

Rheology Bulletin



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Record-Breaking 81st Annual Meeting of the SOR
Book Review: Denn on Polymer Processing
Technical Program for Santa Fe 2010

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Nine Bingham medalists present in Madison were (back row) John Brady, Gerry Fuller, Ron Larson, Henning Winter, Gary Leal, (front row) John Dealy, Andy Acrivos, Greg McKenna, and Bob Bird.

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Madison Report 2009

The Society of Rheology just cannot get enough of Madison.

In 2009 and for the fourth time, the annual gathering of The Society of Rheology was hosted in Madison by the Rheology Research Center (RRC) at the University of Wisconsin-Madison. Local Arrangements were handled by Jeffrey Giacomini, the chair of the RRC. The registration total was 470, a record. This delightful outcome, in the face of tough financial times, comes thanks to the outstanding technical programming by Jeffrey Morris and Srinivasa Raghavan in addition to the good planning and hard work of Giacomini and his team. The registration total of 470 reflects 103 more registrants than the previous all-time high for meeting registrants in an annual meeting, a record set the last time a meeting was held in Madison.

Events in Madison began with the short course on *Mesosopic Simulation of Dynamics in Complex Fluids*, which was taught by Mike Graham and Juan Hernandez-Ortiz of the University of Wisconsin-Madison, and which attracted 27 attendees. Another event scheduled before the main meeting was an industry/faculty/student mixer held on the topic *Industrial Applications of Rheology*. This event, sponsored by the Industrial Outreach Program of the American Institute of Physics, attracted about 30 participants who listened to a variety of speakers describe how rheological modeling and concepts could address industrial problems.

The meeting itself began with a Sunday reception sponsored by Malvern Instruments, followed by Monday through Thursday technical sessions organized by Program Chairs Jeffrey F. Morris (City College of New York, USA) and Srinivasa R. Raghavan (University of Maryland, USA). The meeting included plenary presen-



Receptions at the Madison meeting brought attendees together most evenings.

tations by Norman J. Wagner (University of Delaware, USA), Ajay K. Sood (Indian Institute of Science, Bangalore India), and 2009 Bingham medalist Gregory B. McKenna (Texas Tech University, USA).

The social program included a Monday luncheon sponsored by The Society of Rheology and a Monday Society Reception sponsored by the *Journal of Rheology*. The Tuesday Awards Reception was sponsored by Xpansion Instruments. The poster session took place on Wednesday evening, and the reception during the poster session was sponsored by Anton Paar USA. All registrants were treated to a 2GB USB data drive through the generosity of Thermo Scientific.

The Society Luncheon on Monday was an opportunity for registrants to socialize on-site between sessions, and the gathering was also used to surprise Gerry Fuller with the presentation of The Society of Rheology Distinguished Service Award. This award, given infrequently, recognizes exceptional service to the Society. For more on Fuller's contributions to the SOR, see the article on page 7.

At the Business Meeting on Tuesday evening, the Society gavel was handed over from president Bob Prud'homme to incoming President Faith Morrison. Retiring from the ExCom were Past President Andy Kraynik and Members at Large Marie-Claude Heuzey and Dan Klingenberg. With the change of command, Prud'homme becomes the Past President, and the new Vice President is Jeff Giacomini. Also new to the Executive Committee are Albert Co (Secretary) and Members-at-Large Hiroshi Watanabe and Ole Hassager. Returning to the ExCom are Editor John Brady, Treasurer Monty Shaw, and Member-at-Large Norman Wagner. The Society heard from its officers that its affairs are in order (see minutes and reports in this *Bulletin* for details).



Greg McKenna and Sindee Simon were feted at the Awards Banquet where McKenna received the 2009 Bingham Medal of The Society of Rheology

Bob Prud'home and Betty Metzner congratulate Jonathan Rothstein on his Arthur B. Metzner Early Career Award.



Following the Business Meeting, the Awards Reception and Awards Banquet were held, providing an opportunity to honor some significant contributions to rheology made by Society members. *Journal of Rheology* Editor John Brady chairs the selection committee for the *Journal* Publication Award, and he presented the 2009 award to Sven Reynaert, Carlton F. Brooks, Paula Moldenaers, Jan Vermant, and Gerald G. Fuller. The collaborators hail from three institutions: Brooks is from Sandia National Laboratories (Albuquerque, New Mexico USA), Fuller is from Stanford University (California USA), and the remaining authors are from Katholieke Universiteit Leuven (Leuven, Belgium). The paper for which the team was recognized is "Analysis of the magnetic rod interfacial stress rheometer," which appeared in the *Journal of Rheology* in 2008 (volume 52(1), pages 261-285). Electronic access to this paper and to all other *Journal* Publication Award papers is open to all at no cost.

The Society's newest recognition, the Arthur B. Metzner Early Career Award was presented for the first time in 2009. The new award is given to a younger member of the Society who has distinguished him/herself in rheological research, rheological practice, or service to rheology. The award was approved by the Executive Committee in 2008, and a selection committee chaired by Lynn Walker chose the first recipient. In

Madison the Metzner plaque was presented to Jonathan P. Rothstein (University of Massachusetts, USA). Present at the banquet was Betty Metzner, Art Metzner's widow, who was ably escorted to the meeting by Mike Mackay and Norman Wagner from the University of Delaware. Mrs. Metzner spoke to those assembled of her and her husband's long and valued association with The Society of Rheology. Art Metzner's name is associated with the Early Career Award to recognize his mentorship of young rheologists as well as his important contributions to rheology, rheological practice, and

(continues page 16)

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Gerry Fuller Recognized for Distinguished Service

Gerald G. Fuller of the Department of Chemical Engineering at Stanford University received the Distinguished Service Award of The Society of Rheology on October 19, 2009 at the Annual Meeting in Madison, Wisconsin.

