## **RHEOLOGY BULLETIN**

## **Published by The Society of Rheology**

Vol. 70 No. 2



July 2001

## THE SOCIETY OF RHEOLOGY EXECUTIVE COMMITTEE – 1999-2001

President	Gerald G. Fuller		
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Bingham Award: B. Khomami, chair A. Beris A. Berker W. Burghardt R.J. Butera M.E. Mackay M. Rubinstein

Nominating: J.L. Zakin, chair

## **ELECTRONIC VOTING INTRODUCED**

Beginning with the upcoming biennial elections, the Executive Committee of the Society has decided to do away with paper ballots. Voting will now be done over the internet. A write-up by Society President Fuller appears inside this issue of Rheology Bulletin.

## MASAO DOI 2001 BINGHAM MEDALIST

#### **BINGHAM AWARD GOES OVERSEAS**

The Bingham medal of the Society for 2001 will be awarded at the Bethesda meeting to Professor Masao Doi of Nagoya University in Japan. This is the first time that the medal has been given to a non-North-American rheologist, an event made possible by the recent amendments to the Society constitution.

Professor Doi received his education at the University of Tokyo from where he obtained his undergraduate degree in Applied Physics and his Ph.D. in engineering. He is currently a professor in the Department of Computational Science and Engineering of Nagoya University, having previously worked at the Tokyo Metropolitan University.



Professor Masao Doi

Masao Doi is known for his contributions to the theory of dynamics of entangled polymers, and he has coauthored (with Sam Edwards) the 1986 book, "The Theory of Polymer Dynamics." In the late 1970s, he was a Fellow of the Science Research Council at Cambridge University, and he has been the recipient of numerous national and international awards. RHEOLOGY BULLETIN Rakesh K. Gupta, Editor Department of Chemical Engineering West Virginia University P.O. Box 6102 Morgantown, WV 26506 (304) 293-2111 Ext. 2427 Fax: (304) 293-4139 E-mail: Rakesh.Gupta@mail.wvu.edu

Visit The Society of Rheology on the web at http://www.rheology.org/

## SOCIETY INTRODUCES ELECTRONIC BALLOTING

The Society of Rheology will initiate electronic balloting with this years election. In a move that will certainly be a model for our own federal government, we will move from the paper ballot and avoid the possibility of dangling chads, dimples and butterfly ballots. The process will not be completely paperless since the proposed slate of candidates has been enclosed with this copy of the Bulletin to ensure wide circulation of the information that will be necessary for the membership to properly vote. The Constitution provides that additional nominees may be added to the ballot if a petition signed by 15 members in good standing is forwarded to the Secretary within forty-five days of the date of this Bulletin. Please review the enclosed slate and supply us with "write-in" candidates if appropriate.

Albert Co, the manager of the Society's website, has designed a secure procedure to enable the electronic acquisition, verification, and counting of member votes. From a link on the Society's home page, you can access the voting site using the same login information used for accessing the member site. After being authenticated with the current member database and checked with the voter record database, you will be instructed to proceed to the web ballot form. You then mark your choices and submit the form. A page summarizing your choices are correct, confirm the submission. Otherwise, return to the ballot form to make changes and resubmit.

To ensure confidentiality, your choices and a serial number are then stored in the voting result database on the server. The server also sends a serialized e-mail containing the same information to an AIP designee. In addition, the date and time that you have voted are stored in the voter record database. There is no direct link between the two sets of records so the vote will remain anonymous. After verifying the voting result database with the serialized e-mails, the AIP designee then confirms the results of the balloting.

Please pay attention to the deadline for casting your ballot. Since this will be accomplished using the Society's website, make sure that you know your login information ahead of time. There are instructions on the web page on how to retrieve forgotten passwords.

