

RHEOLOGY BULLETIN

Publication of The Society of Rheology, Inc.

Vol. 59, No. 1



January, 1990

SOCIETY OF RHEOLOGY OFFICERS AND BOARD - 1989-91

President	Robert A. Mendelson
Vice President	Joseph D. Goddard
Secretary	Andrew M. Kraynik
Treasurer	Edward A. Collins
Editor	Arthur B. Metzner
Past President	John M. Dealy
Members-at-large	Robert K. Prud'homme H. Henning Winter

COMMITTEES (Most recent available listing)

Membership:

A. J. Giacomini, chairman
A. M. Kraynik
S. J. Armour
R. H. Colby

Education:

E. A. Collins, chairman
M. M. Denn
D. Hunston
G. B. McKenna
J. L. Throne

Site Selection:

E. A. Collins, chairman
D. Hunston
M. E. Ryan

Bingham Award:

C. W. Macosko, chairman
R. C. Armstrong
G. G. Fuller
J. E. Glass
R. G. Larson
M. T. Shaw
Chi-Kai Shih

Industrial Liaison:

Peter E. Clark

1990 BINGHAM MEDAL NOMINATIONS

Please note these were to be in the hands of the committee chairman prior to January 15, 1990.

62nd ANNUAL MEETING

SANTA FE, NEW MEXICO
OCTOBER 21-25, 1990

This meeting is being held in conjunction with the annual meeting of The Society for Engineering Science and exchange between the two groups will be encouraged by careful scheduling of related symposia.

TECHNICAL PROGRAM CHAIRMAN

Montgomery T. Shaw
IMS, U-136
University of Connecticut
Storrs, CT 06269-3136
USA
Phone: (203) 486-3980
FAX: (203) 486-4745

LOCAL ARRANGEMENTS CHAIRMAN

A. M. Kraynik
Sandia National Labs
Division 1511
Albuquerque, NM 87185
Phone: (505) 844-9696
FAX: (505) 846-0295

VENUE

The concurrent meetings of the Society of Rheology and the Society of Engineering Science will take place at the Sweeney Convention Center in downtown Santa Fe. Hotels within easy walking distance of the convention center have been secured with favorable rates. Authors wishing to present a paper at this meeting should send a 200-word abstract by May 1, 1990, to the Technical Program Chairman.

RHEOLOGY BULLETIN
Arthur B. Metzner, Editor
Debbie Cook, Secretary
Chemical Engineering Department
University of Delaware
Newark, Delaware 19716
Telephone: (302) 451-2328 (Editor)
Telephone: (302) 451-2065 (Secretary)
FAX: (302) 451-1048

Alternatively, the abstract may be directed to a particular symposium by sending it to the indicated organizer.

Please use the enclosed SOR abstract form. Additional forms may be obtained from the Program Chairman or from Mrs. Cook in the Editor's office.

Symposia planned for the meeting include the following:

Rheology of suspensions, emulsions and foams

Organizer: Robert L. Powell
Department of Chemical Engineering
University of California
Davis, CA 95616
Phone: (916) 752-8779

Polymer solutions and melts

Organizer: Dale S. Pearson
Department of Chemical Engineering
University of California
Santa Barbara, CA 93106
Phone: (805) 961-8269

Electrorheology

Organizers:
Edward A. Collins Dr. C. F. Zukoski
255 Glenview Drive Dept. of Chem. Eng.
Avon Lake, OH 44012 University of Illinois
Phone: (216) 933-8345 Urbana, IL 61801
Phone: (217) 333-7379

Rheology of crosslinking systems with applications to composites

Organizer: David S. Soane
Department of Chemical Engineering
University of California
Berkeley, CA 94720-9989
Phone: (415) 642-7998

Experimental methods for highly viscous liquids, plastic materials and gels

Organizer: to be announced.

Processing rheology and numerical methods

Organizer: David S. Malkus
Department of Engineering Mechanics
University of Wisconsin
1415 Johnson Drive
Madison, WI 53706
Phone: (608) 263-2675

Combinations of rheological with other physical characterization techniques

Organizer: Gerald G. Fuller
Department of Chemical Engineering
Stanford University
Stanford, CA 94305
Phone: (415) 723-9243

Theoretical rheology

Organizer: John Wiest
School of Chemical Engineering
Purdue University
West Lafayette, IN 47907
Phone: (317) 494-0756

Nonlinear, large deformation response

Organizer: Robert F. Landel
Jet Propulsion Lab
4800 Oak Grove Drive
Pasadena, CA 91109
Phone: (818) 354-4402

Molecular-Level Modeling in Biorheology*

Blood Cell-Surface Interactions*

General papers

Organizer: to be announced.

