

RHEOLOGY BULLETIN

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THE SOCIETY OF RHEOLOGY EXECUTIVE COMMITTEE - 1991-93

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Members-at-Large Ronald G. Larson
Dale S. Pearson

64th ANNUAL MEETING SANTA BARBARA, CA FEBRUARY 7-11, 1993

The annual meeting of The Society of Rheology will be held in Santa Barbara, CA. The meeting organizers are:

Technical Program Chairman:

L. Gary Leal
Department of Chemical and Nuclear Engineering
University of California
Santa Barbara, CA 93106
(805) 893-3200, Fax: (805) 893-4731
Email: bonnie@squid.ucsb.edu

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E. A. Collins

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Local Arrangements Chairman:

Dale S. Pearson
Department of Chemical and Nuclear Engineering
University of California
Santa Barbara, CA 93106
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Nominations for the 1992 Bingham Medal

Because the 1992 Bingham Medal will not be awarded until the Santa Barbara Meeting, **the deadline for nominations has been extended to May 15, 1992.** Nominations should be sent to the chairman of the Bingham Award Committee:

Dr. Richard L. Hoffman
Monsanto Company
730 Worcester Street
Springfield, MA 01151
(413) 730-2710 Fax: (413) 730-2376

Santa Barbara is located in southern California about 100 miles north and west of Los Angeles. It is part of a small community of 150,000 people consisting of Montecito, Santa Barbara, and Goleta. In addition to being the home of one of the University of California's nine campuses, it is a popular vacation destination in both summer and winter. Santa Barbara is often called the American Riviera because of the similarities in geology, architecture, and climate to its French and Italian counterparts. It can be cool (and even wet) during the month of February with a mean temperature of 59° and an average high and low of 71° and 46°.

The meeting will be held at the Sheraton Santa Barbara which is across the street from East Beach. A block of rooms will be reserved here and arrangements have also been made for lodging at nearby hotels and bed and breakfasts. Santa Barbara has many attractions including walking tours that pass examples of Spanish-Moorish architecture, visiting the Art and Natural History museums, shopping in unique stores, boating or sailing in the harbor during a prime whale migration period,

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hiking in the nearby mountains, and touring county vineyards and wineries. In addition to the Sunday Reception, Bingham Banquet, and a reception at one of the museums, tours of local attractions are being arranged for participants and guests.

Santa Barbara can be reached by regularly scheduled air service. However, considerable savings are sometimes possible by landing in Los Angeles and then renting a car or taking the Santa Barbara Airbus (805-964-7759) which stops at the Sheraton.

TECHNICAL PROGRAM FOR SANTA BARBARA

Authors wishing to present a paper in Santa Barbara must submit a camera-ready abstract on the enclosed form to the Technical Program Chairman, Gary Leal, before September 15, 1992. A copy of the abstract should also be sent to the appropriate symposium organizer. The planned symposia and their organizers follow:

POLYMER RHEOLOGY: Theory and experiment for polymer melt and solution rheology.

Dr. Ronald G. Larson
AT&T Bell Laboratories
600 Mountain Avenue
Murray Hill, NJ 07974
(908) 582-6158
Fax: (908) 582-5570

RHEOLOGY IN POLYMER PROCESSING:
Applications of rheology to the processing of polymer solutions and melts in the liquid and solid states.

Professor Morton M. Denn
Department of Chemical Engineering
University of California
Berkeley, CA 94720
(510) 642-0176
Fax: (510) 642-4778

COMPLEX FLUIDS FROM MICELLES TO PARTICULATES: Multicomponent and multiphase systems for which the rheology depends on the complex interplay among physical chemical and mechanical forces.

Professor William B. Russel
Department of Chemical Engineering
Princeton University
Princeton, NJ 08544-5263
(609) 258-4581
Fax: (609) 258-0211

EXPERIMENTAL METHODS IN RHEOLOGY:
Electrical, mechanical, and optical techniques for investigating flow behavior and for measuring continuum and molecular properties.

Professor David F. James
Department of Mechanical Engineering
University of Toronto
5 King's College Road
Toronto, Ontario M5S 1A4 Canada
(416) 978-3049
Fax: (406) 978-7753

NON-NEWTONIAN FLUID MECHANICS:
Experimental, theoretical, and computer studies of non-Newtonian effects on complex flows and their stability.