In the future, an increasing amount of the Society's interface with its membership will be accomplished electronically for reasons of efficiency and economy. For this purpose we are anxious to assemble an accurate directory of e-mail addresses of our members. In this regard, it is important that each member check the e-mail lists the Society has assembled for accuracy. Two lists are maintained in the Society's website. One is based on the list maintained by Jeffrey Giacomin and the other is based on the AIP database. Procedures to add to or update each list are given in the corresponding pages.

I certainly hope to see you at the Annual Meeting in Bethesda to congratulate the Society's newly elected officers. Gerry Fuller

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### **CANDIDATES FOR SOCIETY OFFICE**

The three-member Nominating Committee, consisting of Dan Klingenberg, Faith Morrison and Jack Zakin (chair), has prepared the following list of candidates:

PresidentVVice PresidentATreasurerMSecretaryAEditorMMembers-at-Large

William B. Russel Andrew Kraynik and Susan Muller Montgomery T. Shaw A. Jeffrey Giacomin Morton M. Denn

Donald Baird, Ali Berker Saad Khan, Lisa Mondy Robert Powell and Tam Sridhar

## ABSTRACT BOOKS AVAILABLE AT MEETING ONLY

Since abstracts of talks to be presented at the annual meeting of the Society are available on the Society website, abstract books will no longer be mailed out. These will, however, still be available to meeting registrants on site.

## 73<sup>rd</sup> ANNUAL MEETING BETHESDA, MD OCTOBER 21-25, 2001

The Fall 2001 meeting of the Society of Rheology will be held at the Hyatt Regency Hotel in Bethesda, Maryland. The technical program co-chairs are Lynn Walker of Carnegie Mellon University and Robert Butera of DuPont. Local arrangements are being handled by Carl Schultheisz, Kalman Migler and Christopher White, all of NIST, and Gregory McKenna of Texas Tech University. An insert to this issue of the Bulletin provides all the details.

## POLYMER PROCESSING SOCIETY JOINS AIP

At a recent meeting, the Governing Board of the AIP voted unanimously to pass the following resolution:

"THAT the application by the Polymer Processing Society for membership as an Affiliated Society of the American Institute of Physics be accepted." Welcomel

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**BOHLIN INSTRUMENTS** 

## MINUTES OF THE EXECUTIVE COMMITTEE MEETING February 11, 2001

Gerry Fuller called the meeting to order at 8:55 a.m. in the Magnolia Room of the Westin Resort in Hilton Head, SC. Committee members in attendance were Susan Muller, Lisa Mondy, Monty Shaw, Jeffrey Giacomin, Gerry Fuller, Mort Denn and Ron Larson. Vice-President Bill Russel was busy teaching the short course. Invited guests were Rakesh Gupta, Janis Bennett, Greg McKenna, Francis Gadala-Maria, Carl Schultheisz, Art Metzner and Albert Co. The minutes of the previous meeting were read and approved. Susan Muller reported on the Education Committee. Bill Tuminello will give the short course at the Bethesda meeting on Polymer Melt Shear Rheology and Molecular Architectural Interpretations. The Student Poster Presentation Award competition, successfully inaugurated at the Hilton Head meeting, will be repeated at the next meeting. Faith Morrison reports that overall membership has declined from 1779('98), 1762('99) to 1696('00). These data correct an error in the Minutes to the Cambridge meeting. The main cause for the decrease is a decline in student membership. Faculty members should inform their students of the virtues of student membership. Gerry Fuller led a discussion about computer projection equipment for upcoming meetings. A motion was passed that, for the Bethesda meeting, authors will be asked to indicate their wishes for computer projection equipment at submission time. Every effort will be made to fulfill these. Local Arrangements Chair, Don Baird, reported on the Hilton Head meeting. They had 256 pre-registered, 107 pre-registered for the Bingham banquet, 29 registered for the short-course, 9 exhibitors, with 3 event sponsors (Rheometrics, TA Instruments and Paar Physica). Local Arrangements Chair Carl Schultheisz reported on the Bethesda meeting (October 21-25, 2001). There are 3 suitable airports (1) Baltimore Washington International Airport, (2) Ronald Reagan Washington National Airport, and (3) Dulles International Airport. From Ronald Reagan Washington National Airport, one can proceed by subway (one transfer required) to the conference hotel (Hyatt Regency Bethesda) by alighting at the stop named Bethesda. Ideal arrangements are planned for exhibitors, with coffee breaks in the exhibit area. For Local Arrangements Chair, Chris Macosko, Monty Shaw gave a status report on the Minneapolis meeting (October 13-17, 2002). Everything is in order. Local Arrangements Co-Chair, Rakesh Gupta, reported on the Pittsburgh, Pennsylvania meeting to be held at the Sheraton at Station Square (October 12-16, 2003). Pittsburgh area industries are invited to contribute meeting sponsorship for this special Semicentennial Anniversary meeting. The Society of Rheology was founded in Pennsylvania. Greg McKenna proposed to host the February 2005 meeting in Lubbock, Texas. With enthusiasm,

