena in Materials Processing & Manufacturing Processes, ASME Fluids Engineering Summer Meeting, Puerto Rico, July 8-12, ...2012
- ***Organizer & Chair***, Symposium on "Advances in Materials Processing Science", ASME IMEC&E 2011, Denver, Colorado, November 11-17, ...2011
- ***Organizer & Chair,*** Symposium on "Fluid Mechanics & Rheology of Complex Fluids", ASME IMEC&E 2011, Denver, Colorado, November 11-17, ...2011
- ***Organizer & Chair,*** Symposium on "Electric, Magnetic and Thermal Phenomena in Micro and Nano Scale Systems ", ASME IMEC&E 2011, Denver, Colorado, November 11-17, ...2011
- ***Co-Chair,*** 10th Symposium on Transport Phenomena in Manufacturing Processes & Materials Processing, ASME-JSME-KSME Joint Fluids Engineering Conference, Hamamatsu, Shizuoka, Japan, July 24-29…….. ……...2011
- ***Organizer & Co-Chair,*** International Symposium on "Engineering Ethics", Petroleum Institute, Abu Dhabi, United Arab Emirates, April 13-14, ...2011
- ***Organizer & Chair,*** Symposium on "Advances in Materials Processing Science", ASME IMEC&E 2010, Vancouver, British Columbia, November 12-18,..…….2010
- ***Organizer & Chair,*** Symposium on "Fluid Mechanics & Rheology of Complex Fluids", ASME IMEC&E 2010, Vancouver, British Columbia, November 12-18,.....2010
- ***Organizer & Chair,*** Symposium on "Electric, Magnetic and Thermal Phenomena in Micro and Nano Scale Systems ", ASME IMEC&E 2010, Vancouver, British Columbia, November 12-18,.....2010
- ***Symposium Coordinator,*** 9th Symposium on Transport Phenomena in Manufacturing Processes & Materials Processing, ASME 3rd Joint US-European Fluids Engineering Conference, Montréal, Québec, Canada, August 1-4.....2010
- ***Organizer & Chair,*** Symposium on "Advances in Materials Processing Science", ASME IMEC&E'09, Lake Buena Vista, Florida, November 14-19,.....2009
- ***Organizer & Chair,*** Symposium on "Fluid Mechanics & Rheology of Complex Fluids", ASME IMEC&E'09, Lake Buena Vista, Florida, November 14-19,.....2009
- ***Organizer & Chair,*** Symposium on "Electric, Magnetic and Thermal Phenomena in Micro and Nano Scale Systems ", ASME IMEC&E'09, Lake Buena Vista, Florida, November 14-19, ...2009
- ***Symposium Coordinator,*** 8th Symposium on Transport Phenomena in Manufacturing Processes & Materials Processing, ASME Fluids Engineering Division Summer Conference, Vail, Colorado, August 2-6,.....2009
- ***Co-Chair,* 6th ICTEA-*International Conference on Thermal Engineering*: *Theory and** *Applications,* Abu Dhabi, United Arab Emirates, January 12-14,.....2009
- ***Organizer & Chair,*** Symposium on "Advances in Materials Processing Science", ASME IMEC&E'08, Boston, Massachusetts, October 31-November 6.....2008
- ***Organizer & Chair,*** Symposium on "Fluid Mechanics & Rheology of Complex Fluids", ASME IMEC&E'08, Boston, Massachusetts, October 31-November 6.....2008
- ***Organizer & Chair,*** Symposium on "Electric, Magnetic and Thermal Phenomena in Micro and Nano Scale Systems ", ASME IMEC&E'08, Boston, Massachusetts, October 31-November 6,.....2008
- ***Symposium Coordinator,*** 7th Symposium on Transport Phenomena in Manufacturing Processes, ASME Fluids Engineering Division Summer Conference, Jacksonville, Florida, August 10-14, ...2008
- ***Technical Program Chair,*** Materials Division, ASME IMEC&E'07, Seattle, Washington, November 10-16,.....2007
- ***Track Co-Chair,*** Micro and Nano Systems, ASME IMEC&E'07, Seattle, Washington, November 10-16, ...2007
- ***Track Co-Chair,*** Heat Transfer, Fluid Flows and Thermal Systems, ASME IMEC&E'07, Seattle, Washington, November 10-16, ...2007

- ***Track Co-Chair,*** Processing and Engineering Applications of Novel Materials, ASME IMEC&E'07, Seattle, Washington, November 10-16, ... 2007
- ***Track Co-Chair***, Design and Manufacturing, ASME IMEC&E'07, Seattle, Washington, November 10-16, ... 2007
- ***Track Co-Chair***, Mechanics of Solids and Structures, ASME IMEC&E'07, Seattle, Washington, November 10-16, ... 2007
- ***Chair,*** Symposium on "Fluid Mechanics & Rheology of Complex Fluids", ASME IMEC&E'07, Seattle, Washington, November 10-15, ... 2007
- ***Chair,*** Symposium on "Electric, Magnetic and Thermal Phenomena in Micro and Nano Scale Systems ", ASME IMEC&E'07, Seattle, Washington, November 10-15, ... 2007
- ***Symposium Coordinator,*** 6th Symposium on Flows in Manufacturing Processes, 5th Joint ASME-JSME Fluids Engineering Conference, San Diego, CA, July 30-August 2 2007
- ***Topic Chair,*** Symposium on "Rheology & Fluid Mechanics of Non-linear Materials", ASME IMEC&E'06, Chicago, Illinois, November 5-10, ... 2006
- ***Topic Chair,*** Symposium on "Electric and Magnetic Phenomena in Micro and Nano Scale Systems ", ASME IMEC&E'06, Chicago, Illinois, November 5-10, ... 2006
- ***Symposium Coordinator,*** 5th Symposium on Flows in Manufacturing Processes, 2nd ASME Joint US-European Fluids Engineering Conference, Miami, FL, July 17-20 2006
- Topic Chair, Symposium on "Advances in Materials Processing Science", ASME IMEC&E'05, Orlando, Florida, November 5-11, ... 2005
- Topic Chair, Symposium on "Rheology & Fluid Mechanics of Non-linear Materials", ASME IMEC&E'05, Orlando, Florida, November 5-11, ... 2005
- ***Topic Chair,*** Symposium on "Electric and Magnetic Phenomena in Micro and Nano Scale Systems ", ASME IMEC&E'05, Orlando, Florida, November 5-11, ... 2005
- ***Mini-Symposium Chair,*** 4th Pacific Rim Conference on Rheology (PRCR4), Shanghai, China, August 7-11 2005
- ***Symposium Coordinator,*** 4th Symposium on Flows in Manufacturing Processes, ASME FEDSM'05, Fluids Engineering Division Summer Conference, Houston, Texas, June 19-23 2005
- ***Topic Chair***, Symposium on "Advances in Materials Processing Science", ASME IMEC&E'04, Anaheim, California, November 13-19, ... 2004
- ***Topic Chair***, Symposium on "Rheology & Fluid Mechanics of Non-linear Materials", ASME IMEC&E'04, Anaheim, California, November 13-19, ... 2004
- ***Topic Chair***, Symposium on "Electric and Magnetic Phenomena in Micro and Nano Scale Systems ", ASME IMEC&E'04, Anaheim, California, November 13-19, ... 2004
- ***Topic Chair,*** Symposium on "Transport Phenomena in Materials Processing & Manufacturing", ASME Heat Transfer/Fluids Engineering Summer Conference, Charlotte, North Carolina, July 11-15 2004
- ***Topic Chair,*** Symposium on "Advances in Materials Processing Science", ASME IMEC&E'03, Washington D.C., November 16-21 2003
- ***Topic Chair,*** Symposium on "Rheology & Fluid Mechanics of Non-linear Materials", ASME IMEC&E'03, Washington D.C., November 16-21 2003
- ***Topic Chair,*** Symposium on " Electric and Magnetic Phenomena in Micro and Nano . Scale Systems ", ASME IMEC&E'03, Washington D.C., November 16-21, ... 2003
- ***Lead Organizer,*** Symposium on "Modeling and Simulation of Turbulent Flows" in honor & memory of Professor Charles Speziale, 4th ASME-JSME Joint Fluids Engineering Conference, Honolulu, Hawaii, July 6-10 2003
- ***Lead Organizer,*** Symposium on "Flows in Manufacturing Processes", 4th ASME-JSME Joint Fluids Engineering Conference, Honolulu, Hawaii, July 6-10, ... 2003
- ***Organizer,*** Panel discussion sessions on " Electric and Magnetic Phenomena in Micro and Nano Scale Systems ", ASME IMEC&E'02, New Orleans, Louisiana, November 17-22, ... 2002
- ***Lead Organizer,*** Symposium on "Rheology & Fluid Mechanics of Non-linear Materials", ASME IMEC&E'02, New Orleans, Louisiana, November 11-17 2002
- ***Lead Organizer,*** Symposium on "Advances in Processing Science", ASME IMEC&E'02, New Orleans, Louisiana, November 11-17 2002
- ***Organizer,*** Symposium on "Flows in Manufacturing Processes", ASME FEDSM'02, Montréal, Québec, Canada, July 14-18 2002
- ***Lead Organizer,*** Symposium in honor & memory of Professor Charles Speziale, U.S. National Congress of Theoretical and Applied Mechanics, Virginia Polytechnic Institute, June 23-28, ... 2002
- ***Organizer,*** Panel discussion sessions on "Electric and Magnetic Phenomena in Micro and Nano Scale Systems ", ASME IMEC&E'01, New York, New York, November 11-17, ... 2001
- ***Lead Organizer,*** Symposium on "Rheology & Fluid Mechanics of Non-linear Materials", ASME IMEC&E'01, New York, New York, November 11-17, ... 2001
- ***Lead Organizer,*** Symposium on "Rheology & Fluid Mechanics of Non-linear Materials", ASME IMEC&E'00, Orlando, Florida, November 5-10, ... 2000
- ***Lead Organizer,*** Symposium on "Rheology & Fluid Mechanics of Non-linear Materials", ASME IMEC&E'99, Nashville, Tennessee, November 14-19, ... 1999