With the recent International Congress on Rheology (ICR) in Monterey fresh on everyone's mind and sure to be remembered for years to come, and Gerry's role in organizing that meeting recognized and appreciated by the international rheology community, it came as no surprise to those in attendance at the Society luncheon in Madison when this award was announced. But, to be sure, the Monterey ICR was just the latest edition of Gerry Fuller's service to the Society over the past two decades. He has served on the Bingham Award (1987-1989) and Nominating Committees (1989) and seen both sides of annual meeting organization: chairing the Technical Program Committee in Sacramento (1995) and the Local Organizing Committee in Monterey (1998). The last experience would eventually spawn a successful proposal to host the Monterey ICR a decade later.

Gerry was elected and served on the Executive Committee of the Society as Member at Large (1995-1997), Vice President (1997-1999), President (1999-2001), and Past President (2001-2003). A brilliant record of scientific achievement has included over 200 refereed publications, a seminal book on "Optical Rheometry of Complex Fluids" (1995), and the Bingham Medal (1997). Gerry has taught two very popular short courses on optical rheometry and interfacial rheology at annual meetings of the Society. He and his coauthors (Sven Reynaert, Carlton F. Brooks, Paula Moldenaers, and Jan Vermant) also received the *Journal of Rheology* Publication Award in Madison for their article: "Analysis of the magnetic rod interfacial stress rheometer" *J. Rheol.*, 52, 261-285 (2008). Gerry



currently serves as Chairman of the International Committee on Rheology (2008-2012), in which capacity he is dedicated to promoting rheology, worldwide.

Gerry enjoys cycling at rheological venues around the globe. He has a son, Adam, and two daughters, Leslie and Chloe, and resides in Stanford, California, with his wife, Mary.

Andy Kraynik



Come to Santa Fe for the 82nd Annual Meeting

Submitted by Andy Kraynik
Local Arrangements Chair, Santa Fe

The Society of Rheology will return to Santa Fe, New Mexico USA for the next annual meeting, 24-28 October 2010 – twenty years after the first Santa Fe meeting in October 1990. The previous venue, the old Sweeney Center, has been replaced by a modern convention center, with plenty of Santa Fe charm, located two blocks from the historic plaza and numerous restaurants. Andy Kraynik and colleagues from Sandia National Laboratories in Albuquerque are coordinating local arrangements.

The Technical Program for Santa Fe is being organized by Saad Khan (North Carolina State University) and Greg McKenna (Texas Tech University), and appears on pages 11-12 of this *Bulletin*. Abstracts for oral presentations and posters can be submitted through the Society website beginning in March 2010. Student-members travel grants will also be available (see page 17).



Two short courses will be offered by veteran short-course instructors on the weekend before the Santa Fe meeting. Jan Mewis (Katholieke Universiteit Leuven, Belgium) and Norman Wagner (University of Delaware, USA) will teach a two-day course on “Suspension Rheology,” which is based on their forthcoming book. Eric Furst (University of Delaware), Patrick Doyle (Massachusetts Institute of Technology, USA) and Patrick Spicer (Procter & Gamble, USA) will give a one-day course on “Microrheology: Theory, Practice and Applications.” Participants can opt to attend one day of each



course and receive both sets of course notes. Details on both courses will be published in the July *Rheology Bulletin* and posted on the Society website at www.rheology.org.

Santa Fe is located in northern New Mexico, an hour’s drive north of Albuquerque, the state’s largest city and major air gateway. Convenient shuttle service is readily available from the Albuquerque airport (ABQ) to all Santa Fe hotels. Those planning to do a little sightseeing may choose to rent a car in Albuquerque and drive the 60 miles to Santa Fe. The city is located at the base of the Sangre de Cristo Mountains at an elevation of 7000 ft. Santa Fe is ranked among the top five US travel destinations, in part because it has long been a center for arts and culture, owing to its Hispanic, Native American and Anglo heritage. It ranks as the country’s third largest art market with nearly 300 galleries and dealers. More information on Santa Fe can be found at santafe.org.

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**82nd Annual Meeting of
The Society of Rheology
Santa Fe, New Mexico 24-28 October 2010**

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To submit a presentation or poster abstract, please visit the Society website www.rheology.org after 1 February 2010.

Technical Program for Santa Fe 2010

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Nano- and Micro-Rheology: Indentation and Beyond

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Complex Fluids: Nanocomposites and Phase Separated Systems

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Poster Session

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Polymer Rheology: Melts, Solutions and Blends

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Computational Rheology: Behavior 'in Silico'

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For information on student travel grants for Santa Fe, see page 18. For information on the 2010 Student Poster and Postdoc Poster Competitions, please go to www.rheology.org/sor/annual_meeting/2010Oct/.