Professor L. Gary Leal
Department of Chemical and Nuclear Engineering
University of California
Santa Barbara, CA 93106
(805) 893-8510
Fax: 893-4731

Professor Robert Brown
Department of Chemical Engineering
Massachusetts Institute of Technology
Cambridge, MA 02139
(617) 253-5726
Fax: (617) 253-9695

GENERAL PAPERS: All aspects of experimental and theoretical rheology not explicitly covered by the other symposia.

Professor Eric Matthys
Department of Mechanical Engineering
University of California
Santa Barbara, CA 93106
(805) 893-2919
Fax: (805) 893-8651

Rheology Short Course

A two-day short course is being planned in conjunction with the Santa Barbara meeting. The topic and instructor will be announced in the July Bulletin. The course is scheduled to begin on Saturday, February 6.

Instrument Exhibit

Several companies will exhibit rheological instrumentation during the annual meeting in Santa Barbara.

THANK YOU

The Society of Rheology thanks the following organizations for their financial support of the Rochester Meeting:

EASTMAN KODAK COMPANY
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MESSAGE FROM THE PRESIDENT

On assuming the office of President, it occurs to me that I would probably not be doing so had it been the tradition of the Society to demand platforms from candidates or agendas from incoming presidents. It might, nevertheless, be a good idea for me to say something about what I perceive to be the current state of the Society and what I think the Executive Committee and Members should be doing in the near future.

First of all, let me say that I have found the low percentage return of ballots in most recent SoR polls or votes to be somewhat disconcerting. From the perspective of the Executive Committee, this might be construed as either the lack of a mandate to do much of anything or else as *carte blanche* for us to go about pretty much as we see fit in addressing various challenges which confront the Society. With assurances from some of you that the low return of paper slips is more a reflection of the "rugged individualism" of rheologists than an indication of basic apathy, I am inclined to favor the later. On the other hand, our ever diligent secretary, Andy Kraynik, informs me that his simple expedient of

franking the return envelopes for ballots has resulted in a vastly improved response to the most recent ballot of November, 1991. Whatever your conclusions about rheologists, let me touch on some of the important SoR issues here, as I see them.

Thanks to the timely action of the previous two executive committees, and in particular to the extraordinary efforts of John Dealy, Ed Collins, Bob Mendelson, and Art Metzner, in transferring Journal publication to the A.I.P., the Society now enjoys a degree of fiscal health unprecedented in its recent history. As pointed out at the Business Meeting in Rochester, this "embarrassment of riches" is not yet so clearly embarrassing as some might think, since we still have to establish some type of reserve funds commensurate with the magnitude of the SoR and JoR business operations and our IRS tax status. This is one of the major issues now before the Executive Committee and you will no doubt be hearing more about it later. In the meantime, you, the Membership, should join the Executive Committee in thinking about ways in which we might employ additional resources in order to further the goals of the Society and to insure its continued viability. We would greatly appreciate hearing your thoughts on this.

As also learned in Rochester from the Membership Committee Chair, Jeff Giacomini, the Society's membership has also surged upward to approximately twelve hundred, which is due largely to the vigorous effort of Jeff and his committee to recruit new members. Until we can further discuss some of the issues related to growth and direction, I fully endorse Jeff's stated goal of recruiting an additional hundred or so members, especially younger and international members.

As one recent initiative aimed at increasing the Society's visibility and enhancing its international role, the Executive Committee voted at its meeting of October 20 to seek member approval in creating a new Society award for younger members of the SoR, without regard to nationality. We look forward to your response to the thoughtful statements, pro and con, accompanying the ballot and to the outcome of your vote.

Along with the above question, there are numerous related issues having to do with where we wish the Society to go and what we want it to become in the years ahead. With that in mind, the Executive Committee recently asked your approval in establishing a Meetings Policy Committee for the purpose of long-range planning of meeting sites and meeting format, including specialized topical meetings and joint meetings with other societies, such as was realized at the 1990 Santa Fe meeting with the Society for Engineering Science. I have just finished chairing an ad hoc version of that committee and have submitted a report consisting mainly of a Meetings Policy Manual, which should benefit from ongoing revision by future committees. To insure continuity of that effort, the Executive Committee has approved a motion to propose a new constitutional amendment allowing the Vice President of the Society to serve as Chair of the Meetings Policy Committee. With apologies for the false start on a previous version of that amendment, we hope you also have given the new version your serious consideration and vote. I should also mention that, as one benefit of our meetings policy activity, we now

MINUTES OF THE EXECUTIVE COMMITTEE MEETING October 20, 1991

have a fairly firm list of meeting sites for regular meetings lined up through 1995, as well as a plan to host the 1996 International Congress in North America. There is still room for irregular topical meetings and joint meetings, and we welcome your recommendations or offers to organize such meetings (see below). Please direct your suggestions to Bob Armstrong, the V.P., who will be closely involved with meeting planning.