*Organized by The North American Society for Biorheology
c/o Dr. S. P. Sutera (President)
Mechanical Engineering
Washington University
Box 1185
St. Louis, MO 63130
Phone: (314) 889-6047
FAX: (314) 726-4434

COME TO SANTA FE!

Santa Fe is the oldest capitol city and the third largest art center in the USA. Spanish and Pueblo Indian style are reflected in the unique architecture of this historic city, which is located at the base of the Sangre de Cristo Mountains at an elevation over 7,000 feet. The city features many fine museums, shops, art galleries, and restaurants; and the surrounding area offers Indian pueblos, ancient ruins, and spectacular mountain scenery. October days are typically sunny, but nights are very cool.

Hotel accommodations include (single/double) the Santa Fe Hilton (\$60/70), El Dorado (\$95/95), St. Francis (\$70/80), La Fonda (\$65/75), Inn of the Governors (\$58/68), and Best Western High Mesa Inn (\$45/45). The Social Program will include a reception at the Palace of the Governors and Bingham Banquet at the El Dorado Hotel. A pass to all four State Museums in Santa Fe will be provided to registrants.

Upon flying into Albuquerque, one can either rent a car to drive the sixty miles to Santa Fe or take a scheduled Airport Shuttle (\$25 one way).

Further details and registration information will be included in the July Rheology Bulletin.

MINUTES OF THE SOCIETY OF RHEOLOGY EXECUTIVE COMMITTEE October 22, 1989

The executive meeting was called to order at 9:07 A.M. at the LeGrand Hotel, Montreal, on October 22, 1989. Officers present included: John Dealy, Bob Mendelson, Art Metzner, Don Baird, Ed Collins, Joe Goddard, Bob Landel and Greg McKenna. Kurt Wissbrun, SOR representative to AIP and A. Kraynik, newly elected SOR secretary, were also present.

1. Reports

Minutes of the February 12, 1989 executive meeting as printed in the July 1989 Bulletin were approved.

Ed Collins, Treasurer, reported that the balance as of October 15, 1989 was \$123,809.43. It was estimated that after the outstanding bills to Wiley are paid (Journal) that the balance at the end of 1989 will be about \$93,000. The treasurer's report was accepted as read. A motion to establish an auditing committee consisting of the president, past president and vice-president was passed. The purpose of this committee is to review the finances.

See Business Meeting minutes for Editor's report. Arthur Metzner recommended that a letter of apology be sent to Margaret Ensley at AIP as the result of inappropriate behavior over the phone by one of our members.

Kurt Wissbrun reported on the recent AIP meeting in which most of the discussion was concerned with two amendments and relocation of the AIP offices.

2. Meetings

Andy Kraynik is the local arrangements chairman for the Santa Fe meeting in October, 1990. Room rates have been set and are much less than present rates. A registration fee of \$80 and a banquet fee of \$30 were proposed. Monty Shaw is the program chairman for the Santa Fe meeting and abstracts are due by May 1, 1990.

The annual meeting in 1991 will be held in Rochester, New York. Glenn Pearson will be the local arrangements chairman and Bruce Hartmann is the program chairman. The international meeting will be held in Brussels in August of 1992. This will be followed by a winter meeting in February 1993 in California. The 1993 annual meeting will be held in Boston. Beyond 1993 host locations are being sought and suggestions are welcome.

Joe Goddard prepared a questionnaire which was distributed at the Montreal meeting to determine the members' view on having a program committee. The purpose of the committee would be to handle site selection planning and up-date guidelines for local arrangements chairman. It was moved that a meetings policy committee be established consisting of the current local and program chairman and a chairman to be appointed by the President with concurrence of the Executive Committee. The motion was amended to add that the chairman be a nonvoting member of the Executive Committee. The motion was passed, but must be voted on by the membership.