- ***Lead Organizer,*** Symposium on "Rheology & Fluid Mechanics of Non-linear Materials", ASME IMEC&E'98, Anaheim, California, November 15-20,.....1998
- ***Organizer and Symposium co-chairman,*** Symposium on "Mechanics of Non-linear Materials", Banff, Alberta, Canada, May 13-16, ...1998
- ***Organizer,*** Symposium on "Rheology & Fluid Mechanics of Non-linear Materials", ASME IMEC&E'97, Dallas, Texas, November 16-21, ...1997
- ***Lead Organizer,*** Symposium on "Rheology & Fluid Mechanics of Non-linear Materials", ASME IMEC&E'96, Atlanta, GA, November 17-22,.....1996
- ***Lead Organizer,*** Symposium on "Developments and Applications of Non-Newtonian Flows III", ASME IMEC&E'95, San Francisco, CA, November 12-17,.....1995
- ***Lead Organizer,*** Symposium on "Electrorheological Flows III", ASME IMEC&E'95, San Francisco, CA, November 12-17,.....1995
- ***Conference General Chairman,*** International Symposium on ***Advances in Structured and Heterogeneous Continua II,*** Moscow, ***Russia,*** August 14-18, ...1995
- ***Lead Organizer,*** Symposium on "Developments in Electrorheological Flows II", ASME IMEC&E'94, Chicago, IL, November 6-11, ...1994
- ***Organizer,*** Symposium on "Two Fluid Flows With or Without Phase Change", ASME IMEC&E'94, Chicago, IL, November 6-11, ...1994
- ***Lead Organizer,*** Symposium on "Developments in Non-Newtonian Flows II", ASME IMEC&E'94, Chicago, IL, November 6-11, ...1994
- ***Organizer,*** Symposium on "Numerical Methods for Non-Newtonian Fluid Dynamics", ASME FEDSM'94, Fluids Engineering Division Summer Meeting, Lake Tahoe, Nevada, June 19-23,.....1994
- ***Lead Organizer,*** Symposium on "Fluid Mechanics Phenomena in Microgravity", ASME Winter Annual Meeting, New Orleans, LA, November 28-December 3, ...1993
- ***Lead Organizer,*** Symposium on "Developments in Non-Newtonian Flows I", ASME Winter Annual Meeting, New Orleans, LA, November 28-December 3, ...1993
- ***Conference Chairman,*** International Symposium on ***Advances in Structured and Heterogeneous Continua,*** Moscow, ***Russia,*** August 22-26, ...1993
- ***Lead Organizer,*** Symposium on "Electrorheological Flows-1993", ASME FEDSM'93, Washington, D.C., June 20-23,.....1993
- ***Organizer,*** Symposium on "Recent Advances in Non-Newtonian Flows", ASME WAM'92, Anaheim, CA, November 8-13,.....1992
- ***Lead Organizer,*** Symposium on "Fluid Mechanics Phenomena in Microgravity", ASME WAM'92, Anaheim, CA, November 8-13,.....1992
- ***Lead Organizer,*** Forum "Recent Developments in Non-Newtonian Flows and Industrial Applications - 1991", ASME WAM'91, Atlanta, GA, December 1-6 1991
- ***Member, Organizing Committee,*** 60th Meeting of the Society of Rheology, Gainesville, Florida, February 12-15,.....1989
- ***Member, International Program Committee,*** XIVth IASTED International Conference on Applied Simulation and Modeling, Vancouver, Canada, June 4-6, ...1986
- ***Member,*** Organizing Committee, XIIth Southeastern Conference of Theoretical and Applied Mechanics (SECTAM).....1984

UNIVERSITY SERVICE

- ***Chair***, BIUST University Senate, ...October & November 2014
- ***Chair***, BIUST Vice-Chancellor Cabinet, ...October & November 2014
- ***Chair***, BIUST Executive Leadership Team, ...October & November 2014
- ***Chair***, Provost Council, Botswana International University of Science and Technology (BIUST), Botswana ..... January 2014-Present
- ***Deputy Chair***, BIUST University Senate, ...January 2014-Present
- ***Deputy Chair***, BIUST Vice-Chancellor Cabinet, ...January 2014-Present
- ***Deputy Chair***, BIUST Executive Leadership Team, ...January 2014-Present
- ***Chair***, Borealis Chair Professor Search Committee, Petroleum Institute, Abu Dhabi, UAE..... 03/15/2010-3/15/2011
- ***Chair***, Recruitment Committee, Petroleum Institute, Abu Dhabi, UAE 10/15/2009-3/15/2011
- ***Chair***, Chemical Engineering Director Search Committee, Petroleum Institute, Abu Dhabi, UAE 11/15/2008-7/2009
- ***Chair***, Mechanical Engineering Director Search Committee, Petroleum Institute, Abu Dhabi, UAE 11/15/2008-9/2009
- ***Chair***, Academic Management Committee, Petroleum Institute, Abu Dhabi, UAE..... 10/15/2007-10/15/2010
- ***Chair***, Curriculum Committee, Petroleum Institute, Abu Dhabi, UAE 8/15/2008-5/30/2011
- ***Secretary***, Executive Management Committee, Petroleum Institute, Abu Dhabi, UAE..... 2/15/2008-10/15/2009