Coming back to the issue of membership views, I recall that a poll of mine in 1990, taken with the aim of developing new meeting policy, showed no clearcut preference (again based on a notably low return) for meeting format or technical content. Here, I believe one finds the limitations on what the membership may regard as pro forma opinion polls, for I detect in private conversation many strong opinions against the Society losing its small-society informality and exchange of views, in favor of large meetings with many parallel sessions, impersonal poster presentations, and ten-minute talks warmed over from other meetings. Please correct me if you think I'm mis-reading.

The question of what a society should be doing (more or less of) technically is probably not one best addressed from the president's podium, since that is to a large extent determined by the proclivities of its members. So saying, I cannot resist observing that the SoR is, technically speaking, something of a special case. We are after all an unlikely entity--spawned by a chemist, lodged in a physics institute, overrun by engineers, and dedicated to the hopelessly vague pursuit of "deformation and flow". Yet I could not help wondering at the 1991 Rochester meeting in what other forum could one have found such an engaging (and well-libated) discussion of polymeric reptation models (in vino veritas?), whose predictions of strong shear thinning may someday serve to explain "spurt" instabilities and, possibly, "melt fracture", which continue to be subjects of analysis and lively debate at SoR meetings.

It requires of course more than a simple feat of untrained imagination to go in a scientifically plausible way from "snakey" molecules to "snakey" flows, which I think illustrates what most agree the SoR is or should be about -- bridging the gaps between microstructural models, continuum mechanics, experimental rheology, and the dynamics of flow and deformation. In my view it is not a society for materials science, engineering mechanics, nor materials processing, although it may have much to gain from and to offer such activities. Having stated what many will consider obvious, I think our challenge is to maintain a level of technical quality and scientific coherence that will make it a place where the best representatives from other fields will wish to participate. While I have my own pet projects, it is you the Membership whom I urge, nay, challenge to bring forth the top people you know from other societies to give invited talks, run SoR symposia, and to conduct joint meetings.

With best wishes for the New Year,

Joe Goddard
President

The Executive Committee Meeting was called to order at 9:00 a.m. at the Holiday Inn-Genesee Plaza in downtown Rochester, NY.

Executive Committee Members present included: Bob Mendelson, Joe Goddard, Ed Collins, Art Metzner, John Dealy, Bob Prud'homme, Henning Winter, and Andy Kraynik. Kurt Wissbrun, Bruce Hartmann, Stuart Kurtz, and Don Marlette also attended.

The minutes of the March 17, 1991 Executive Committee Meeting that appeared in the July 1991 Rheology Bulletin were approved as read. The secretary announced that newly elected officers for the 1991-1993 term included: Robert C. Armstrong, Vice President, and Ronald G. Larson and Dale S. Pearson, Members-at-Large.

Ed Collins, Treasurer, reported a balance of \$310,769 as of December 31, 1990. Collins also presented a memorandum prepared by an independent accounting firm that described their audit of accounting procedures and internal accounting control measures practiced by the Society. The treasurer and Kurt Wissbrun, Administrative Assistant to the Editor, agreed to follow up on recommendations raised in the audit, which included setting a target for the Journal (Publication) Fund. The committee agreed that separate financial statements for the Journal of Rheology should be published in the Bulletin.

Kurt Wissbrun reported on A.I.P. issues. The committee voted to approve an amendment to the A.I.P. Constitution that would provide each member society a position on the executive committee of A.I.P.

Art Metzner, Editor, provided a status report on the Journal of Rheology. Issues discussed included: secretarial support for the editor, the number of pages published annually in the Journal, and the physical size of the Journal page. The editor suggested that the committee should start thinking about future candidates for the position of Editor.