a motion to accept this proposal was passed. The meeting will take place February 13-17. Francis Gadala-Maria proposed to host a meeting in Charleston, South Carolina. This was tabled. For the Bingham Committee Chair, Bamin Khomami, Gerry Fuller gave the Bingham Award Committee report. A motion was passed to accept the recommendation of the Bingham Award Committee to award the Bingham Medal to Masao Doi. The Award will be presented at the Bethesda Meeting. Rakesh Gupta, Editor, reported on the Rheology Bulletin. Treasurer Monty Shaw submitted a Statement of Revenues and Expenses on The Society of Rheology and on the Journal of Rheology. In summary, the financial position of the Society improved in year 2000. The Executive Committee passed a motion to accept this report. Editor Mort Denn reported that the Journal of Rheology is in good health. Over the period October 1, 1999 to September 30, 2000, 173 papers were submitted, 77 of which were accepted, and 74 were rejected. Over this period, the journal's mean time for receipt to acceptance was 140 days, and for receipt to rejection is 50 days. Over this same period, the time from receipt to sending reviews to authors was 68 days (median 62 days), and the mean time from receipt to publication was 215 days (median 213 days). The Executive Committee passed a motion to accept this report. A motion was passed to move the July 2001 Bulletin to May 2001 to satisfy constitutional requirements for the upcoming election. Art Metzner reported as our appointed representative of the President on the AIP Governing Board. Jeffrey Giacomin was appointed to serve for Art Metzner at the next Governing Board meeting. Albert Co reported on plans to conduct the upcoming election electronically through www.rheology.org. Jeffrey Giacomin reported the following 2001 constitutional deadlines for the upcoming election. May 30: Notify membership of nominations by committee. July 15: Nominations by petition. August 27: Send ballots. September 23: Ballot postmark receipt. The meeting was adjourned at 3:45 p.m. A subsequent Executive Session followed, which was adjourned at 4:30 p.m.

## MINUTES OF THE BUSINESS MEETING February 13, 2001

Gerry Fuller called the business meeting to order at 5:35 p.m. at the Westin Resort in Hilton Head, South Carolina. A motion was passed to waive reading of the minutes of the previous business meeting. Each officer report presented at the Executive Committee meeting (see above) was presented and accepted at the business meeting. Gerry Fuller led a discussion on plans to use LCD projection equipment at the upcoming Bethesda meeting.

## The Society of Rheology Presents A Two-Day Short Course on

# Conventional Experimental Methods Used in Polymer Melt Shear Rheology and Molecular Architectural Interpretation

by William H. Tuminello DuPont

**Dates:** Saturday & Sunday, October 20 & 21, 2001. The short course is held in conjunction with the 73rd Annual Meeting of the Society of Rheology, October 21-25, 2001 in Bethesda, MD. The course will begin at 8:30 am, Saturday, October 20, 2001.