- ***Chair***, Research Award Committee, Petroleum Institute, Abu Dhabi, UAE 11/1/2007-12/31/2007
- ***Chair***, Committee on Peer Evaluation of Teaching, Petroleum Institute, Abu Dhabi, UAE 10/1/2007-10/2009
- ***Member***, Curriculum Committee, Petroleum Institute, Abu Dhabi, UAE..... ..9/15/2007-5/30/2011
- ***Member***, Accreditation Committee, Petroleum Institute, Abu Dhabi, UAE 9/15/2007-10/15/2010
- ***Member***, Publications Manager Search Committee, Petroleum Institute, Abu Dhabi, UAE..... 9/15/2007-10/15/2010
- ***Chair***, Petroleum Engineering Director Search Committee, Petroleum Institute, Abu Dhabi, UAE 9/1/2007-5/1/2009
- ***Dean***, College of Arts & Sciences, Petroleum Institute, Abu Dhabi, UAE 9/1/2007-5/30/2011
- ***Chair***, College of Arts & Sciences Dean's Council, Petroleum Institute, Abu Dhabi, UAE..... 9/1/2007-5/30/2011
- ***Member***, Academic Management Committee, Petroleum Institute, Abu Dhabi, UAE 9/1/2007-5/30/2011
- ***Member***, Tenure & Promotion Committee, College of Engineering, Wichita State University ..... 2006 – 2007
- ***Chair***, Tenure & Promotion Committee, Mechanical Engineering, Wichita State University ..... 8/1/2004 – 8/1/2007
- ***Chair***, Faculty Search Committee, Mechanical Engineering, Wichita State University ..... Fall 2005 – Spring 2006
- ***Member***, Graduate Committee, Mechanical Engineering, Wichita State University..... 8/1/2005 – 8/1/2007
- ***Chair,*** Mechanical Engineering Colloquia, Wichita State University..... 8/1/2006 – 8/12007
- ***Faculty Senator*** representing Mechanical Engineering for a two-year term, Wichita State University, elected on April 17, 2006 for ..... 8/15/2006 - 8/15/2008
- ***Chair***, Mechanical Engineering Electorate, Wichita State University ..... April-May 2005
- ***Dean***, College of Engineering, Wichita State University ..... 8/15/2000 - 7/1/2003
- ***Member***, Academic Affairs Council, Wichita State University..... 8/15/2000-7/1/2003
- ***Member***, Deans Council, Wichita State University 8/15/2000-7/1/2003
- ***Member,*** Search Committee for the Executive Director of the National Institute for Aviation Research (NIAR) 2001-2002
- ***Member,*** Search Committee for Endowed Boeing Global Learning Professorship at WSU.....2000-2001
- ***Member***, Committee to establish a B.S. program in Bioengineering at NJIT.....1999
- ***Chair,*** Department of Mechanical Engineering, New Jersey Institute of Technology.....1998-2000
- ***Member***, Search Committee for the Director of Laboratories for Biomedical Devices, New Jersey Institute of Technology.....1998-2000
- ***Representative*** of the New Jersey Institute of Technology to a statewide Committee to facilitate the interface with the Health Care Institute of New Jersey to organize joint Symposia and other activities of interest to pharmaceutical industry.....1998-2000
- ***Member,*** representing NJIT, Operations Advisory Group (OAG), The New Jersey Center for Biomaterials and Medical Devices sponsored by NJIT, UMDNJ and Rutgers University 1998-2000
- ***Chair,*** Mechanical Engineering Colloquia, New Jersey Institute of Technology.....1998-2000
- ***Member,*** Search Committee for the Pappas Bioengineering Chair, New Jersey Institute of Technology.....1998-1999
- ***Member,*** Search Committee for the Microelectromechanical Systems (MEMS) Chair, New Jersey Institute of Technology.....1998-1999
- ***Member,*** Search Committee for the Director of Materials Science and Engineering Program, New Jersey Institute of Technology.....1998
- ***Member***, Selection Committee for the Summer Award Program, New Jersey Center for Biomaterials and Medical Devices, Rutgers University.....1998
- ***Chair,*** Committee developing the new semester-based curriculum to be implemented as part of the transition at Auburn from the quarter to the semester system 1997
- ***Started the drive to establish*** two Pi Tau Sigma undergraduate scholarships in the ME Department at Auburn University through his personal fund-raising initiative.....1997
- ***Member,*** Selection Committee for Top Doctoral and Master's Students, Auburn University.....1997
- ***Member,*** Graduate Council Curriculum Committee, Auburn University.....1996-1997
- ***Member,*** Graduate Council Committee on Theses/Dissertations, Auburn University 1996
- ***Member,*** Curriculum Committee, College of Engineering, Auburn University 1996-1997
- ***Member,*** Selection Committee for the Distinguished Graduate Faculty Lecturer, Auburn University.....1996
- ***Member,*** Faculty Search Committee in Mechanical Engineering, Auburn University 1996
- ***Chair,*** Curriculum Committee, Department of Mechanical Engineering, Auburn University 1996
- ***Chair,*** Mechanics Academic Area, Department of Mechanical Engineering, Auburn University.....1996
- ***Member,*** Graduate Council, Auburn University.....1994-1997
- ***Advisor*** to the ***Chi Chapter*** in Auburn of ***Pi Tau Sigma,*** the National Honorary Mechanical Engineering Society 1994-1997
- ***Reappointed to Graduate Faculty*** at Auburn University for a seven-year term 1994
- ***Invited*** by Tau Beta Pi to hold EIT Reviews, Spring and Fall of 1989 & Spring of 1990
- ***Representative*** of Auburn University to the policy committee of SECTAM, the Southeastern Conference on Theoretical and Applied Mechanics.....1990-1993
- ***Representative*** of the College of Engineering to the University Faculty Grievance Committee, Auburn.....1990-1993

- ***Representative*** of the Department of Mechanical Engineering to the Engineering Council of the College, Auburn University.....1989-1991
- ***General Faculty Advisor*** for undergraduate students, Department of Mechanical Engineering, Auburn University 1989-1993
- ***Chair,*** Academic Program Review Committee, Alabama Commission on Higher Education to review the programs of the Department of Aerospace Engineering at Auburn University.....1988
- ***Appointed to Graduate Faculty*** at Auburn University for a seven-year term 1987
- ***Chair,*** Mechanical Engineering Colloquia, Auburn University..... 1985-1991