3. Montreal Meeting

Pierre Carreau reported that 316 people had pre-registered for the meeting. John Dealy and Pierre Carreau will review expenses and divide up the profits or losses from the meeting.

4. Associated Rheology Groups

An exploratory letter will be sent to the electrorheology group by Bob Mendelson to determine how the SOR may interact with them.

5. Corporate Associates Program

The executive committee voted to abolish the Sustaining Membership Program and replace it with a Corporate Associates organization. The dues will be \$2,500/year. A letter ballot will be submitted to the membership to delete Article III and replace it with: "The Corporate Associates shall be an organization with an active interest in the science of rheology. The dues for Corporate Associates shall be established by the Executive Committee."

6. Miscellaneous (AIP Matters)

It was agreed to support the Physics Olympiad at the current level of \$500. A motion to pay \$6,000 per year for secretarial services at AIP was passed.

The meeting was adjourned at 6:15 P.M.

BUSINESS MEETING MINUTES October 25, 1989

The business meeting was called to order at 5:30 P.M. at the LeGrand Hotel, Montreal.

Reports

The minutes of the last meeting were read and approved. The election results were reported. The new officers are:

President: R. A. Mendelson
Vice President: J. D. Goddard
Treasurer: E. A. Collins
Secretary: A. M. Kraynik
Members at Large: R. K. Prud'homme and H. H. Winter

The Amendments (Amendment to Article VIII and Amendment to Article VI) were passed by the membership.

Arthur Metzner reported that it cost about \$170,000 to publish the *Journal of Rheology* through Wiley. Dues bring in only \$40,000. Publishing the Journal through AIP will cost between \$15,000 and \$30,000. A twelve month publication delay for manuscripts was noted. The editors report was accepted as read.

Ed Collins reported that our balance at the end of 1989 should be about \$93,000 after paying about \$30,000 to Wiley. It was estimated that our balance at the end of 1990 should be about \$114,000. Members were requested to check with their libraries to determine if it received a bill for the Journal. The report was accepted as read.

Meetings

Pierre Carreau reported that 428 people registered for the meeting with 108 of these being students.

The future meetings are:

1990 Santa Fe A. Kraynik - local arrangements chairman
M. Shaw - program chairman

1991 Rochester G. Pearson - local arrangements chairman
B. Hartmann - program chairman

1992 Brussels International Meeting

1993 -
S. California R. Landel - local arrangements
(January)

1993 -
Boston (Fall) R. Armstrong - local arrangements

New Business

It was agreed that the electro-rheologists interest in the SOR be cultivated.

A ballot will be sent out to the membership to determine whether a Corporate Associates Program will be formed.

Bob Mendelson took over as the new president. The meeting was adjourned at 6:45 P.M.

SoR Meeting Policy and Questionnaire

The SoR Executive Committee is in the process of developing long-range programming policies or guidelines on meeting content, format and scheduling. If you wish to be heard, please take the time to complete and return the questionnaire/mailer, attached to this issue of the Bulletin, by **March 1, 1990**.

Some of you will recall that a similar questionnaire was passed out at the recent Montreal meeting (which except for Item II, 4, added here, was identical). Unfortunately, and perhaps because of numerous distractions, the rate of return was very low and inadequate. Hence we ask all members to respond, please, even if you (good citizen) already did so in Montreal.

ANNOUNCEMENTS

Dr. Robert A. Mendelson, the Society's president, was elevated to one of Monsanto's top technical ranks - that of Senior Fellow - in September. Cited were his past and continuing contributions to an impressive variety of projects and products.

Dr. Mendelson received his B.S. and Ph.D. degrees from Case Institute of Technology in 1952 and 1956. He has been employed by Monsanto since, and he has authored approximately 40 scientific paper and patents - a very impressive total for an industrial practitioner.

SOCIETY OF RHEOLOGY
MEETING ANNOUNCEMENTS

63rd ANNUAL MEETING
SOCIETY OF RHEOLOGY

Rochester, NY
October, 1991

Symposia planned for the 63rd Annual Meeting of the Society of Rheology, to be held in Rochester, New York, in October 1991, include the following tentative titles:

Viscoelastic Properties of Solid Polymers - all aspects of experimental and theoretical studies on amorphous and crystalline polymers. Areas of particular interest include molecular theories for the frequency and temperature dependence of viscoelastic properties and comparison of different instruments for measuring these properties.