**Location:** The Hyatt Regency Hotel, in Bethesda, MD. This is also the site of the Annual Society of Rheology Meeting.

## **COURSE DESCRIPTION**

This course is designed to be suitable for a wide range of technical professionals including engineers, chemists and physicists, as well as students in these disciplines. Both industrial and academic professionals should benefit. The emphasis of the course will be using shear melt rheology as a tool to characterize polymers. The most commonly used measurement techniques and the structural interpretation of the properties derived will be covered.

Accurate and detailed characterization of polymer structure is important for establishing the basis of patents, controlling polymer manufacture, understanding and controlling polymer processing and is the cornerstone for any serious scientific research. Melt rheology is one of the most sensitive tools for elucidating polymer structure. The shapes of both viscosity and elasticity functions correlate with structural features such as molecular weight and distribution, long-chain branching, gel content, multiple phases and plasticization. This course will demonstrate how viscosity and elasticity information are utilized to calculate molecular weight distribution and how molecular weight distribution is used to calculate the viscosity and elasticity. Correlations of rheological properties with long-chain branching will be presented along with some of the latest work on quantitatively determining rheological properties of long-chain branched materials. The process of gelation leads to profound changes in the state of a fluid and these changes can be sensitively monitored with rheological methods. The presence of multiple phases greatly compounds rheological response. Some quantitative relationships will be discussed. Plasticization, or molecular blending of polymers with low molecular weight diluents, can modify

## MEETING INFORMATION The Society of Rheology 73<sup>rd</sup> Annual Meeting with Short Course October 22-25, 2001, The Hyatt Regency Bethesda, Maryland

For more information: Detailed information about the meeting, lodging, registration, and travel can be found on the Society of Rheology website at http://www.rheology.org/sor/ under the heading Meeting Announcements. The website should also be used to submit abstracts for the meeting.

Location: Technical sessions and the short course will be held at the Hyatt Regency Bethesda, One Bethesda Metro Center, Wisconsin Avenue at Old Georgetown Road, Bethesda, MD 20814, (800) 233-1234, (301) 657 1234. The hotel is just 2 miles (3.2 km) from the Washington, D.C. border, adjacent to the National Institutes of Health. The hotel is also situated directly above a stop on Washington's Metro subway system, for convenient access to the Smithsonian Institution museums, the National Zoo, the White House, the Capitol, and the monuments around the National Mall. Admission is free to most of the federally operated sights like the Smithsonian Institution. Bethesda also has over 100 restaurants within walking distance of the Hyatt.

**Transportation:** The location is convenient to all 3 of the airports that serve Washington, D.C., with easy freeway access to Dulles International Airport (25 miles, 40 km), Baltimore-Washington International Airport (35 miles, 56 km), and Reagan National Airport (15 miles, 24 km). See the maps provided. Information about shuttle and taxi service can be found at the websites for the airports in the **General Information** section of the **73<sup>rd</sup> Annual Meeting** website. Travel from Reagan National Airport is most convenient using the Metro subway system, since the Hyatt Regency sits directly above the **BETHESDA** stop on the Red Line. From the airport, take the Yellow Line north into Washington, transfer to the Red Line toward Shady Grove at Gallery Place/Chinatown; or take the Blue Line north and transfer to the Red Line toward Shady Grove at Metro Center; exit at the **BETHESDA** stop.

**Technical Program:** In addition to the Bingham Award Lecture, Professors Ronald Larson and Antony Beris are scheduled to present plenary lectures, and there will be a special session to honor William Schowalter. Several sessions will include connections to the history of rheology at the National Institute of Standards and Technology (formerly the National Bureau of Standards), which is celebrating its Centennial this year. A poster session will be held Wednesday evening in the Crystal Ballroom. A short course on experimental methods for melts rheology and molecular architecture interpretations will be taught by William H. Tuminello of The DuPont Company.