EDITORIAL SERVICE & APPOINTMENTS

- ***International Editorial Board***, Transactions of the Azerbaijan National Academy of Sciences (Issue Mechanics), published by the Institute of Mathematics and Mechanics of Azerbaijan NAS. ..... 2016- Present
- ***Guest Editor, Journal of Heat Transfer*** (Transactions of the ASME), special issue dedicated to selected papers presented at the 7th International Conference on "Thermal Engineering: Theory and Applications" in Marrakech, Morocco on May 6-8, 2014, Vol. 138, No. 9, p. 090301,.....June 2016
- ***Guest Editor, Journal of Fluids Engineering*** (Transactions of the ASME), special issue dedicated to selected papers presented at the IMEC&E'06 and in FEDSM'07 Vol.130, No. 8.....August 2008
- ***Guest Editor, Journal of Fluids Engineering*** (Transactions of the ASME), special issue dedicated to selected papers presented at the IMEC&E'05 and in FEDSM'06 Vol.129, No. 4.....April 2007
- ***Associate Editor, Journal of Fluids Engineering*** (Transactions of the ASME) 1/1/2003-31/12/2008
- ***Guest Editor, Journal of Applied Mechanics*** (Transactions of the ASME) - memorial issue to honor Professor Charles Speziale dedicated to selected papers presented at the FEDSM-JSME'03 in Hawaii, Vol. 73, No. 3 .....May 2006
- ***Guest Editor, Journal of Fluids Engineering*** (Transactions of the ASME), special issue dedicated to selected papers presented at the IMEC&E'04 in Anaheim, CA, Vol.128, No.1.....January 2006
- ***Guest Editor, Journal of Applied Mechanics*** (Transactions of the ASME) dedicated to selected papers from the International Conference on Thermal Engineering, Beirut, Lebanon, May 31-June 4, 2004, Vol.73, No.1.....January 2006
- ***Associate Editor, Journal of Applied Mechanics*** (Transactions of the ASME)..... .....7/1/1997-6/30/2003
- ***Guest Editor, Journal of Fluids Engineering*** (Transactions of the ASME)-special issue dedicated to selected papers presented at the IMEC&E'02 in New Orleans, Vol. 126, No. 2 .....March 2004
- ***Siginer, D.A***. and ***Khusid, B.***, editors, Electric and Magnetic Phenomena in Micro and Nano Scale Systems, ASME IMEC&E DVD Proceedings, ISBN: 0-7918-3790-4, ***ASME Press,*** New York, NY 2006
- ***Siginer, D.A***., editor, Rheology and Fluid Mechanics of Nonlinear Materials & Advances in Processing Science ASME IMEC&E DVD Proceedings, ISBN: 0-7918-3790-4, ***ASME Press,*** New York, NY.....2006
- ***Siginer, D.A***. and ***Bourgin, P.,*** editors, Flows in Manufacturing Processes, 2006 ASME Joint U.S.-European Fluids Engineering Summer Meeting, DVD Proceedings, ISBN: 0-7918-3783-1, ***ASME Press,*** New York, NY.....2006
- ***Siginer, D.A***. and ***Khusid, B.***, editors, Electric and Magnetic Phenomena in Micro and Nano Scale Systems, ASME IMEC&E DVD Proceedings, ISBN: 0-7918-3769-6, ***ASME Press,*** New York, NY 2005
- ***Siginer, D.A***., editor, Rheology and Fluid Mechanics of Nonlinear Materials & Advances in Processing Science ASME IMEC&E DVD Proceedings, ISBN: 0-7918-3769-6, ***ASME Press,*** New York, NY.....2005
- ***Siginer, D.A***. and ***Khusid, B.***, editors, Electric and Magnetic Phenomena in Micro and Nano Scale Systems, ASME IMEC&E CD Proceedings, Vol. 1, ISBN: 0-7918-4178-1, ***ASME Press,*** New York, NY.....2004
- ***Siginer, D.A***., editor, Rheology and Fluid Mechanics of Nonlinear Materials, ASME IMEC&E CD Proceedings, Vol. 1, ISBN: 0-7918-4178-1, ***ASME Press,*** New York, NY 2004
- ***Siginer, D.A***., editor, Transport Phenomena in Materials Processing and Manufacturing, 2004 ASME Heat Transfer/Fluids Engineering Summer Conf., CD Proceedings, ISBN: 0-7918-3740-8, ***ASME Press,*** New York, NY.....2004
- ***Siginer, D.A***., ***Khusid, B.*** and ***Lloyd J.***, editors, Electric and Magnetic Phenomena in Micro and Nano Scale Systems, ASME IMEC&E CD Proceedings, Vol. 3, ISBN: 0-7918-4665-2, ***ASME Press,*** New York, NY.....2003
- ***Siginer, D.A***. and ***Bakhtiyarov, S.I***, editors, Rheology and Fluid Mechanics of Nonlinear Materials, ASME IMEC&E CD Proceedings, Vol. 1, ISBN: 0-7918-4663-6, ***ASME Press,*** New York, NY 2003
- ***Siginer, D.A***. and ***Bakhtiyarov, S.I.,*** editors, Advances in Processing Science, ASME IMEC&E CD Proceedings, Vols. 1&3, ISBN: 0-7918-4663-6 & 0-7918-4665-2, ***ASME Press,*** New York, NY.....2003
- ***Siginer, D.A***., ***Watanabe, K***., ***Iwamoto, J.***, ***Bourgin, P***. and ***Bakhtiyarov, S.I*** ,editors, Flows in Manufacturing Processes, 4th ASME-JSME Joint Fluids Engineering Conference, CD Proceedings, 210 pages, ISBN No. 0-7918-3673-8, ***ASME Press,*** New York, NY 2003
- ***Siginer, D.A***., ***Thangam, Siva*** and ***Stanley Berger*** editors, Modeling and Simulation of Turbulent Flows, 4th ASME-JSME Joint Fluids Engineering Conference, CD Proceedings, ISBN No. 0-7918-3673-8, ***ASME Press,*** New York, NY 2003