Composites - rheological aspects of composite processing and properties including effective viscosity in relation to degree of cure, effective medium theories, and the effect of moisture. Composites will include short fiber reinforced composites, polymer composites, and ceramic composites.

Rheology of Emulsions and Dispersions - experimental and theoretical studies in the fields of food rheology, biorheology, and polymers. The goal is to compare and contrast emulsions and dispersions in the different fields of application.

Polymer Processing - emphasis on the fundamental aspects of flow as applied to polymer processing. General behavior relevant to a variety of applications is of interest rather than modeling a specific use.

Other Symposia and fuller details will be announced in future issues of the Bulletin. Individuals interested in organizing symposia should contact the program chairman.

Program Chairman

Bruce Hartmann, Code R31
Naval Surface Warfare Center
10901 New Hampshire Ave.
Silver Spring, MD 20903-5000
Phone: (202) 394-2629
FAX: (202) 394-2414

Local Arrangements Chairman

Glen H. Pearson
Eastman Kodak Co.
Rochester, NY 14652-3701
Phone: (716) 722-9138 Office
FAX: (716) 722-7072

XIth INTERNATIONAL CONGRESS ON RHEOLOGY:
Palace of Congresses, Brussels, Belgium, August 17 to 21, 1992.

This meeting is scheduled to be followed by The International Congress of Theoretical and Applied Mechanics in Israel. The Palace of Congresses is a very comfortable and fully equipped meeting center located in the heart of Brussels and within walking distance of a number of large hotels. Student rooms will also be available at the University of Brussels.

The meeting will be co-chaired by Professor M. J. Crochet (Louvain-la-Neuve) and Professor J. Mewis (Leuven); the first circular will be mailed in September, 1990.

ANNOUNCEMENTS OF OTHER MEETINGS OF
POSSIBLE INTEREST TO RHEOLOGISTS

February 14-15, 1990: Training course in viscometry at Warren Spring Laboratory. The course is intended for technicians and research workers who use viscometers in their everyday work and will include lectures and hands-on experience on a range of instruments available at the Laboratory in Stevenage. Further details and a registration form can be obtained from: Miss P. Madhvi, Warren Spring Laboratory, Gunnels Wood Road, Stevenage, Hertfordshire, SG1 2BX, U. K. Tel: (0438) 741122, Ext. 438.

March 26-29, 1990: Liverpool, U.K. International Conference on Rheology of Fresh Cement and Concrete. Dr. P. F. G. Banfill, School of Architecture and Building Engineering, University of Liverpool, P. O. Box 147, Liverpool L69 3BX, U.K.

April 17-20, 1990: Nice, France. Sixth Annual Meeting of the Polymer Processing Society. Secretariat - PPS.6 (Nice), Ecole des Mines de Paris, CEMEF, SOPHIA ANTIPOLIS, 06560 VALBONNE, FRANCE. Tel: 93.95.75.75; FAX: 93.65.43.04.

April 22-25, 1990: The Seventh SPE/DOE Symposium on Enhanced Oil Recovery in Tulsa, Oklahoma. The theme of the 1990 symposium will be "EOR in the 1990's: Global Prospects and Perspectives." Reply to J. R. Bragg, Program Department, Society of Petroleum Engineers, P. O. Box 833836, Richardson, TX 75083-3836 U.S.A.

April 23-26, 1990: Sheraton Sand Key, Clearwater, Florida. 15th International Conference on Coal and Slurry Technology. Contact: Coal and Slurry Conference Committee, 1156 Fifteenth Street, N.W., Suite 505, Washington, D.C. 20005.

May 17-18: 17th Annual Meeting of the Society of Rheology, Japan. In Chiba. Information available from the society's secretary, Professor Kunihiro Osaki, Institute for Chemical Research, Kyoto University, Uji Kyoto 611, Japan.

May 20-25, 1990: Jerusalem, Israel. Tenth Polymer Networks Group Meeting. Contact Melia-Te'um, POB 8388, Jerusalem 91082, Israel. Tel: 972 2 667402; Telex: 25628 TEUMJ IL; FAX: 972 2 637572.

May 21-25, 1990: Tucson, Arizona. Eleventh U.S. National Congress of Applied Mechanics. Contact Professor C. F. Chen, Department of Aerospace and Mechanical Engineering, University of Arizona, Tucson, Arizona 85721 U.S.A.