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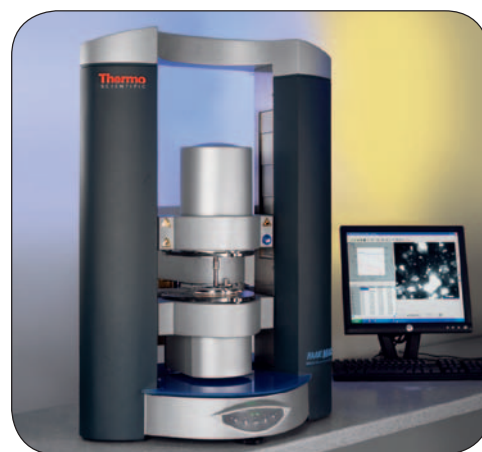
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Book Review

Reviewed by Gibson Batch
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The book instructs us in the fundamentals of flow and heat transfer, one of many important elements in polymer processing. The text summarizes research topics by Dr. Morton Denn over his long and fruitful career. Those of us who know Morton will recognize his familiar, thoughtful, frank, and friendly tone throughout the text.

The author focuses on fluid mechanics only, as suggested in the title, starting at the point where the polymer is uniformly melted and ending when it leaves the die. The targeted audience is either an advanced undergraduate or beginning graduate student.

I have a few reservations about this book for a general polymer processing text. This book is not an exhaustive study of the polymer literature, nor is it a descriptive text of equipment and methods for polymer-based products. It contains only a cursory review of polymer physics, structure/property relationships, and process methods. Instructors familiar with other polymer processing texts may find a noticeable absence of instruction about feeding, melting, residence time, and cooling. The book does not have homework questions.

But these reservations are counterbalanced by something unique in the text that I haven't seen elsewhere such as

- 1) The coupling between flow and heat transfer as it affects process stability,
- 2) Detailed analysis of fiber spinning with the Maxwell and Phan-Thien/Tanner constitutive equations,
- 3) A review coauthored with Benoit Debbaut about basics of finite element method,
- 4) Detailed discussion about the phenomena of draw resonance and wall slip.

Throughout the book, the emphasis is on applied fluid mechanics and heat transfer.

This text has 14 chapters in length appropriate for a semester of study. The content is self-contained and flows logically from topic to topic. The book is well-written, and I have found few errors in the text or equations. In the later chapters on topics of recent interest (wall slip, structured fluids, mixing of blends), the author gives literature references for further exploration.

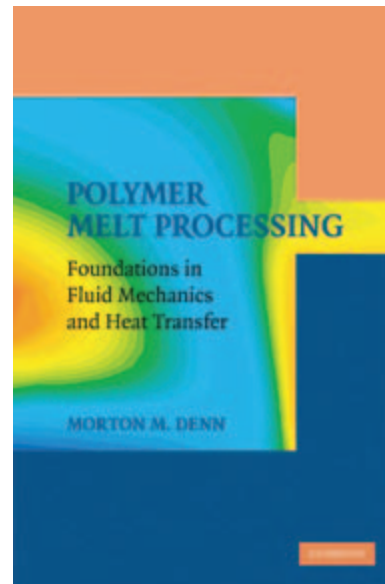
Polymer Melt Processing: Foundations in Fluid Mechanics and Heat Transfer

Morton M. Denn
City College of New York

It is an admirable work, something quite unlike I have seen in other texts in the field. The 240 page lexicon is elegant and freshly instructive. I find this text compact, self-contained, and interesting to read.

It is a monumental work, and I recommend it for anyone wishing to have a perspective of Dr. Denn's work in process stability and rheology. This book is worthy of consideration for instruction on transport and/or modeling of polymer processing. For general instruction, it would be a good companion to other more broad-reaching texts in the field.

Cambridge University Press (2008)
ISBN-10: 0521899699



Authors interested in having their works reviewed in the *Rheology Bulletin* may contact the editor at rheology@aip.org.

Outreach Activities Target New Societies of Rheology

Submitted by Gerry Fuller
Chairman, International Committee on Rheology

The science of rheology is well-represented throughout the world. Our major, annual meetings in North America, Europe, and Asia continue to attract greater numbers of registrants. The recent Society of Rheology meeting in Madison, WI USA, set an attendance record for an annual meeting with 470 in attendance. Last year's International Congress on Rheology in Monterey, California USA attracted 1009 people from around the globe, making it the largest such Congress on record. This healthy growth in the rheological community reflects the vital position of our science in addressing world-wide technological challenges in energy, the environment, and manufacturing.

As developing countries grow their economies, opportunities to establish societies of rheology and rheology user groups emerge. A principal purpose of the International Committee on Rheology (www.icr.tu-berlin.de) is to offer support to such activities.



During my tenure as Chairman of the ICR, I will work along side the Secretary of the ICR, Manfred Wagner, to make this a priority. The Society of Rheology has also responded to this charge. At the Spring Meeting of the SOR Executive Committee, a one-time amount of \$10,000 was offered to the ICR for the purpose of supporting its operations. Additionally,

the Executive Committee voted to set aside \$5000 each year for the purpose of funding outreach activities with the promise of establishing viable societies and groups of rheology throughout the world.

There were several important developments this past year. This June saw the inaugural meeting of the Romanian Society of Rheology (SRR 2009) in Bran, Transylvania. This meeting brought together 36 participants from different parts of Romania and included six invited lecturers from abroad (Ken Walters and Tim Phillips, UK; Manfred Wagner, Germany; Cris Gallegos, Spain; and Gareth McKinley and Gerry Fuller, USA). Orga-

nized by Professor Corneliu Balan of Bucharest, this meeting introduced Professor Maria Lungu of Iasi as the President. I am pleased to relate that the SRR 2009 was voted into ICR membership in September.