- ***Siginer, D.A.***, ***Bakhtiyarov, S.I.***, ***Khusid, B.*** and ***DeKee, D.***, editors, Rheology and Fluid Mechanics of Nonlinear Materials, p.171-346, ISBN No.0-7918-3657-6, ***ASME Press,*** New York, NY.....2000
- ***Siginer, D.A.***, ***Bakhtiyarov, S.I.***, and ***Coulter, J.,*** editors, Advances in Processing Science, p. 551-620, ISBN No. 0-7918-3657-6, ***ASME Press,*** New York, NY.....2002
- ***Siginer, D.A.*** and ***Bourgin, P.***, editors, Flows in Manufacturing Processes, p.1-76, ISBN No. 0-7918-3616-9, ***ASME Press,*** New York, NY.....2002
- ***Siginer, D.A.*** and ***Bakhtiyarov, S.,*** editors, Rheology and Fluid Mechanics of Nonlinear Materials, 187 pages, ISBN No. 0-7918-3568-5, ***ASME Press,*** New York, NY.....2001
- ***Siginer, D.A.*** and ***DeKee, D.,*** editors, Rheology and Fluid Mechanics of Nonlinear Materials, 164 pages, ISBN No.0-7918-1918-3, ***ASME Press,*** New York, NY.....2000
- ***Editor-in-Chief, Advances in the Flow & Rheology of Non-Newtonian Fluids,*** Part A, p.1-636 & Part B, p. 637-1515, ISBN No. 0444-82679-3, ***Elsevier Science BV***, Amsterdam, the Netherlands.....1999
- ***Guest Editor***, ***Journal of Non-Newtonian Fluid Mechanics*** (Elsevier).....1999
- ***Siginer, D.A.***, Editor, Rheology and Fluid Mechanics of Nonlinear Materials, 183 pages, ISBN No. 0-7918-1658-3, ***ASME Press,*** New York, NY.....1999
- ***Siginer, D.A.*** and ***DeKee, D.,*** editors, Rheology and Fluid Mechanics of Nonlinear Materials, 197 pages, ISBN No. 0-7918-1592-7, ***ASME Press,*** New York, NY.....1998
- ***Advani, S.C.*** and ***Siginer, D.A.,*** editors, Rheology and Fluid Mechanics of Nonlinear Materials, 216 pages, ISBN No. 0-7918-1825-X, ***ASME Press,*** New York, NY.....1997
- ***Siginer, D.A.*** and ***Advani, S.C.,*** editors, Rheology and Fluid Mechanics of Nonlinear Materials, 315 pages, ISBN No. 0-7918-1526-9, ***ASME Press,*** New York, NY.....1996
- ***Siginer, D.A.*** and ***Wang, H.P.,*** editors, Developments and Applications of Non-Newtonian Flows - 1995, 285 pages, ISBN No. 0-7918-1742-3, ***ASME Press,*** New York, NY.....1995
- ***Siginer, D.A.*** and ***Dulikravich, G.E.,*** editors, Developments in Electrorheological Fluids - 1995, 95 pages, ISBN No. 0-7918-1742-5, ***ASME Press,*** New York, NY.....1995
- ***Siginer, D.A.*** and ***Yanovsky, Y.G.*** editors, Advances in Structured and Heterogeneous Continua, 550 pages, ISBN No. 0-89864-071-7, ***Allerton Press,*** Inc., New York, NY.....1994
- ***Siginer, D.A.*** and ***Bechtel, S.E.,*** editors, Developments in Non-Newtonian Flows - 1994, 178 pages, ISBN No. 0-7918-1439-4, ***ASME Press,*** New York, NY.....1994
- ***Siginer, D.A., Kim, J.H., Sherif, S.A.*** and ***Coleman, H.W.,*** editors, Developments in Electrorheological Flows and Measurement Uncertainty - 1994, 187 pages, ISBN No. 0-7918-1438-6, ***ASME Press,*** New York, NY.....1994
- ***Siginer, D.A., Narain, A.*** and ***Kelkar, K.M.,*** editors, Two Fluid Flows-With or Without Phase Change, 107 pages, ISBN No. 0-7918-1405-X, ***ASME Press,*** New York, NY.....1994
- ***Vradis, G.C.*** and ***Siginer, D.A.,*** editors, Numerical Methods for Non-Newtonian Fluid Dynamics, 111 pages, ISBN No. 0-7918-1362-2, ***ASME Press,*** New York, NY.....1994
- ***Siginer, D.A., Thompson, R.L. and Trefethen, L.M.,*** editors, Fluid Mechanics Phenomena in Microgravity, 183 pages, ISBN No. 0-7918-1037-2, ***ASME Press,*** New York, NY.....1993
- ***Siginer, D.A., Van Arsdale, W.E., Altan, M.C.*** and ***Alexandrou, A.N.,*** editors, Developments in Non-Newtonian Flows, 243 pages, ISBN No. 0-7918-1038-0. ***ASME Press,*** New York, NY.....1993
- ***Siginer, D.A., Kim, J.H.,*** and ***Bajura, R.A.,*** editors, Electrorheological Flows, 157 pages, ISBN No. 0-7918-0972-2, ***ASME Press,*** New York, NY.....1993
- ***Siginer, D.A.*** editor, Recent Advances in Non-Newtonian Flows, 151 pages, ISBN No. 0-7918-1121-2, ***ASME Press,*** New York, NY.....1992
- ***Siginer, D.A.,*** and ***Weislogel, M.M.,*** editors, Fluid Mechanics Phenomena in Microgravity, 161 pages, ISBN No. 0-7918-1122-0, ***ASME Press,*** New York, NY.....1992
- ***Siginer, D.A.,*** and ***Dhaubhadel, M.N.,*** editors, Recent Developments in Non-Newtonian Flows and Industrial Applications, 81 pages, ISBN No. 0-7918-0850-5, ***ASME Press,*** New York, NY.....1991
- ***Siginer, D.A.,*** editor, Developments in Theoretical and Applied Mechanics, Vol. XII (selected papers from the Proceedings of SECTAM XII held in Callaway Gardens, Georgia in May 1984), 549 pages, ***Auburn University Press***.....1990

CHAIRMANSHIPS IN PROFESSIONAL MEETINGS

- ASME IMEC&E 2019, Salt Lake City, Utah, November 8-14 2019
- ASME IMEC&E 2018, Pittsburgh, Pennsylvania, November 9-15 2018
- ASME IMEC&E 2017, Tampa, Florida, November 3-9 2017
- ASME IMEC&E 2016, Phoenix, Arizona, November 11-17 2016
- ASME 2016 HT/FEDSM/ICNMM, Washington DC, USA, July 10-14 2016
- 2nd International Conference on Rheology and Modeling of Materials, Miskolc-Lillafüred, *Hungary*, October 5-9 2015