May 23-25, 1990: "Recent Developments in Structured Continua II" will be held in Sherbrooke, Quebec, Canada. Contact: Dr. D. De Kee, Department of Chemical Engineering, University of Sherbrooke, Sherbrooke, Que., J1K 2R1, Canada.

June 27-28, 1990: Toronto, Canada. Canadian Conference on Engineering Education. Joint sessions with the ASEE 1990 Annual Conference will be held on the morning of June 27, 1990. Eminent international speakers from education, industry, and government will give plenary and keynote addresses in session on "The International Nature of Engineering," "Globalizing Cooperative Research," "Globalizing Engineering Education," and "Globalizing the Engineering Marketplace." Contact C. R. Phillips, Department of Chemical Engineering and Applied Chemistry, University of Toronto, Toronto, Ontario, Canada M5S 1A4. Telephone: (416) 978-6182; FAX: (416) 978-8605.

July 15-20, 1990: Halifax, Nova Scotia. Canadian Rheology Group Sessions at the First C.I.C. (Chemistry and Chemical Engineering) Congress. Contact Professor D.

DeKee, Department of Chemical Engineering, University of Sherbrooke, Sherbrooke, Quebec, J1K 2R1, Canada. Tel: (519) 821-7904.

July 23-25, 1990: "Recent Advances in Polymer Analysis and Characterization" will be held in Brno, Czechoslovakia. For further information, please contact: Dr. Howard G. Barth, ISPAC Chairman, DuPont Company, Experimental Station, E228/238, P. O. Box 80228, Wilmington, DE 19880-0228, USA. Telephone: (302) 695-4354 or Dr. Josef Janca, Inst. Analytical Chem., Czechoslovak Acad. Sci., Leninova 82, 611 42 Brno, Czechoslovakia. Telephone: (05) 744574.

July 24-26, 1990: "Polymer Blends" will be held in Cambridge, U.K. Contact: Dr. D. J. Hourston, Department of Chemistry, University of Lancaster, Bailrigg, Lancaster, Lancs. LA1 4YA, U.K.

August 20-24, 1990: The IUTAM Symposium on Fluid Mechanics of Stirring and Mixing will be held in La Jolla, California, on the campus of University of California at San Diego. Co-chairmen of the Symposium are H. Aref (UCSD) and J. M. Ottino (University of Massachusetts at Amherst). Contact Professor H. Aref, IGPP, A-025, UCSD, La Jolla, CA 92093. Abstracts submitted for consideration are due by March 1, 1990.

August 26-31, 1990: La Jolla, California. The First World Congress of Biomechanics. Address inquiries and correspondence to: Professor Geert W. Schmid-Schönbein, Secretary General, The First World Congress of Biomechanics, AMES - Bioengineering M-005, University of California-San Diego, La Jolla, CA 92093 U.S.A. Tel: (619) 534-4272.

August 27-30, 1990: "The Time-dependent Behaviour of Ice - Euromech 258" will be held in Hamburg, Germany (B.R.D.). Contact: Professor O. Mahrenholtz, Technische Universität Hamburg-Harburg, ES 42, 2100 Hamburg 90, German Federal Republic.

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 _____

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

- PRIMARY
- SECONDARY
- TERTIARY

INTEREST AREA	CODE
Biological Materials	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
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, New York 10017

Society of Rheology

Ballot for Rules Amendments

The Executive Committee has approved the submission of the following rules change to a letter ballot of the membership:

Delete Article III.2 concerning the Sustaining Members and replace it with "Corporate Associates shall be an organization with an active interest in the science of rheology. The dues for the Corporate Associates shall be established by the Executive Committee."

Explanation: Sustaining members are presently paying less for the *Journal of Rheology* than libraries and other organizations. The dues will serve as additional income to SOR.

Indicate your vote below:

For _____

Against _____

Please return you ballot by March 1, 1990 to:

Margaret Ensley
American Institute of Physics
335 East 45th Street
New York, NY 10017

Society of Rheology

Ballot to Establish a Meetings Policy Committee

The Executive Committee has approved the establishment of a Meetings Policy Committee, but final approval must be done by a letter ballot of the membership. The action to be voted on is:

A Meetings Policy Committee is to be established consisting of the local and program chairmen and a chairman to be appointed by the President with concurrence of the Executive Committee. The chairman shall be a non-voting member of the Executive Committee.