Bruce Hartmann reported on the technical program for the Rochester meeting and Glen Pearson reported on local arrangements. Gary Leal and Dale Pearson reported by letter on plans for the technical program and local arrangements for the annual meeting in Santa Barbara in February 1993. The regular annual meeting for 1993 will be held in Boston with Bob Armstrong serving as local arrangements chairman. Other future meeting sites include Philadelphia in 1994 and Sacramento in 1995. Representatives from the Canadian Rheology Group joined our meeting to discuss their proposal to host the 1996 International Congress on Rheology in Quebec City. A proposal to host the ICR in San Diego was presented by Joe Goddard. Both parties plan to submit their plans to the International Committee on Rheology.

The Chairman of the Membership Committee, Jeff Giacomini, reported by letter that the Society had 1142 members as of September 30, 1991.

The committee approved the submission of two amendments to the Rules to a letter ballot of the membership. The first concerned membership on the Meetings Policy Committee.

AVON LAKE TRAVEL

To: Society Of Rheology Members

From: Edward A. Collins

We are looking into the possibility of organizing a charter with special airfares for the 11th International Congress Of Rheology to be held in Brussels Belgium, August 17-21 1992.

In order to determine the very best arrangements, we need to have some ideas as to the number of potentially interested individuals. Your travel arrangements will be made by a fully bonded travel agency.

Arrangements can be made for extended stays throughout Europe, with special rates for travel from specified United States cities.

Please complete this questionnaire and return before February 1, 1992.

Return to: Frida Wolverton
Avon Lake Travel
375 Lear Road
Avon Lake, Ohio 44012

1-800-837-2377
Fax 216-933-5227
Local 216-933-9455

I definitely plan to attend

Yes____ No____

I will be accompanied by

_____Persons

I plan to stay

_____Number of days

I would like to visit

London____ Austria____
Germany____ Other____

Name _____

Address _____

City_____State _____

Telephone _____

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FAX: 1-216-933-5227

USNC/TAM NEWS

June, 1991

Volume 2

David B. Bogy
Editor
U.C. Berkeley

Pol Spanos
Associate Editor
Rice University

Introduction

This newsletter was begun in 1990 to make the existence and activities of the U.S. National Committee on Theoretical and Applied Mechanics better known to the U.S. mechanics community. The newsletter enjoys a wide circulation by its inclusion in the newsletters of the 12 member societies of USNC/TAM. It is published soon after the annual meeting of the Committee, which is held in May. Copies of previous issues can be obtained by contacting Ms. Dana Caines at the National Research Council (HA 280), 2101 Constitution Ave., Washington DC 20418.

Meetings

The next International Congress on Theoretical and Applied Mechanics (ICTAM) is planned for Haifa, Israel, August 22-28, 1992. Andy Acrivos of USNC/TAM is very active in the planning of this meeting. His address is: Prof. A. Acrivos, Levich Inst., 202 Steinman, City College of CUNY, 138 St. & Convent Ave., New York, NY 10031. For information regarding the meeting, contact Professor A. Solan, Secretary ICTAM 1992, Faculty of Mechanical Engineering, Technion, Haifa 32000, Israel. Some travel fellowships are available for U.S. authors of accepted papers. Fellowship applications may be obtained between July 15 and December 15 from Prof. Thomas L. Geers, Dept. of Mechanical Engineering, University of Colorado, Boulder, CO 80309-0427.

The University of Washington in Seattle has been selected as the site for the XIIth U.S. Nat. Cong. on TAM, to be held June 26 - July 1, 1994. The Chairman of the organizing committee is Prof. A. Kobayashi, Department of Mechanical Engineering, FU-10, University of Washington, Seattle, WA 98195.

First USNC/TAM Report on Research Directions in Computational Mechanics to Appear

The USNC/TAM has instituted an ambitious effort to summarize the entire field of mechanics at ten-year intervals and produce a series of reports on research directions in various

mechanics sub-disciplines. These reports will be published by the NAE and will be made available to major research and funding agencies to provide insight and perspective into the research directions from specialists in the field.

The first report, entitled *Research Directions in Computational Mechanics*, is ready for publication, and it should appear by the end of the year. This report was prepared by the USNC/TAM and by SCORDIM, the Subcommittee on Research Directions in Mechanics.