- ASME IMEC&E 2014, Montréal, Québec, November 12-18 2014
- 4th Joint US-European Fluids Engineering Meeting, Chicago, Illinois, August 3-7 2014
- 1st International Conference on Rheology and Modeling of Materials, Miskolc-Lillafüred, *Hungary*, October 9-11 2013
- ASME IMEC&E 2012, Houston, Texas, November 9-15 2012
- ASME IMEC&E 2011, Denver, Colorado, November 11-17 2011
- ASME IMEC&E 2010, Vancouver, British Columbia, *Canada*, November 12-18 2010
- 3rd Joint US-European Fluids Engineering Meeting, Montréal, Quebec, *Canada*, August 1-4 2010
- ASME IMEC&E'09, Lake Buena Vista, Florida, November 13-19 2009
- FEDSM'09, Vail, Colorado, August 2-6 2009
- 4th ICTEA, *Conference General Co-Chair*, Petroleum Institute, *United Arab Emirates*, January 12-14 2004
- 61st APS-DFD Meeting, San Antonio, Texas, November 23- 25 2008
- ASME IMEC&E'08, Boston, Massachusetts, October 31- November 5 2008
- FEDSM'08, Jacksonville, Florida, August 10-14 2008
- ICR2008, Monterey, California, August 3-8 2008
- MTDM2008, Monterey, California, March 30-April 4 2008
- 60th APS-DFD Meeting, Salt Lake City, Utah, November 18-20 2007
- ASME IMEC&E'07, Seattle, Washington, November 11-15 2007
- 5th Joint ASME-JSME Fluids Engineering Conference, San Diego, California, July 30-August 2 2007
- ASME IMEC&E'06, Chicago, Illinois, November 5-10 2006
- 2nd Joint US-European Fluids Engineering Meeting, Miami, Florida, July 17-20 2006
- ICTEA 2006, Al-Ain, *United Arab Emirates*, January 3-6 2006
- ASME IMEC&E'05, Orlando, Florida, November 5-11 2005
- 4th Pacific Rim Conference on Rheology (PRCR4), Shanghai, *China*, August 7-11 2005
- ASME IMEC&E'04, Anaheim, California, November 13-19 2004
- ASME Heat Transfer/Fluids Engineering Conference, Charlotte, North Carolina 2004
- ICTEA 2004, Beirut, *Lebanon*, May 31-June 4 2004
- ASME IMEC&E'03, Washington D.C., November 16-21 2003
- 4th Joint Meeting of FEDSM - JSME, Honolulu, Hawaii, July 6-10 2003
- ASME IMEC&E'02, New Orleans, Louisiana, November 17-22 2002
- Symposium in honor & memory of Professor Charles Speziale, U. S. National Congress of Theoretical and Applied Mechanics, Virginia Polytechnic Institute, June 23-28 2002
- ASME FESMD'02, Montréal, Québec, *Canada*, July 14-18 2002
- ASME IMEC&E'01, New York, New York, November 11-17 2001
- ASME IMEC&E'00, Orlando, Florida, November 5-10 2000
- ASME IMEC&E'99, Nashville, Tennessee, November 14-19.....1999
- ASME IMEC&E'98, Anaheim, California, November 15-20.....1998
- *Conference General Co-Chair* and *Chairman,* technical sessions, Symposium on *"Mechanics of Non-linear Materials"*, Banff, Alberta, *Canada,* May13-16.....1998
- ASME IMEC&E'97, Dallas, Texas, November 16-21 1997
- ASME IMECE'96, Atlanta, GA, November 17-22 1996
- XIIth International Congress on Rheology, Quebec City, *Canada,* August 18-23.....1996
- ASME IMECE'95, San Francisco, CA, November 12-17 1995
- *Conference General Chair,* International Symposium on *Advances in Structured and Heterogeneous Continua II,* Moscow, *Russia,* August 14-18.....1995
- ASME IMECE'94, Chicago, IL, November 6-11 1994
- ASME FEDSM'94, Lake Tahoe, Nevada, June 19-23 1994
- ASME WAM'93, New Orleans, LA, November 28-December 3 1993
- *Conference General Chairman,* International Symposium on *Advances in Structured and Heterogeneous Continua I,* Moscow, *Russia,* August 22-26.....1993
- ASME FEDSM'93, Washington D.C., June 20-23 1993
- PACAM III, sponsored by the American Academy of Mechanics, Sao Paulo, *Brazil,* January 4-8 1993
- ASME WAM'92, Anaheim, CA, November 8-13.....1992
- ASME WAM'91, Atlanta, GA, December 1-6 1991
- PACAM II, sponsored by the National Science Foundation and The American Academy of Mechanics, Valparaiso, *Chile,* Jan. 2- 4..... 1991
- 60th Meeting of the Soc. of Rheology, Gainesville, Florida, February 12-15 1989
- First Caribbean Conference on Fluid Dynamics, The University of the West Indies, *Trinidad,* January 8-11 1989
- European Symposium on Polymeric Materials Lyon, *France,* Sept. 14-18.....1987
- 2nd Conference of European Rheologists, Prague, *Czechoslovakia,* June 17-20 1986
- IIIth IASTED International Conference on Modeling and Simulation, Lugano, *Switzerland,* June 24-26.....1985
- SECTAM XII; Callaway Gardens, Georgia, May 10-11..... 1984

- CANCAM IX, University of Saskatchewan, Saskatoon, *Canada***,** May 30 - June 3 1983
- VIII[th] IASTED International Symposium on Simulation and Modeling; Orlando, Florida, November 9-11 1983

INVITED SEMINARS & LECTURES

- ***Invited speaker***, 9[th] International Workshop on Advanced Materials Science and Nanotechnology, IWAMSN 2018, Ninh Binh City, Vietnam..... November 7-11, 2018
- ***Plenary lecture***, 2[nd] International Conference on Rheology and Modeling of Materials, *Miskolc-Lillafüred, Hungary*, October 5-9 2015
- ***Keynote lecture***, ICTEA 2015 - 8[th] International Conference on Thermal Engineering Theory and Applications, *Amman, Jordan*, May 18- 21 2015
- Department of Mathematics, Gaziantep University, *Gaziantep, Turkey*, May 15..... 2015
- College of Engineering, Universidad de Santiago de Chile, *Santiago, Chile*, January 6..... 2015
- ***Plenary lecture***, 1[st] International Conference on Rheology and Modeling of Materials, *Miskolc-Lillafüred, Hungary*, October 7- 11 2013
- ***Keynote lecture***, ICTEA 2012 - 6[th] International Conference on Thermal Engineering Theory and Applications, *Istanbul, Turkey*, May 29- June 1 2012
- ***Keynote lectures***, International Computational Modeling Validation Conference, *Sydney, Australia*.....January 14&15, 2012
- Universiti Teknologi PETRONAS (***three lectures***), *Malaysia*, July 24-30 2011
- ***Plenary Lecture***, International Conference on Fluid Dynamics and its Applications, *Bangalore, India*, July 20 - 22 2011
- Yeditepe University, Departments of Mechanical Engineering and Chemical Engineering, *Istanbul, Turkey*, June 8 2011
- Qatar University, College of Engineering, *Doha, Qatar*, May 26 2011
- ***Keynote Lecture***, 6[th] International Conference on Dynamical Systems and Applications *Antalya, Turkey*, July 10-14 2010
- Michigan Technological University, College of Engineering, Houghton, MI, November 20 2008
- Cairo University, College of Engineering, *Cairo, Egypt*, January 16 2008
- Symposium to honor Professor Jean Bataille on the occasion of his retirement, *Lyon, France*, June 20 2007
- ***Keynote Lecture***, ICTEA 2007 - Third International Conference on Thermal Engineering Theory and Applications, *Amman, Jordan*, May 21-23 2007
- Petroleum Institute, *Abu Dhabi, United Arab Emirates*, May 16 2007
- University of Maine, College of Engineering, Orono, ME, April 25 2007
- Ecole Centrale de *Lyon, Ecully, France*, November 23&24 2006
- College of Engineering, Lebanese- American University, *Beirut, Lebanon*, July 11 2006
- ***Keynote Lecture***, ICTEA 2006 - Second International Conference on Thermal Engineering Theory and Applications**,** *Al Ain, United Arab Emirates*, January 3-6 2006
- College of Engineering, *American University at Sharjah, United Arab Emirates*, November 27 2005
- Department of Civil Engineering, Dalhousie University, *Halifax, Nova Scotia, Canada*, October 17..... 2005
- Department of Mechanical Engineering, Wichita State University, Wichita, KS, September 23 ... ……..2005
- ***Keynote Lecture***, 4th Pacific Rim Conference on Rheology (PRCR4), *Shanghai, China*, August 7-11..... 2005
- Ecole Polytechnique de l'Université de Nantes, *Nantes, France***,** July 11&13 2005
- Institut National des Sciences Appliquées (INSA) de *Lyon, France*, June 30 2005
- Université Pierre et Marie Curie, Laboratoire de Modélisation en Mécanique (LMM), *Jussieu, Paris, France*, May 27..2005
- Department of Mechanical, Aerospace, and Biomechanical Engineering, University of Tennessee, Knoxville, TN, April 18 2005
- South Dakota State University, College of Engineering, Brookings, SD, February 22 2005
- Symposium in Honor of the SES 2004 Eringen Medalist Professor K. R. Rajagopal, 41st Technical Meeting of the Society of Engineering Science, University of Nebraska, October 10-13 2004
- College of Engineering, Koc University, *Istanbul, Turkey*, June 8 2004
- ***Plenary Lecture***, ICTEA 2004 - International Conference on Thermal Engineering Theory and Applications, *Beirut, Lebanon*, May 31-June 4 2004
- Department of Mechanical & Materials Engineering, Florida International University, Florida, April 30 2004
- Micro Thermal Systems Research Center, Korea Science and Engineering Foundation, Seoul National University, *Seoul, Korea*, March 22 2004
- Symposium on Recent Advances in the Mechanics of Non-Newtonian Fluids, ASME IMEC&E, Washington D.C., November 15..... 2003
- Mississippi State University, College of Engineering, May 22 2003
- Marquette University, College of Enginering, April 17 2003
- Université Joseph Fourier, Laboratoire de Rhéologie, *Grenoble, France*, March 20..... 2003
- Ecole Supérieure de Plasturgie, *Oyannax, France*, March 17 2003