India and Brazil represent two exciting opportunities for growth of the rheological community. The Indian Society of Rheology was established in 1984, although the intervening years have seen this society become inactive. There is a resurgence of interest in rebuilding this society, however, and two central figures in Indian rheology, Ashish Lele of Pune and Ajay Sood of Bangalore, graciously accepted an invitation to observe the Executive Committee meeting at the Madison meeting for the purpose of building ties to The Society of Rheology. It appears likely that a reconstitution of the Indian Society of Rheology will take place during an upcoming meeting on complex fluids in Chennai this coming January.

The Executive Committee also welcomed Professor Paulo Mendes of Rio de Janeiro, Brazil as an observer to its meeting. Recent expansion of the Brazilian economy and important discoveries of oil in that country have led to a subsequent increased need for rheological research and development. We look forward to learning more about the establishment of a Brazilian Society of Rheology at a meeting planned for July 2010.



Ajay Sood, professor of physics at the Indian Institute of Science in Bangalore, India, attended the Madison Meeting and presented a well received plenary lecture.



Monty Shaw, Bob Bird, and Betty Metzner enjoy the Awards Banquet in Madison.

(continued from page 5)

service to the Society.

As is the tradition, the main event of the Awards Banquet was the presentation of the Bingham Medal, which

went in 2009 to Gregory B. McKenna, Paul Whitfield Horn Professor at Texas Tech University in the Department of Chemical Engineering. The nomination materials for McKenna cite his extensive contributions in surface rheological methods, polymer glasses, molecular rheology, and the mechanics of cross-linked rubbers. Accompanying McKenna at the banquet was his spouse Sindee Simon, also a member of the Chemical Engineering faculty at Texas Tech. Just to make sure events did not stay somber the whole evening, colleague Chris White gently roasted McKenna.

The next annual meeting of The Society of Rheology is scheduled for 24-28 October 2010 in Santa Fe, New Mexico USA, where our host will be Andy Kraynik of Sandia National Labs. The technical program in Santa Fe is chaired by Greg McKenna and Saad Khan. More on the Santa Fe meeting and on the technical program in Santa Fe may be found in this *Bulletin*.



Joseph M. Starita (1944 – 2009)

died 17 November 2009 following a valiant fight with brain cancer. Starita was president of CPP Engineering, LLC and was the founder of Rheometrics, Inc. (acquired by TA Instruments, Inc. in 2003) a leading manufacturer of rheometers. Previously, he held product, process and materials development managerial positions with General Electric. Starita received his ME from Stevens Institute of Technology and earned his MSE, MA and PhD in Chemical Engineering from Princeton University. Starita was a Society of Plastics Fellow and was recognized worldwide as an expert in applying rheology to solve polymer process, material and product problems. He held many patents associated with rheology and polymers. Starita was preceded in death by his mother and a brother Richard Starita. Along with his father, survivors include his wife of 7 years, Renee Kelly Starita. (Compiled by the Editor from his obituary)

James L. White (1938 – 2009)

Bingham medalist and Harold A. Morton Professor of Polymer Engineering at the University of Akron, suddenly passed away in Germany on 26 November 2009.

Jim White studied chemical engineering at the Brooklyn Polytechnic Institute and then joined the research group of Arthur Metzner at the University of Delaware, finishing his MS degree in 1962 and PhD degree in 1965. At Delaware, White and Metzner developed the rheologi-

cal model that bears their names and which is widely used for polymer processing simulation. White's career started in industry working for the Uniroyal Company as a research engineer and group leader from 1963-1967. In 1967 White joined the University of Tennessee as an associate professor and quickly rose through the academic ranks to become a professor. At Tennessee White originated the Polymer Science and Engineering M.S. and Ph.D. degree programs, and he founded the *Journal of Polymer Engineering*, serving as Editor-in-Chief until 1984.

In 1983, White moved to The University of Akron where he founded the Institute and Department of Polymer Engineering, serving as both Center Director and Department Chair. At Akron White turned his attention to rubber processing and compounding, experimentally studying and simulating flow in internal mixers and pin barrel extruders as well as twin screw extruders without and with chemical reactions. In 1985 White founded the Polymer Processing Society and the journal *International Polymer Processing*, serving as Editor-in-Chief from 1986 until 2004. White published over 500 papers and eight books on subjects ranging from rheology, twin screw extrusion, rubber, polyolefins and polymer compounds, and thermoplastic elastomers. White received numerous awards over his career, including the Bingham Medal of the Society of Rheology (1981) and the Yuko-Sho Award, Society of Rheology, Japan (1984).

Compiled by the Editor from materials supplied by the University of Akron; Miko Cakmak and Avraam Isayev contributed to the biography.



NEWS

Bingham Award Nominations Sought

Nominations are invited for the 2010 Bingham Award of The Society of Rheology.

The Bingham Award is presented annually to an individual who is a resident of North America or a member of the Society who has made outstanding contributions to the field of rheology. The award consists of a medal, a certificate, and a \$10,000 honorarium. Additional information and guidelines for preparing a nomination can be found on the SOR website at www.rheology.org/sor/awards/Bingham/nom2010.htm.

Nomination materials should be submitted electronically as pdf files by 1 February 2009 to the chair of the Bingham Award Committee, Tim Lodge:

Timothy Lodge
University of Minnesota
email: lodge@umn.edu

Award announcement will precede the 82nd Annual Meeting of the Society of Rheology in Santa Fe, New Mexico USA (24-28 October 2010), and the medal will be presented at that meeting.