**Registration:** The registration fee includes access to all technical sessions and the vendor display, the program and abstract booklets, two receptions, one luncheon, coffee breaks, and refreshments at the poster session. The registration fee does not include the Bingham Award Banquet. The fee for the banquet is \$50. Registration instructions, forms and fees appear on the Society website.

**NIST Neutron Facility Tour:** A free tour of the NIST Center for Neutron Research will be offered during lunchtime on Tuesday (and perhaps again Wednesday if there is sufficient response). NIST is located in Gaithersburg, Maryland, and the total time including transit will be about 2 ½ hours.

**Social Program:** A welcoming reception will be held Sunday evening in Fellini's Bar and Restaurant in the Hyatt Lobby. A Society Luncheon will be held in the Crystal Ballroom on Monday. The General Business Meeting will be held Tuesday evening, followed by a reception in the lobby of the Crystal Ballroom and the Bingham Award Banquet inside the Crystal Ballroom. A reception will also be held in tandem with the Poster Session in the Crystal Ballroom on Wednesday evening.

**Exhibits:** Instrument vendors will display products in the Chesapeake Suites. Refreshments during the breaks between sessions will also be served in the Chesapeake Suites.

**Driving Instructions:** From Reagan National Airport, head northwest on the George Washington Parkway, exiting toward the east onto the Capital Beltway, I-495. From Dulles International Airport, take the Dulles access road east, exiting onto I-495 northeast toward Maryland. From Baltimore–Washington International Airport, take I-95 (or the Baltimore-Washington Parkway) south, exiting toward the west onto I-495. In all cases, follow I-495 to Exit 34, and exit south onto **Wisconsin Avenue** (Maryland Route 355, also called Rockville Pike). Head south for 2 miles, passing the National Institutes of Health on the right and the National Naval Medical Center on the left. The **Hyatt Regency Bethesda** is on the right in the 7400 block of **Wisconsin Avenue**, just past the intersection with Old Georgetown Road and East-West Highway.





rheological properties in predictable ways and can sometimes help in specifying the structural cause of rheological responses.

Three of the most common ways of measuring rheological properties will be emphasized: steady state flows, oscillatory flow and creep/recovery. All of the techniques covered relate to commercially available instruments. Capillary viscometry and rotational rheometry will be presented in terms of steady state flow. Oscillatory flow will be covered with respect to rotational rheometers. The most sensitive rheological technique we will discuss will be creep/recovery and rotational rheometers will be emphasized. The effects of temperature and deformation rate will be discussed. Experimental difficulties and common errors will be brought out. Transforming creep/recovery data to greatly extend the viscosity and elasticity property range to lower deformation rates will be demonstrated. Examples will be given of the beneficial combination of rheological data with more classical characterization tools, such as size exclusion chromatography and light scattering, to solve structural problems neither could do alone. Linear viscoelastic properties will be emphasized because theoretical interpretation has been worked out most completely in this area. However, the relationship of linear shear response to non-linear shear and extensional properties will also be discussed.

## About the instructor:

William H. Tuminello obtained a Batchelor's Degree in Chemistry at Harpur College of Binghamton University in 1967. He served almost three years in the U.S. Army Engineer Corps and was discharged as a First Lieutenant in 1969. He obtained a Master's Degree in Chemistry (1971) at the University of Notre Dame while working in the Plastics Division of Uniroyal, Inc. He then participated in the Chemistry Department Graduate Program of the University of Technology, Loughborough, England where he received a PhD in Polymer Physical Chemistry in 1973. He was then employed by the DuPont Company in 1973 until the present. He has worked on fiber spinning, plastics toughening, advanced composites, coatings, supercritical fluid applications and dissolution of fluoropolymers and polymer melt rheology. His chief areas of expertise are relating molecular features to polymer melt rheology, (particularly fluoropolymers and polyolefins) and solvents for Teflon®-type fluoropolymers. He has obtained 39 publications, 16 patents, 8 patents pending, and over 50 invited presentations during his DuPont career.