- Aerospace and Mechanical Engineering Department, Louisiana State University, Baton Rouge, Louisiana, November 15.....2002
- Symposium to honor Professor Daniel Joseph, 14th US Congress of Applied Mechanics, Virginia Polytechnic Institute & State University, Blacksburg, Virginia, June 23-28, ...2002
- Aerospace and Mechanical Engineering Department, University of Oklahoma, Norman, Oklahoma, November 1 2001
- Department of Chemical and Petroleum Engineering, University of Kansas, Lawrence, Kansas, September 25 2001
- Mechanical and Aerospace Engineering Department, University of Texas at Arlington, Arlington, Texas, March 2 2001
- Mathematics Department, Wichita State University, Wichita, Kansas, February 9.....2001
- ***ASME Fluids Engineering Division Lecture***, American Society of Mechanical Engineers International Mechanical Engineering Congress & Exposition, Orlando, Florida, November 5-10, ...2000
- ***Keynote Lecture***, Regional Meeting of the Polymer Processing Society, Technical University of Brno, *Zlin, Czech Republic*, August 16-18,.....2000
- School of Mechanical and Materials Engineering, The Washington State University, Pullman, Washington, April 3,.....2000
- Department of Mechanical Engineering, The University of New Mexico, Albuquerque, New Mexico, March 28,.....2000
- Departments of Mechanical and Chemical Engineering, Tulane University, New Orleans, Louisiana, February 25, ...2000
- Symposium in honor of Professor Howard Brenner on the Occasion of his Seventieth Birthday, MIT, September 25,....1999
- Universidad de La Serena, *La Serena, Chile*, August 20.....1999
- Universidad Tecnológica Nacional, *Buenos Aires, Argentina*, August 10 1999
- Workshop on "Multi-phase/Multi-fluid Fluid Dynamics", University of Pennsylvania, Philadelphia, March 19-20, ...1999
- ***Visiting Professor & Lecturer,*** Universidad de Santiago de Chile, Research Institute of Santiago de Chile University and the Department of Mechanical Engineering, *Santiago, Chile*, December 1998-January 1999 1999
- *ibidem*, September-October 1997
- ***Visiting Professor,*** University of New Brunswick, Department of Mathematics, Statistics and Computer Science, *Saint John, N.B. Canada*, June 1997
- ***Visiting Professor, & Lecturer,*** Pontificia Universidade Catolica, Department of Mechanical Engineering, *Rio de Janeiro, Brazil*, May 1-15, ...1997
- Annual Meeting of the Caribbean Academy of Sciences, *Barbados*, April 23-25,.....1997
- University of Missouri-Columbia, Department of Mechanical and Aerospace Engineering, Columbia, Missouri, April 10,.....1997
- Polytechnic University, Department of Mechanical, Aerospace and Manufacturing Engineering, Brooklyn, New York, March 27 1997
- ***Visiting Professor, & Lecturer,*** (sponsored by the World Bank), The University of the West Indies, Department of Mathematics and Computer Science, *St. Augustine, Trinidad & Tobago*, April – May.....1997
- ***Plenary Lecture,*** VIII National Workshop on Rheology, *Sofia, Bulgaria*, October 9, ...1996
- Institute of Mechanics, Bulgarian Academy of Sciences, *Sofia, Bulgaria*, October 9,.....1996
- Technical University Brno, Faculty of Technology Zlin, *Zlin, Czech Republic*, October 4, ...1996
- Institute of Hydrodynamics, Czech Academy of Sciences, *Prague, Czech Republic*, October 2,.....1996
- Ecole Nationale Supérieure des Mines de Paris, Sophia Antipolis, *Valbonne, France*, October 1, ...1996
- Laboratoire de Rhéologie, Université Joseph Fourier, *Grenoble, France*, September 27 1996
- East China University of Science & Technology, Rheology Research Center and Departments of Mechanical & Chemical Engineering, *Shanghai, People's Republic of China*, September 15-22, ...1996
- China Textile University, Department of Textile-Chemical Engineering, *People's Republic of China*, September 15-22,.....1996
- Department of Mechanical Design, Pusan National University, *Pusan, Korea*, September 12, ...1996
- Department of Mechanical Engineering, Seoul National University, *Seoul, Korea*, September 17, ...1996
- Department of Chemical Engineering, Seoul National University, *Seoul, Korea*, September 16, ...1996
- Department of Metallurgy, University of Tokyo, *Tokyo, Japan*, September 9, ...1996
- Department of Mechanical and Production Engineering Niigata University, *Niigata, Japan*, September 5,.....1996
- Department of Mechanical Engineering, Tokyo Denki University, *Tokyo, Japan*, September 3,.....1996
- Ecole Supérieure de Physique et Chimie Industrielles, Physique et Mécanique des Milieux Heterogenes, *Paris, France*, June 7 1996
- Ecole Nationale Supérieure de Techniques Avancées, Groupe Phénomènes d'Interface, *Palaiseau, France*, June 6.....1996
- Universita degli Studi di Roma, Dipartimento di Meccanica e Aeronautica, *Rome, Italy*, June 21 1996
- Instituto per le Applicazioni de Calcolo - C.N.R. (Consiglio Nazionale delle Ricerche), *Rome, Italy*, June 19, 20 1996
- University of Missouri-Rolla, Department of Mechanical and Aerospace Engineering and Engineering Science, Rolla, Missouri, May 2.....1996
- Materials Society, Auburn University, April 10, ...1996
- 32nd Annual Meeting of the Society of Engineering Science (SES), New Orleans, October 29-November 1 1995
- Department of Mechanical Engineering and the Research Institute of the University of Santiago, Santiago University, *Santiago, Chile,* September 15-30,.....1995
- ***Plenary Lecture,*** Annual Meeting of the Korean Society of Rheology, *Taejon, Korea,* Sept. 30, ...1994

- Seoul National University, *Seoul, Korea,* September 23,.....1994
- Oriental Chemical Industries Research Center, *Inchon, Korea,* September 22,.....1994
- Stevens Institute of Technology, Highly Filled Materials Institute, Hoboken, New Jersey, March 30, ...1994
- University of Massachusetts, Department of Chemical Engineering, Amherst, Massachusetts, March 17, ...1994
- Joint meeting of the ASME Applied Mechanics and Bioengineering Divisions, ASCE Engineering Mechanics Division, and the Society of Engineering Science (SES), University of Virginia, Charlottesville, VA, June 6-9..... 1993
- Seoul National University, *Seoul, Korea,* July.....1993
- Pusan National University, *Pusan, Korea,* July.....1993
- Oriental Chemical Industries Research Center at Inchon, *Inchon, Korea,* July 1993
- ***Plenary Speaker,*** Symposium on Recent Developments in Structured Continua III, Montreal, May 26-28,.....1993
- Institute of Applied Mechanics of Russian Academy of Sciences (RAS), *Moscow, Russia,* September.....1992
- ***Plenary Speaker,*** Symposium "Some Current Problems of Rheology, Biomechanics and Biorheology", *Moscow, USSR,* August 19-25,.....1991
- ASME Applied Mechanics/Bioengineering Conference, Columbus, Ohio, June 16-19,.....1991
- ***Keynote Speaker,*** Symposium on Recent Developments in Structured Continua II, Université de Sherbrooke, *Sherbrooke, Canada,* May 23-25, ...1990