Nominations Sought for Second Metzner Early Career Award

Nominations are invited for the Metzner Award of The Society of Rheology.

The Metzner Early Career Award is given, at most annually, to a member of the Society who is younger than

35 (on January 15th of the year the award is to be given) and has distinguished him/herself in rheological research, rheological practice, or service to rheology. The award consists of a plaque and a \$7,500 honorarium. Additional information and guidelines for preparing a nomination can be found on the SOR website at www.rheology.org/sor/awards/Metzner/nom2010.htm.

Nomination materials should be submitted electronically as pdf files by 1 February 2009 to the chair of the Metzner Award Committee, Lynn Walker:

Lynn Walker
Carnegie Mellon University
email: lwalker@andrew.cmu.edu

All nomination packages must be accompanied by a letter of support from a nominator. Award announcement will precede the 82nd Annual Meeting of the Society of Rheology in Santa Fe, New Mexico USA (24-28 October 2010).

Travel Grants Available for Santa Fe 2010

The Society of Rheology is again offering grants to partially support the cost of attending the Annual Meeting of the Society in Santa Fe, New Mexico USA. These grants are available to any graduate student who is a member of the Society as of 15 July 2010 and whose faculty advisor is also a member as of that date. We anticipate that each grant will cover up to a maximum of four days of lodging at the conference hotel. Only students who have never before received an SOR travel grant are eligible.

To apply, the student must write a letter requesting the grant. The student's faculty advisor should add a letter of support, certifying that both the advisor and the student are members of The Society of Rheology. Only one application per faculty advisor will be accepted for each meeting. Letters from the student and advisor should be emailed before 15 July 2010 to Norman Wagner wagnernj@udel.edu.

Poster Awards: Graduate Students and Post- doctoral Associates

During the Wednesday evening poster session at the Annual Meeting in Santa Fe, The Society of Rheology will present poster awards in two categories, one for graduate student authors and one for postdoctoral authors. All eligible researchers are encouraged to participate.

The Society's Best Student Poster Award has been awarded annually since 2001 to a student selected by a panel of judges at the Poster Session of the Annual Meeting. The Society of Rheology sponsors the student

poster competition to encourage student presentations and participation in the meeting and to recognize excellence. Since 2009 three awards have been given, first place (\$500), second place (\$300), and third place (\$200). In 2009 the awardees were: first place, Kendra Erk, Northwestern (poster PO56); second place, Patrick Rensing, Colorado School of Mines (poster PO28); and third place, Saswati Pujari, Northwestern (poster PO43). A list of all past winners of the Poster Award is available on the web (www.rheology.org/sor/awards/Student_Posters/).

The Best Postdoctoral Fellow Poster Award was inaugurated in 2009 with the presentation of a first prize and a second prize to the honored posters. The awardees were: first place, Johannes Soulages, MIT (poster PO89); and second place, Pouyan Boukany, The Ohio State University (poster PO62).



At the end of the Wednesday evening poster session, SOR President Faith Morrison presided over the Poster Awards. Shown above is Morrison with first place awardee Kendra Erk, second place awardee Patrick Rensing, and third place awardee Saswati Pujari.



Faith Morrison congratulates Postdoctoral Associate Best Paper Award recipients Johannes Soulages (first place, left) and Pouyan Boukany (second place).

US Students Succeed in Physics Olympiad

A team of five high-school students represented the United States at the 40th International Physics Olympiad held in Merida, Mexico in July 2009, winning four gold medals and one silver medal. The team is sponsored in part by the member societies of the American Institute of Physics, including The Society of Rheology.

The International Physics Olympiad Is an annual physics competition that is organized for secondary school students. The Olympiad is a competition between individuals in which teams from various countries sit two exams and are awarded gold, silver, and bronze metals according to their performance. Each participating country sends a delegation of five students who have not yet started at college, and the competition is conducted over two days.



The students on the 2009 US team, from left to right, were Anand Natarajan, Bowei Liu, David Field, Marianna Mao, and Joshua Oremán.

The two examinations that comprise the Olympiad are a theoretical examination worth 30 points and an experimental examination worth 20 points. Each examination lasts five hours, and no programmable calculators are permitted.

The examinations are graded by a committee and gold medals are assigned such that 8% of the contestants receive gold, 25% receive gold or silver, and 50% receive gold, silver or bronze. The first IPhO was held in Warsaw, Poland, in 1967, and the 2009 competition was the 40th Olympiad.

5th Pacific Rim Conference on Rheology (PRCR-5) set for Japan

Since 1994 the Pacific Rim Conference on Rheology (PRCR) has been successfully organized by Asian/Australian Societies of Rheology as a periodic, major International Rheology Conference thereby contributing to progress in rheology. The fifth edition of the PRCR is to be held at Hokkaido University, in Sapporo, Japan on 1-6 August 2010.

PRCR-5 is now soliciting submission of short abstracts. SOR members are invited to submit abstracts and are asked also to help to promote the meeting by encouraging submissions from colleagues. The submission site is open at [prcr2010.com/index.php?Abstract Submission and Acceptance](http://prcr2010.com/index.php?Abstract+Submission+and+Acceptance).

The conference secretary is Hiroshi Watanabe of Kyoto University, Japan. For more information see prcr2010.com.