## **Registration Information:**

The fee for the two-day course is \$450 prior to October 1, 2001. For registration after October 1, the fee will be \$550. Student rates are \$225 prior to October 1 and \$275 after October 1.

## Registration forms and complete registration information are available at the Society of Rheology website, at: http://www.rheology.org/sor/annual\_meeting/2001Oct/

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## STUDENT POSTER PRESENTATION AWARD CONTEST TO BE REPEATED AT BETHESDA

A successful student poster presentation award contest was held in Hilton Head in conjunction with the regular poster session. The Executive Committee has decided to repeat the contest for the Bethesda meeting. The purpose of the contest is to encourage student presentations and participation in the meeting and to recognize excellence.

In order to participate in the competition, students must submit either a two-page extended abstract describing their research or a powerpoint preprint of the poster. This is in addition to the normal abstract submission for the poster session. A panel of judges will select up to 8 finalists based on entries, with the final selection of the winner to be made by the judges at the poster session. An award of \$200 will be made to the winner at the conclusion of the poster session.

Please note that:

First author must be a student.

First author must attend and be available to discuss the poster at the poster session.

In addition to the normal Web-based abstract submission, either an extended, 2-page abstract or a MS-Powerpoint preprint of the poster must be received by the Poster Session Chair for the purposes of selection of the finalists. The 2-page extended abstract should be prepared using a 10-point font or larger, and it should be attached to an e-mail to muller2@Socrates.Berkeley.edu as either a pdf file or as a MS-Word file. Alternatively, the student may submit a MS-Powerpoint preprint of the poster attached to an e-mail. The Powerpoint files should contain no more than 20 slides or Panels. All files must be no larger than 2 MB.

Complete details are available on the Society website. Finalists will be notified by e-mail.

## **RHELOGY BULLETIN AUTHOR GUIDELINES**

The Rheology Bulletin publishes papers on the applied aspects of Rheology which are intended for the non-specialist. (Archival research papers should be sent to the Journal of Rheology which is also published by the Society of Rheology.) Appropriate topics include the application of rheological principles to a specific system, instrumentation for rheological measurements, description of interesting rheological phenomena, and the use of well-established rheological techniques to characterize products, processes or phenomena. Papers that describe the historical aspects of the practice of rheology and how these may have influenced current trends are welcome. Also welcome are papers that address the present and changing status of rheological education including papers that describe recent or current innovation in the classroom or laboratory. Consultation with the Editor prior to manuscript submission is encouraged.

Papers should ordinarily not exceed about 4000 words in length. SI units should be used, but any standard style of writing may be employed. The article must have a clear message, and the significance of the work must be explicitly stated. Submit two copies of the manuscript at least three months prior to the issue in which publication is desired. The initial decision about suitability of publication will be made by the Editor. Both solicited and contributed papers may be sent to two or more reviewers. If a paper has been published previously in essentially the same form, permission for reprinting must have been obtained from the copyright holder.

### **FUTURE MEETINGS OF THE SOCIETY**

74<sup>th</sup> Annual Meeting Minneapolis, Minnesota October 13-18, 2002

75<sup>th</sup> Annual Meeting Pittsburgh, Pennsylvania October 12-16, 2003

76<sup>th</sup> Annual Meeting Lubbock, Texas February 13-17, 2005

#### **CHANGE OF ADDRESS**

If you are moving, please inform Janis Bennett by phone at (516) 576-2403 or by fax at (516) 576-2223. You may also write to her at:

THE SOCIETY OF RHEOLOGY c/o American Institute of Physics Suite 1NO1, 2 Huntington Quadrangle Melville, NY 11747