The SCORDIM committee is made up of the following: Professors J.T. Oden (Chair), A. Acrivos, T. Belytschko, T. Geers, S. Leibovich, and M. Tulin. The Principal Editors of the *Report on Computational Mechanics* were Professors J.T. Oden, Ivo Babuska, and T. Belytschko.

The report features 14 chapters indicating areas perceived to be major research thrusts. These and their authors are:

1. *Adaptive Methods and Error Estimation*, by J. Tinsley Oden and I. Babuska,
2. *Prototype Test Simulation*, by T. Belytschko,
3. *Parallel Computation*, by J. Flaherty,
4. *Artificial Intelligence in Mathematical Modeling*, by S. Fenves and G. Turkiyyah,
5. *Environmental Contamination and Geomechanical Simulation*, by R. Ewing,
6. *Materials Research - Numerical Modeling of New Materials*, by A. Needleman,
7. *Structures and Structural Dynamics*, by A.K. Noor,
8. *Nonlinear Equations and Bifurcation*, by W.C. Reinboldt and P.J. Rabier,
9. *Uncertainty and Stochastic Processes in Mechanics*, by M. Shinozuka and T. Belytschko,
10. *Chemically Reacting Flow and Combustion*, by A.F. Ghoniem,
11. *Numerical Modeling of Turbulence*, by S. Orszag,
12. *General Computational Fluid Dynamics*, by D. Anderson, R. Glowinski, and J.T. Oden,
13. *Non-Linear Dynamics of Multiparticle Systems*, by J. Goddard, P. Haff, and O. Walton,
14. *Manufacturing Processes*, by O. Richmond.

The Report also features an Executive Summary which summarizes the principal research areas and explains the importance of these research topics in non-technical terms.

The second report will be in Fluid Mechanics. The SCORDIM editorial subcommittee is J.L. Lumley, Editor and Chairman, A. Acrivos, and S. Leibovich. Professor Lumley's address is: Sibley School of Mechanical and Aerospace Engineering, Upson and Grumman Halls, Ithaca, New York 14853-7501. Some of the topics to be included are Buoyancy-driven flows, Geophysical fluid mechanics, Hydrology, Interfacial problems, Non-Newtonian Fluids, and Vortex dynamics.

The third report will be on Experimental Mechanics. The subcommittee is Chuck Taylor, Editor and Chairman, M. Fournay, and Jim Dally.

The present plan is for Solid Mechanics to be the fourth report. The editorial subcommittee has not yet been selected.

It is expected that these reports will be published in intervals of about two years.

Critical Technologies

In April the White House released a report listing 22 technologies deemed critical to the U.S.'s future (see *C&EN*, April 29, 1991). The report was prepared by a 13-member National Critical Technologies Panel chaired by chemist William D. Phillips, an associate director of the White House Office of Science & Technology Policy.

22 Critical Technologies

- Materials synthesis and processing
- High-performance computing and networking
- Electronic and photonic materials
- High-definition imaging and displays
- Ceramics
- Sensors and signal processing
- Composites
- Data storage and peripherals
- High-performance metals and alloys
- Computer simulation and modelling
- Flexible computer-integrated manufacturing
- Applied molecular biology manufacturing
- Medical technology
- Intelligent processing equipment
- Aeronautics
- Micro-and nanofabrication
- Surface transportation technologies
- Systems management technologies
- Energy technologies
- Software
- Pollution minimization, remediation, and waste
- Microelectronics and optoelectronics management

It has been suggested that research proposals in mechanics should identify with these critical technologies.

USNC/TAM Meets Funding Agency Reps

The first afternoon of the May '91 USNC/TAM meeting took place in the Rayburn Building on Capitol Hill with several representatives of the governmental funding agencies. From the agencies: Lallit Anand, Ray Bowen, and Henry McGee of NSF, Roshdy Barsoum of ONR, James Chang of AFOSR, Kristin Hassenius of NASA, and Oscar Manley of DOE. Also attending were David Goldston, Republican Special Assistant, House Committee on Science, of U.S. House of Representatives, and NRC staff Archie Wood, Executive Director of CETS, Tom Mahoney, Acting Director of CETS, and Dana Caines, Staff Associate, USNC/TAM, Manufacturing Studies Bd of CETS.