Minutes of the ExCom Meeting

Sunday, 18 October 2009
Madison, Wisconsin

Attending: Bob Prud'homme, Faith Morrison, Jeffrey Giacomini, Monty Shaw, John Brady, Andy Kraynik, Marie-Claude Heuzey, Dan Klingenberg, Norm Wagner, Albert Co, Ole Hassager, Hiroshi Watanabe, Gerry Fuller, Liz Caron, Paulo de Souza Mendes, Michael Solomon, Jeff Morris, Pat Mather (via phone), Ashish Lele, Ajay Sood, Greg McKenna, and Shelly Anna.



President Bob Prud'homme called the meeting to order at 8:30 a.m. in the Dane Room at the Monona Terrace, One John Nolen Drive, Madison, Wisconsin.

The minutes were read by Secretary Jeffrey Giacomini and approved with two corrections: (1) "Dan Klingenberg" to be added to the list of attending (p. 23, Col 1 of

Rheology Bulletin, 78(2) July 2009) and (2) “to authorize giving \$10,000” should read “to authorize giving a one-time \$10,000” (p. 23, Col 2 of Rheology Bulletin, 78(2) July 2009).

Monty Shaw, Treasurer, reported on the financial matters of the Madison meeting and the Society. Jeffrey Giacomini will look into the source of higher costs of postage, printing, and paper for the *Journal of Rheology*. Treasurer Shaw also reported that the overall financial conditions of both the Society and the *Journal* are fairly good. Each of the Treasurer’s reports was accepted.

John Brady, Editor of the *Journal of Rheology*, reported that manuscript submissions were on par with previous years. The page count of the *Journal* has reached a healthy number. The length of time from submission to decision is currently 3.5 months. The 5-year impact factor of the *Journal* has passed 3. The Editor’s report was accepted. A motion to implement eFirst, which makes a paper available on line right after it is finalized, was passed.

Jeffrey Giacomini, *JOR* Associate Editor for Business, reported that AIP has implemented a new on-line platform for publications. He also demonstrated NetInsight, an AIP web interface to access journal usage instantly. Jeffrey Giacomini, the Local Arrangement Chair, reported that the Madison meeting proceeded “swimmingly,” and he expected a net positive balance. A motion to make accepting Society membership the default during registration of non-members, with the option to decline, was passed. A motion to establish the policy to fill in holes in the program grid due to cancellation with poster papers was passed. The need for a third, higher cost registration category for on-site registration will be discussed at the Spring 2010 ExCom meeting.

Liz Caron of AIP demonstrated AIP UniPHY (a social networking site for the physical sciences) and new features of Scitation. She also reported improved readability of AIP web pages including the *JOR* on Blackberry devices.

Bob Prud’homme reported for Lynn Walker on the Metzner Award. A motion to include a nomination letter in the Metzner Award nomination requirements was passed. Faith Morrison will rephrase the wording of the Metzner Award nomination requirements. The possibility of a lecture to be given by the Metzner awardee will be discussed in the Spring 2010 ExCom meeting.

Bob Prud’homme reported for Kalman Migler on AIP Policy Committee. The role of the committee has changed from a role of member liaison plus advisory

panel to the AIP Governing Board to one of advice to the AIP management.

A motion to nominate Kurt Wisbrun to AIP History Committee and to provide travel support to attend committee meeting was passed.

Albert Co reported on activities of the web sites. A motion that requires all e-mail communications to the members and meeting registrants to go through Webmaster Albert Co was passed.

Andy Kraynik presented updates on the hotel arrangement, meeting rooms, social programs, and budget for the 2010 Santa Fe meeting. Pat Mather provided updates via phone on the conference venue, hotel arrangement, and local support for the 2011 Cleveland meeting. Jeff Morris reported on the Technical Program for the Madison Meeting.

Gerry Fuller introduced Asish Lele and Ajay Sood from India and Paulo de Souza Mendes from Brazil. Asish Lele presented current rheological activities in India. Paulo de Souza Mendes described current rheological activities in Brazil.

John Brady reported that agreements for two hotels have been signed for the 2013 (Spring) Pasadena meeting. Marie-Claude Heuzey reported on the arrangement for the 2013 (Fall) Montreal meeting. Norm Wagner reported that contract has been signed for the 2014 Philadelphia meeting.

Greg McKenna, Technical Program Co-Chair for the 2010 Santa Fe meeting, discussed the tentative sessions for the 2010 Santa Fe meeting.

Marie-Claude Heuzey and John Brady discussed conflict of interest for members of the committee for the *JOR* Publication Award. A motion to constitute the *JOR* Publication Award Committee with two members-at-large and the most recent recipient of the *JOR* Publication Award was passed.

Mike Solomon, Chair of the Education Committee, reported that the current short course, “Mesoscopic simulation of dynamics in complex fluids” by Mike Graham and Juan Hernandez-Ortiz, has 24 registrants (three local arrangements volunteers also attended). For the 2010 Santa Fe Meeting, he proposed two short courses: (1) a two-day (Saturday and Sunday) short course on “Suspension Rheology” by Norm Wagner and Jan Vermant and (2) a one-day (Sunday) short course on “Micro-rheology: Theory, practice and applications” by Eric Furst,

Patrick Doyle, and Patrick Spicer. A motion to accept the proposal was passed.

Shelly Anna, Chair of the Membership Committee, presented summaries of membership status. As of 30 September 2009, the total number of members is 1430. Shelly Anna will present a graduate student gift proposal at the Spring 2010 ExCom meeting.