RESEARCH FUNDING

- Heat Transfer Asymptote and Secondary Flows of Viscoelastic Fluids in Conduits of Arbitrary Shape; **D.A. Siginer co-PI**; Chilean National Fund for Scientific and Technological Development (FONDECYT) Grant No. 1130346; 3/1/12 - 2/28/15; **$210,000 US**.
- CFD Analysis for De-bottlenecking and Carryover of Separation Equipment; **D.A. Siginer co-PI**; ADMA/ADNOC Research Grant supported by the Oil Subcommittee; 40 months project starting on September 1, 2010; AED660,000 (**$175, 000 US**).
- Characteristics of Viscoelastic Flows for High Weissenberg Numbers of Relevance to Polymer Melt Flows; **D.A. Siginer PI** ; PI RAGS-Internal Research Grant ; 2 year project; 2010 budget AED160,000 (**$45,000 US**).
- Drainage of Viscoelastic Liquid films by Oscillation and Effect of Porosity; **D.A. Siginer co-PI** ; PI RAGS-Internal Research Grant ; 2 year project; 2010 budget AED30,000 (**$7,000 US**).
- Innovation in Aircraft Manufacturing Through System-Wide Virtual Reality Models and Curriculum Integration (in partnership with Boeing Inc.) ; **D.A. Siginer PI** ; National Science Foundation (NSF) 1/1/2002 – 5/31/2005 **$1,463,964 US.** No cost extension to 5/31/2006.
- Curriculum Development Planning Grant on "I-SEE Paradigm for Multi-Disciplinary Learning and Collaboration"; **D.A. Siginer PI** ; National Science Foundation (NSF) ; 9/1/2002 – 11/30/2003; **$100,000 US**.
- REU for "Innovation in Aircraft Manufacturing Through System-Wide Virtual Reality Models and Curriculum Integration" grant (in partnership with Boeing Inc.) – supplemental: undergraduate students and education **D. A. Siginer PI;** National Science Foundation (NSF) 1/1/2002 – 12/31/2004; **$30,375 US**.
- Heat Transfer in the Flow of Viscoelastic Fluids in Conduits of Arbitrary Shape (Analisis de Flujo Secundario y Transferencia de Calor en Flujo Viscoelastico en Ductos de Secciones no Circulares Complejas); **D.A. Siginer co-PI**; Research collaboration grant with the University of Santiago of Chile in Santiago, Chile, Chilean National Fund for Scientific and Technological Development (FONDECYT) Grant No. 7010173; 3/1/01 - 2/28/05; **$120,000 US**.
- Tech-Prep in Engineering, Science and Technology; **D. A. Siginer PI**; State of New Jersey Department of Education; 9/1/1998 - 8/31/2003; **$1,200,000 US**.
- Flow of Non-Newtonian Fluids in Conduits of Arbitrary Shape. Study of Secondary Flows and Energy Budgets (Flujo No-Newtoniano en Tubos de Secciones Transversales Complejas. Estudio de Flujo Secundario, Caudal y Consumo Energetico); **D.A. Siginer co-PI**; Research collaboration grant with the Universidad de Santiago de Chile Santiago, Chile; Chilean National Fund for Scientific and Technological Development (FONDECYT) Grant No. 1970810; 6/1/97 - 5/31/99; **$80,000**.
- Energy savings in the flow enhancement of viscoelastic liquids; **D.A. Siginer PI**; Research collaboration grant with the Russian Academy of Sciences in Moscow, Russia North Atlantic Treaty Organization (NATO); 8/1/92 - 7/31/94; **$28,704**.
- Energy savings in the flow enhancement of viscoelastic liquids; **D.A. Siginer PI**; Research collaboration grant with the Russian Academy of Sciences in Moscow, Russia North Atlantic Treaty Organization (NATO) - renewal; 7/31/94 - 8/1/96; **$18,000**.
- Prediction of Deflection Response of Flexible Pavements under Dynamic Loads; **D.A Siginer PI**; National Asphalt Research Center; 9/1/94 - 8/31/97; **$160,000**.
- Developments in the mechanics of viscoelastic liquids; **D.A. Siginer PI**; a proposal to hold a NATO Advanced Study Institute of two week duration North Atlantic Treaty Organization (NATO); Fall 1997; **$68,000**.
- Anomalous flows and constitutive equations in Rheology; **D. A. Siginer PI**; a research collaboration grant with the Russian Academy of Sciences in Moscow, Russia; US Civilian Research & Development Foundation (CRDF); Summer 1996 – 1998; **$80,000**.
- Graduate Research Fellowship Program; **D.A. Siginer PI**; National Science Foundation (NSF); 6/1/93 - 6/1/96; **$70,000 US**
- Grant to host Professor Bakhtiyarov from the Azerbaijan State Oil Academy in Auburn University for nine months to conduct joint research; **D. A. Siginer PI**; International Programs Office, Auburn University; 3/1/95 - 12/1/95; **$12,000 US**.

- Reducing the pumping cost of and a constitutive equation for viscoelastic liquids including paper pulp and black liquor; **D.A. Siginer PI**; Alabama Paper and Pulp Research and Education Center (PPREC); 10/1/91 - 9/30/94; **$65,600 US**.
- A study of interfacial stability and vortex breakdown in microgravity; **D.A. Siginer PI**; National Aeronautics and Space Agency (NASA); 10/1/93 - 10/1/96; **$116,000**.
- Graduate Research Fellowship Program; **D.A. Siginer PI**; National Science Foundation (NSF); 6/1/91 - 5/31/94; **$60,000** US
- Grant to host in Auburn a team of scientists from the Russian Academy of Sciences in Moscow including the former Russian Minister of Education Academician Ivan Obratzsov; **D. A. Siginer PI**; International Programs Office, Auburn University; October 1992; **$4,000 US**.
- Reducing the pumping cost of non-Newtonian liquids; **D.A. Siginer PI**; Department of Energy DOE/EPSCOR program; 2/1/89 - 1/31/91; **$80,000**.
- Rheological properties of asphalt and related pavement materials; **D.A. Siginer PI**; National Asphalt Research Center; 2/1/89 - 1/31/92; **$120,000**.
- Graduate Research Fellowship Program; **D.A. Siginer PI**; National Aeronautics and Space Agency (NASA); 9/1/89 - 8/31/92; **$66,000.**
- Peristaltic flow of viscoelastic liquids and some related flow problems; **D. A. Siginer PI**; National Science Foundation (NSF); 10/1/87 - 9/30/89; **$85,000**.
- Characteristics of the flow in pipes carrying non-Newtonian liquids; **D.A. Siginer PI**; State of Alabama Novel Research Initiative Grant; 10/1/85 - 9/30/87; **$60,000**.
- A class of viscoelastic motions with applications; **D.A. Siginer PI**; Engineering Experiment Station - Auburn University; 10/1/84 - 9/30/86; $16,000