Present from the committee were: Sid Leibovich, Andy Acrivos, Bob Brodkey, Dan Drucker, Tom Geers, Tinsley Oden, Dick Christensen, Ted Belytschko, Tony Chen, Mike Fourney, Joe Goddard, Norm Abramson, David Bogy, Steve Crandall, Dan Frederick, Dan Joseph, Phil Hodge, Bruno Boley, Charles Dalton, Ben Freund, and Gary Leal.

The purpose of the meeting, as briefly summarized by Chair Sid Leibovich, was an attempt to relate the concerns of the mechanics community to the broader concerns of the funding agencies and Congress. Dan Drucker, also a member of the National Science Board, expressed the concerns of USNC/TAM. He pointed out that "engineering plays, or should play, a key role in our national competitive position in industry. In analyzing this problem, an important factor is generally overlooked, namely, the role of fundamental engineering research. We need basic science research, and in recent years funding for this general area has gone up faster than the cost of living. But there is a large gap between this basic research on the one hand, and development and manufacturing on the other. Fundamental engineering research is needed to bridge this gap, generate knowledge of the man-made world, and translate the ideas of science research into engineering applications. Funding for this area has remained essentially constant in current dollars since the mid 80's. It represents only 10% of all basic research which is the same percentage it had in the 50's. Perhaps the most harmful result of insufficient funding are the many years we have not developed people with interest and expertise in this translation. This is not only a major cause of our poor competitive position at present, but also an ominous sign for the future."

A lively discussion followed in which the agency reps expressed the view that although mechanics permeates every branch of engineering and science, mechanics proposals often address only the mechanics aspects of problems. They must relate more to the broader picture. It was also stated that mechanics proposals are often *dull* compared to those in other areas. "They have no schmaltz. Nothing leaps off the page."

It was pointed out that we need to participate in the political process. We must tell our story to the decision makers. The lobbying must be a statesman-like process of education.

All agreed that mechanics should not lobby merely for increased mechanics funding. Engineering as a whole must speak with one voice. We were told that various branches of science, such as physics, do so, and that Congress considers engineering as a single area, not as different sub fields.

USNC/TAM will nevertheless continue to seek ways to improve the funding of mechanics research.

Ed Collins went on record as opposing the amendment. The other amendment proposed establishing "The Reiner Award" for young rheologists. The committee defeated a motion to submit a third amendment to a ballot, which would eliminate the requirement that the recipient of the Bingham Award be a resident of North America.

The meeting was adjourned at 6:00 p.m.

MINUTES OF THE BUSINESS MEETING October 22, 1991

The Business Meeting was called to order at 6:00 p.m. in the Holiday Inn-Genesee Plaza in downtown Rochester, NY.

The minutes of the previous meeting were read and approved as they appeared in the July 1991 Rheology Bulletin. Results of the recent election for Society officers were announced.

Art Metzner, Editor, reported that reviewers for the Journal of Rheology were increasingly responsive and that this was greatly appreciated. Financial matters relating to Journal publication are progressing well. The time required to publish articles in the journal varies from 6-14 months with 7-8 months being average. Of 126 manuscripts submitted to the journal, 61% had been accepted for publication in 1991.

Ed Collins gave the treasurer's report. He reported a balance of \$310,769 as of December 31, 1990, pointed out the new format for financial reporting in the Bulletin, and discussed the need to establish a Journal (Publication) Fund.

The members present commended John Dealy, Art Metzner, Bob Mendelson, and Ed Collins for their efforts to change publishers for the Journal of Rheology.

Jeff Giacomini, Chairman of the Membership Committee, reported that membership in the Society had exceeded 1200.

Bruce Hartmann, the Technical Program Chairman for the Rochester meeting, announced that 184 papers were being presented. Glen Pearson, the Local Arrangements Chairman, indicated that attendance had surpassed three hundred.

A moment of silence was observed for John H. Elliot, who had passed away in the previous year.

Bob Mendelson, President, observed that the Society was healthy and growing. The members commended him for his accomplishments as president.

The meeting was adjourned at 7:00 p.m.

RESULTS OF RECENT BALLOTS

Publication of this Bulletin was delayed a few weeks so that we could report the results of two recent ballots that were mentioned above in the minutes of the Executive Committee Meeting.