The meeting entered into Executive Session at 3:45 p.m. The meeting was adjourned at 4:00 p.m.

Submitted by Albert Co for Jeffrey Giacomini, Secretary

Minutes of the Business Meeting

To the membership:

Tuesday, October 20, 2009
Madison, Wisconsin

Bob Prud'homme called the meeting to order at 6:10p.m. in the G Section of the Hall of Ideas of the Monona Terrace at Madison, Wisconsin (80 in attendance). The minutes of the previous Business Meeting in Monterey, California USA were read by Jeffrey Giacomini and approved without addition or correction.

The officer reports and the committee reports presented at the Executive Committee meeting (see above) were presented and accepted. Prud'homme recognized the special efforts in conjunction with the SOR Madison Meeting of Jeffrey Giacomini, Jeffrey Morris, and Srini-vasa Raghavan.

John Dealy brought up the issue of standard nomenclature in rheology; he noted that we do not insist that SOR standard nomenclature be used in the *Journal of Rheology*. Editor Brady agreed and cited the difficulty of policing that issue.

Jeff Giacomini reported that there were 470 registrants in Madison, which is 103 more than the previous all-time high for meeting registrants in an annual meeting. Shelly Anna reported that the SOR membership stands at 1600.

Gerry Fuller, current ICR chair, reported that two observers from India and one from Brazil were at the Madison meeting. He also reported that a society of rheology was formed in Romania this past June. The Executive

Committee had authorized a one-time \$10,000 contribution to ICR and a \$5,000 contribution for international activities of Gerry Fuller.

John Dealy expressed appreciation to the *Rheology Bulletin* Editor Faith Morrison. Bob Prud'homme announced the new officers of the Society and passed the gavel of the Society to incoming President Faith Morrison.

The meeting was adjourned at 6:52 p.m.

Submitted by Albert Co for Jeffrey Giacomini, Secretary.

Treasurer's Report

To the membership:

The tables included in this report are those presented and modified at the Annual Meeting this past October. Unfortunately, our estimates at that time for the net for the Annual Meeting were overly optimistic, and it is now clear that the meeting will be roughly a wash. Thus, our net for the year will be reduced to around \$38,000.



There is new line item in the budget for 2010: the International Activities Fund. This is a modest initiative to help developing countries establish viable rheology organizations. We also will be making a one-time \$10,000 contribution to the International Committee on Rheology to support future international congresses. This item is included in the Contributions and Prizes line, which also includes the prize amount for the new Metzner Award.

Those with sharp eyes will note that the Meeting Reserve has been maintained at \$300,000. This was felt prudent in view of the increasingly onerous cancellation penalty schedules required by the meeting hotels. The Executive Committee also moved to increase the Operating reserve to \$150,000.

Respectfully submitted,
Montgomery T. Shaw
Treasurer

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The Society of Rheology, Inc. Balance Sheet

(all amounts, USD)	2009 August	2008 Year End	2008 August	2007 Year End	2006 Year End
Assets					
Cash in checking account(s)	61,234	10,859	310,962	24,466	9,777
Securities	0	0	0	0	0
Balance in AIP account	1,390,221	1,342,819	1,367,141	1,292,672	1,185,978
Total Assets	1,451,455	1,353,678	1,678,103	1,317,138	1,195,755
Liabilities and Net Assets					
Liabilities					
Deferred revenue	1,130	87,675	0	111,995	129,339
Total Liabilities	1,130	87,675	0	111,995	129,339
Net Assets					
Publication reserve	450,000	450,000	450,000	450,000	450,000
Student travel grant reserve	30,000	10,000	10,000	10,000	10,000
Annual Meeting reserve	300,000	300,000	300,000	300,000	200,000
Operating reserve	150,000	100,000	100,000	100,000	100,000
Unrestricted	520,325	406,003	818,103	345,143	306,416
Total Net Assets	1,450,325	1,266,003	1,678,103	1,205,143	1,066,416
Total liabilities and net assets	1,451,455	1,353,678	1,678,103	1,317,138	1,195,755

Journal of Rheology

Receipts and Disbursements (all amounts, USD)

	2010 Budget	2009 Projection	2009 August	2009 Budget	2008 Year End
RECEIPTS					
Subscriptions	172,000	174,267	173,099	171,000	172,338
Royalties & Reprint Sales	11,000	12,736	3,279	23,200	12,736
Ad Sales	39,000	44,931	29,954	34,000	43,582
JORO revenue	54,000	55,240	53,518	54,000	54,612
Miscellaneous	1,500	2,000	0	1,000	525
TOTAL RECEIPTS	277,500	289,174	259,850	283,200	283,793
DISBURSEMENTS					
Ads	11,000	11,074	7,870	10,000	10,671
Reprints, Single Copy	1,300	2,033	1,830	1,800	1,255
Paper, Printing	40,000	39,285	24,755	24,000	21,811
SOR Editorial	39,000	39,948	28,486	39,000	37,298
Production	41,000	37,919	26,534	42,000	39,055
Fulfillment	5,825	5,412	3,487	6,425	5,934
Distribution	28,800	27,224	17,800	25,100	20,290
Electronic publishing	38,000	37,608	24,721	34,000	32,570
Miscellaneous	7,600	6,986	3,159	7,300	5,583
TOTAL DISBURSEMENTS	212,525	207,487	138,640	189,625	174,468
Net	64,975	81,686	121,210	93,575	109,325

urer's Report

The Society of Rheology Receipts and Disbursements (all amounts, USD)