## **Journal of Rheology**

# Statement of Revenues and Expenses 2000 Actual, 1999 Actual, and 1999, 2000 and 2001 Budgets

Units: USD					Sulface and succession
1.	1999	1999	2000	2000_	2001
	Budget	Actual	Budget <sup>c</sup>	Actual <sup>D</sup>	Budget <sup>E</sup>
2.					
3. Subscriptions	195,050	201,845	186,000	194,536	211,750
4. Reprints	9,800	10,334	7,800	6,709	7,400
5. Advertisements	18,000	19,146	18,000	28,135	21,000
6. Electronic pub. <sup>A</sup>	5,000	13,453	0	2,675	200
7. Miscellaneous	1,750	1887	1,900	288	2,350
8. TOTAL	229,600	246,665	213,700	232,343	242,700
REVENUES					
9.					enteren hadt to
10. Adver./Marketing	9,800	9,266	8,500	12,146	10,400
11. Reprints, Singles	8,300	10,686	9,000	11,596	12,700
12. Paper, Printing	38,000	38,311	42,000	31,659	39,000
13. SOR Editorial	45,000	50,555	49,000	38,297	45,000
14. Production	75,950	87,428	79,000	73,251	78,400
15. Fulfillment	8,250	7,953	7,900	7,673	7,950
16. Distribution	20,300	22,868	22,000	14,847	21,800
17. Electronic pub. <sup>B</sup>	28,000	35,290	24,500	47,615	39,100
18. TOTAL	233,600	262,357	241,900	237,084	254,350
EXPENSES					
19. Profit	-4,000	-15,692	-28,200	-4,741	-11,650

**Notes**: This statement summarizes the JoR report provided by AIP. Other minor items assignable to the JoR have been included on the Statement of Revenues for the Society.

<sup>A</sup> Line 6, of 1998 and 1999 Actuals are largely from CD sales; JoR Online gains SoR small consortia fees only.

- <sup>B</sup> Line 17. Electronic publishing actual for 1999 is for Model 2, and includes a one-time upgrade fee of \$7,600. 2000 Budget excludes one-time fees for back-file installation and extra storage charges; 2000 Actual has \$12,600 back-file installation fee. 2001 Budget includes full storage charges for all back issues.
- <sup>C</sup> As modified and approved at the 1999 Madison meeting. Excludes recently approved back-file installation fee of \$12,600 (estimate).

<sup>D</sup> From preliminary AIP statement. Includes back-file installation fee.

<sup>E</sup> 2001 budget as approved at the 2000 Annual meeting (Hilton Head). Assumes \$550 institutional subscription rate, 385 institutional subscriptions and 1600 pages.

Units: USD

## The Society of Rheology

Statement of Revenues and Expenses 2000 Actual, 1999 Actual, 1999, 2000 and 2001 Budgets