The ballot regarding formation of and membership on a Meetings Policy Committee passed with 391 votes in favor and 100 votes against. It has come to our attention that several members would have appreciated some explanation for this amendment. Your Bulletin Editor apologizes for this oversight and intends to provide this information in the future. The Meetings Policy Committee is being formed to

consolidate tasks associated with long-range planning of meeting sites and meeting format, as mentioned above in the Message from the President.

The proposed amendment to establish "The Reiner Award" for young rheologists did not pass by a vote of 205 for and 284 against. We thank Henning Winter and Mort Denn for their thoughtful comments on this matter, which were shared with the members.

MEETING ANNOUNCEMENTS

August 17-21, 1992: XIth INTERNATIONAL CONGRESS ON RHEOLOGY, Brussels, Belgium. Contact: Dr. Paula Moldenaers, Chemical Engineering Department, Katholieke Universiteit Leuven, W. de Croylaan 46, B-3001 Leuven, BELGIUM, FAX: 32-16-22 15 22.

August 22-28, 1992: 18th International Congress of Theoretical and Applied Mechanics, Haifa, Israel. Contact: Prof. A. Solan, Secretary ICTAM 1992, Faculty of Mechanical Engineering, Technion - Israel Institute of Technology, Haifa 32000, ISRAEL.

August 30-September 4, 1992: NETWORKS 92: Experiment, theory, and applications of polymer networks, University of California at San Diego, La Jolla, CA. Contact: R. McLaughlin, BIOSYM Technologies, Inc., 10065 Barnes Canyon Road, San Diego, CA 92121-2777

August 31-September 11 1992: THE EUROPEAN SCHOOL OF RHEOLOGY, Glasgow, Scotland, Contact: N. E. Hudson, Dept. Pure and Applied Chemistry, U. Strathclyde, 295 Cathedral Street, Glasgow G1 1XL, Scotland, UK.

September 14-16 1992: Symposium on Shear Instabilities and Viscoplasticity Theories at the 29th Annual Technical Meeting of the Society of Engineering Science, University of California at San Diego, La Jolla, CA. Contact: Prof R. C. Batra, Dept. Mechanical and Aerospace Eng. and Applied Mechanics, U. Missouri, Rolla, MO 65401-0249, 314-341-4589, fax: 341-4607.

October 17-21, 1993: 65th Annual Meeting of The Society of Rheology, Boston, MA.

WANTED: FREE J. RHEOLOGY

The recent generous offer by Chem-Trend Inc. to donate their collection of the Journal prompted numerous requests from universities. If you are aware of any circumstances under which similar offers can be made, please contact Art Metzner, Editor of the Journal of Rheology.

CHANGE OF ADDRESS

If you are moving, be sure to inform: Ms. Margaret Wiley American Institute of Physics, 335 East 45th Street, New York, NY 10017

THE SOCIETY OF RHEOLOGY

FINANCIAL STATEMENT AS OF JANUARY 1992

REVENUES	1990 Budget	1990 Actual	1991 Budget	1991 Actual *	1992 Budget
Dues	46,000	73,182	46,000	46,000	46,000
Interest	4,000	20,329	14,000	20,000	19,000
Journal of Rheology	21,200	176,269	1,000	27,500	217,830
Mailing List Sales		461		360	350
Annual Meetings		7,182	8,000	15,153	
Short Courses		2,950		5,200	
TOTAL REVENUE	71,200	280,373	69,000	114,213	283,180
EXPENSES					
AIP Administrative Services	6,000	6,000	7,000	6,000	6,000
AIP Billing	3,300	481	5,400	500	800
AIP Member Records	3,600	6,269	3,600	7,325	7,500
AIP Member Society Dues	2,400	2,054	2,400	2,254	2,400
AIP Financial Handling	1,000	3,300	3,000	3,000	3,000
AIP Physics Olympiad	500	500	1,000	1,000	1,000
Renewal Billing		890		213	
Journal of Rheology	31,000	45,397			197,380
Bulletins and Abstracts	4,000	8,718	5,000	9,650	5,000
Short Courses		2,453		4,000	
Bingham Award	1,000	538	3,000	3,000	3,000
Executive Committee Meetings	1,000	1,262	2,000	2,500	2,500
President's Discretionary Fund	11,000	468	1,500	800	1,000
Treasurers Discretionary Fund	1,000	670	1,500	800	1,000
Program Chairman's Discretionary Fund			2,000	2,000	
Secretarial Services	1,000		1,000	650	1,000
Mailing		2,774	2,000	2,500	2,500
Office Expenses	9,000	1,076	5,000	1,500	1,500
Banking Services		45		50	50
Liability Insurance	150	146	150	146	150
Council of Scientific Society Presidents	150	100	150	250	250
Membership Directory				300	2,500
Membership Brochure		526		300	500
Accountant			1,000	1,800	1000
TOTAL EXPENSES	66,100	83,667	46,700	50,538	240,030
NET INCOME (LOSS)	5,100	196,706	22,300	63,675	43,150
TOTAL ASSETS AT YEAR END		310,769		374,444*	