	2010 Budget	2009 Projection	2009 August	2009 Budget	2008 Year End
RECEIPTS					
Dues	48,000	50,986	50,450	52,000	49,955
Interest	6,000	6,769	4,974	52,000	35,734
Journal of Rheology	277,500	289,174	259,850	283,200	283,793
Mailing List Sales	100	80	0	0	80
Donations	0	0	0	0	0
Bulletin Advertising	9,000	20,293	9,100	5,000	11,150
Annual Meeting (net)	0	39,000	51,698	0	-54,096
Short Course (net)	0	8,000	2,721	0	-8,347
TOTAL RECEIPTS	340,600	414,301	378,792	392,200	318,269
DISBURSEMENTS					
AIP Dues Bill & Collect.	11,000	10,626	6,923	11,000	10,834
AIP Adm. Services	9,000	9,813	6,325	9,000	9,187
AIP Mem. Soc. Dues	8,000	7,879	5,253	7,600	8,119
Contributions and Prizes	22,000	10,000	0	12,000	1,699
Journal of Rheology	175,000	207,487	138,640	189,625	174,468
Bulletin	19,000	18,767	15,990	16,000	18,557
Bingham Award	12,000	10,000	0	12,000	5,000
Executive Cmt. Meetings	8,500	9,361	8,861	11,000	8,751
Pres. Discretionary Fund	1,500	0	0	1,500	750
Treas. Discr. Fund	1,500	400	0	1,500	0
Bulletin Editor Discr. Fund	1,500	1,400	0	1,500	1,366
Progr. Chm. Discr. Fund	2,000	2,000	0	2,000	0
Webmaster Discr. Fund	3,000	1,800	0	3,000	0
International Activities Fund	5,000				
Office Expenses	3,000	1,171	1,171	3,000	2,196
Banking Services	100	60	40	66	65
Liability Insurance	3,900	4,979	0	4,500	3,830
Membership Broch. & Appl.	500	300	0	500	0
Accountant	2,000	1,920	1,920	2,100	1,940
Student member travel	26,000	21,542	0	24,000	0
Annual meetings, future	9,000	6,533	3,063	8,000	6,533
Website	500	2,846	2,846	500	420
Miscellaneous	500	19	19	500	0
TOTAL DISBURSEMENTS	324,500	328,904	191,050	320,891	253,714
Net	16,100	85,397	187,742	71,309	64,555

the end

CALENDAR OF RHEOLOGY CONFERENCES AND COURSES

2010

7-9 April 2010

6th Annual European Rheology Conference AERC 2010, Göteborg, Sweden, Alexandra Andrén

13-16 June 2010

16th International Workshop on Numerical Methods for Non-Newtonian Flow, Boston, MA USA, Mike Graham (www.ecs.umass.edu/mie/faculty/rothstein/IWNMF_home.html)

4-7 July 2010

26th Annual Meeting of the Polymer Processing Society, Banff, Canada, U. Sundararaj

1-6 August 2010

5th Pacific Rim Conference on Rheology, Hokkaido University, Sapporo, Hokkaido, Japan, Hiroshi Watanabe (prcr2010.com) (approximately every 4 years)

23-24 October 2010

SOR Short Course on *Suspension Rheology*, a two day course by Jan Mewis and Norman Wagner, Santa Fe, NM USA

24 October 2010

SOR Short Course on *Microrheology: Theory, Practice and Applications*, by Eric Furst, Patrick Doyle and Patrick Spicer, Santa Fe, NM USA

24-28 October 2010

82nd Annual Meeting of The Society of Rheology, Santa Fe, New Mexico USA, Andy Kraynik

2011

Spring 2011

7th Annual European Rheology Conference AERC 2011, Russia

Summer 2011

14th International Congress of Biorheology and the 7th International Conference on Clinical Hemorheol-

ogy (held every three years), location TBA (last conference: www.outreach.psu.edu/programs/isbisch/)

June 2011

27th Annual Meeting of the Polymer Processing Society, Marrakesh, Morocco, M. Bousmina

8-9 October 2011

SOR Short Course on Rheology (topic TBA), Cleveland, Ohio USA

9-13 October 2011

83rd Annual Meeting of The Society of Rheology, Cleveland, Ohio USA, Pat Mather

2012

5-10 August 2012

XVIth International Congress on Rheology, Lisbon, Portugal, João M. Lopes Maia (every four years; in 2016 in Asia)

19-24 August 2012

XXIIIrd International Congress of Theoretical and Applied Mechanics ICTAM 2012; Beijing, China (every four years)

2013

9-10 February 2013

SOR Short Course on Rheology (topic TBA), Pasadena, CA USA

10-14 February 2013

84th Annual Meeting of The Society of Rheology, Pasadena, California, USA, John Brady

12-13 October 2013

SOR Short Course on Rheology (topic TBA), Montreal, Quebec, Canada.

13-17 October 2013

85th Annual Meeting of The Society of Rheology, Montreal Quebec Canada, Marie-Claude Heuzey, Paula Wood-Adams.

2014

4-5 October 2014

SOR Short Course on Rheology (topic TBA), Philadelphia, Pennsylvania USA

5-9 October 2014

86th Annual Meeting of The Society of Rheology, Philadelphia, PA USA, Michael Mackey and Norm Wagner