1999 1999 2000 2000 2001 1 Budget Actual Budget Budget Actual 2. **REVENUES** 3. 59,000 58,440 61,000 65,089 68,000 Dues 4. Interest 37,000 32,347 38,000 54,673 41,000 5. Journal of Rheology 229,600 246,514 213,700 229,405 242,700 6. Mailing List Sales 300 130 300 584 300 7. **Bulletin Advertising** 850 1913 850 3188 2,800 8. 17,165 Annual Meeting 5.000 0 0 0 9. Short Course 4,000 0 4,000 4,005 4,000 10. **TOTAL REVENUE** 335,750 339,344 317,850 374,109 358,800 11 **EXPENSES** 12. 13 AIP Dues Bill & Collect. 8,500 9,391 9,000 8.097 9,800 14. AIP Adm. Services 9,000 9,000 9,000 9,000 9,000 15. AIP Mem. Soc. Dues 7,600 7,963 7,800 7,272 8,200 16 AIP Vendor Management 3,600 500 0 0 0 17 AIP Phys. Olympiad 1,500 0 1,500 1,500 1,500 18 Misc. Contributions & Prizes 1,000 1,000 1,000 0 1.000 19 **Renewal Billing** 4,500 4,959 5,000 3,229 5,200 20 Journal of Rheology 241,900 233,600 262.357 239.070 258,000 21 **Bulletins and Abstracts** 13,000 17,555 13,000 6,777 12,000 22 Short Courses 3.000 0 3.000 0 0 23 **Bingham Award** 6,000 5,046 6,000 126 11,000 24 **Executive Cmt.** Meetings 7,000 7,758 7,500 11,830 7,900 25 Pres. Discretionary Fund 1,500 566 1,500 1,500 1,500 26 Treas. Discr. Fund 1,500 70 1,500 303 1.500 27 Progr. Chm. Discr. Fund 2,000 0 2,000 0 4,000 28 Secretarial Services 1,000 0 1,000 0 500 29 Mailing 4.000 4,000 4,407 4.000 357 30. Office Expense 2,000 507 2,000 227 1,500 31 **Banking Services** 250 137 250 61 250 32 Liability Insurance 1,803 2,647 1903 3,407 3,500 33. Membership Directory 7,000 0 0 0 0 34 Membership Broch. & Appl. 578 0 1500 234 0 35 Accountant 1,700 1.517 1.800 1,560 1.900 36. Student member travel 6.000 7,000 3.214 0 9,000 37 Adv. Dep. for future mtg. 3,000 0 3.000 0 3,000 38. Miscellaneous 2,500 215 2,500 2,239 1,500 39. **TOTAL EXPENSES** 332,553 339,387 334,653 296,789 355,750 40. 41. Net Income 3,197 -43 -16,803 77.320 3,050

Notes:

2001 Budget as approved at the Hilton Head meeting

Line 4: Interest for 2000 higher than usual because of maturing Treasury Note in July. Includes \$225 on 15 k CD. Line 5: 1999 Actual includes \$13,453 of CD sales. Revenue excludes subscriptions paid for future years. 2001 Revenue estimate based on \$550 subscription rate and 385 subscribers.

Line 8: Because the closing date for Madison meeting accounts was March 2000, the 1999 Actual shows meeting and shortcourse revenues and expenditures of zero. The 2000 Actual shows the final Madison meeting and short course revenues and expenditures.

Line 20: Actuals include minor journal expenditures paid through the SoR checking account.

Line 23: 2000 Budget was for Committee expenses; 2001 Budget includes awards of \$2500 and \$5000, plus expenses. Line 41: Surplus for 2000 Actual due mainly to Madison meeting and healthy JoR revenue.

## The Society of Rheology, Inc. Balance Sheet December 31, 2000 and 1999 (USD)

	2000	1999
Assets		
Cash in checking account	9,400	10,735
CD's	15,000	0
Balance in AIP account	827,040	766,911
Total Assets	851,440	777,646
Liabilities and Net Assets		
Liabilities		
Deferred subscription revenue	138,500	141,827
Deferred member dues	43,300	41,376
Total Liabilities	181,800	183,203
Net Assets		
Publication reserve	450,000	450,000
Student travel grant reserve	10,000	10,000
Annual Meeting reserve	35,000	35,000
Operating reserve	70,000	70,000
Unrestricted	104,640	29,443
Total Net Assets	669,640	594,443
Total liabilities and net assets	851,440	777,646

Summary: The financial position of the Society improved this year due mainly to the financially successful Madison meeting and short course, maturation of a Treasury note and less-thananticipated decreases in JoR institutional subscriptions combined with lower-than-normal page count. Increasing interest rates have also helped. Unfortunately all of these factors are highly variable and largely unpredictable. In addition we should be aware that the positive effects of the increase in JoR institutional subscription rate (\$475 to \$550) and the slowing loss of subscriptions, will undoubtedly be partially offset by anticipated increases in JoR production costs and JORO platform fees. However, it appears that dues can be held at their present level through 2002.

Respectfully submitted, Montgomery T. Shaw Treasurer

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