Edward A. Collins
Treasurer
January 8, 1992

* Estimate based on eight month record.

JOURNAL OF RHEOLOGY

FINANCIAL STATEMENT AS OF JANUARY 1992

REVENUES	1990 Budget	1990 Actual	1991 Budget	1991 Actual *	1992 Budget
Advertising Sales		11,412	8,500	11,550	10,000
Page Charges		13,073	9,000	13,200	13,000
Abstracts		234		183	200
Reprint Sales	6,000	2,716	2,000	6,000	4,700
Single Copy Sales		2,400		1,362	1,800
Non-Member Subscriptions	165,300	181,462	171,100	172,379	187,840
Member Subscriptions		65		40	
Royalties	500	290	500		290
TOTAL REVENUE	171,800	211,652	191,100	204,714	217,830
EXPENSES					
Advertising Production		6,201	8,100	5,448	5,000
Composition	26,400	32,824	40,100	39,864	39,100
Illustration	2,400	1,072	2,500	1,666	2,550
Editorial Mechanics	20,400	25,364	31,200	30,804	30,600
Editorial Office	15,000	7,020	29,000	28,400	33,000
Reprint Billing	800	963	1,000	741	800
Reprint Processing	7,000	532	600	377	425
Reprint Printing and Mailing	4,800	6,735	8,000	7,000	7,125
Printing and Binding	22,800	16,486	26,000	28,746	27,630
Paper	14,400	5,693	12,000	9,500	12,100
Mailing	12,000	14,734	17,500	14,057	17,250
Single Copy Expenses		932		872	900
Back Issues		3,103			
Member Fullfillment		2,115		2,917	3,300
Non-Member Fullfillment	8,600	7,135	8,745	7,203	7,600
Marketing and Other Business		7,608	5,500	1,480	10,000
TOTAL EXPENSES	134,600	138,517	190,245	179,075	197,380
NET INCOME (LOSS)	37,200	73,135	855	25,639*	20,450

Edward A. Collins
Treasurer
January 8, 1992

* Estimate based on November 30, 1991 data.

Application for Membership in THE SOCIETY OF RHEOLOGY

I wish to apply for membership in THE SOCIETY OF RHEOLOGY dating from January 19 _____

Name _____
(Please print)

Mail Address _____

Telephone Number _____

E Mail Number _____

Fax Number _____

Please indicate in the boxes provided below the code letter from the list at right, which best describes your areas of interest in order of decreasing importance.

- PRIMARY
- SECONDARY
- TERTIARY

Professional Affiliation

- Academic
- Industrial
- National Laboratory
- Other

INTEREST AREA	CODE
Biorheology	A
Experimental methods	B
Foods	C
Inks, Paints, Coatings	D
Materials Science	E
Petroleum Production	F
Plastics Processing	G
Polymer Dilute Solutions	H
Polymer Melts and Conc. Solns.	I
Rational Mechanics	J
Rubbers and Elastomers	K
Solid Polymers	L
Suspensions	M
Theory of Viscoelasticity	N
Electrorheology	P
Composite Materials	Q
Other _____	O

I understand that my regular member's subscription to the **Journal of Rheology** is for my personal use, and not for library use.

(Signature) _____ (Date)

Enclose remittance of \$40 for Regular Annual Dues (\$25 for Student and Retired Members) and mail to:

THE SOCIETY OF RHEOLOGY
c/o American Institute of Physics
335 East 45th Street
New York, NY 10017

Complete if paying by credit card <input type="checkbox"/> AMERICAN EXPRESS <input type="checkbox"/> VISA <input type="checkbox"/> MASTER CARD	CREDIT CARD NUMBER	EXP. DATE	SIGNATURE
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