Indicate your vote below for the establishing of a Meetings Policy Committee.

For _____

Against _____

Please return you ballot by March 1, 1990 to:

Margaret Ensley
American Institute of Physics
335 East 45th Street
New York, NY 10017

III. Scheduling, Location, and Joint Meetings

1. *Scheduling and Location*

The Annual Meeting is normally held in the fall, with the exception of the years of the International Congresses (every fourth year), when it is delayed until the beginning of the following year. West Coast Winter Meetings are currently held only irregularly, and it is doubtful that they would be viable on an annual basis. In the interest of a more even geographical distribution, and in recognition of several significant centers of rheological activity in the Western U. S., several proposals have been made for such meetings, including:

- A. Scheduling more of the regular Annual Meetings in the West, perhaps later in the year, to benefit from winter touristic attractions (sunshine, skiing, etc.).
- B. Regular scheduling of West Coast Winter Meetings (in addition to Annual Meetings in the East), say, every two years, with alternate meetings being held jointly with other societies. Some of these could be smaller topical conferences.
- C. Holding the Annual Meeting on the West Coast, as a Winter Meeting, on years of the International Congresses, and perhaps as smaller topical conferences.

Please rank-order your preferences, from A, B, C above, and your own proposal, D, below:

First Choice	Second	Third	Fourth
_____	_____	_____	_____

D. Your proposal, in brief:

2. *Joint Meetings*

a. Receptivity to joint meetings:

	<i>Strongly Opposed</i>		<i>Neutral</i>		<i>Strongly Favorable</i>
(Circle one)	1	2	3	4	5

b. Your suggestion of possible or desirable societies with which to hold joint meetings (along with any regular meeting dates you know of that might make them particularly attractive):

IV. Comments on Any of Above Items:

University of Southern California
Department of Chemical Engineering, HED 216
Los Angeles, California 90089-1211

Please
Affix
Postage

J. D. Goddard
University of Southern California
Department of Chemical Engineering, HED 216
Los Angeles, California 90089-1211

To: U. S. Society of Rheology (SoR) Members
From: SoR Executive Committee
Date: January, 1990
Subject: Planning of Future Meetings--Your Preferences

To help the Society establish long-range programming policies and guidelines, your opinions or preferences are sought. Please take a few minutes to respond to the following brief questionnaire (on both sides), fold on dotted lines and send by return mail.

I. Meeting Content

1. Current scientific/technical coverage of SoR meetings.

	<i>Unsatisfactory</i>				<i>Highly Satisfactory</i>
(Circle one)	1	2	3	4	5

2. What new or existing topical areas would you like to see receive more emphasis at future SoR meetings?

3. What topics, if any, do you feel may be over-represented at current meetings?

4. Technical quality and presentation of papers presented at recent meetings:

<i>Quality of Content:</i>	<i>Low</i>				<i>High</i>
(Circle one)	1	2	3	4	5

<i>Quality of Presentation:</i>	<i>Low</i>				<i>High</i>
(Circle one)	1	2	3	4	5

II. Meeting Format

1. Length of regular papers (20-25 minutes at present):

	<i>Too Short</i>		<i>Satisfactory</i>		<i>Too Long</i>
(Circle one)	1	2	3	4	5

2. Topical division and parallel sessions (≤ 4 at present):

	<i>Too Few</i>		<i>Satisfactory</i>		<i>Too Many</i>
(Circle one)	1	2	3	4	5

3. (Longer) invited and survey lectures:

	<i>Fewer Needed</i>		<i>Satisfactory</i>		<i>More Needed</i>
(Circle one)	1	2	3	4	5

4. Poster Sessions

	<i>Strongly Opposed</i>		<i>Neutral</i>		<i>Strongly Favorable</i>
(Circle one)	1	2	3	4	5

Please turn over

September 3-7, 1990: Edinburgh, U.K. The Golden Jubilee Conference of the British Society of Rheology and the Third European Rheology Conference. Enquiries should be sent to: Dr. C. J. S. Petrie, Department of Engineering Mathematics, University of Newcastle upon Tyne, Newcastle upon Tyne NE1 7RU, England. February 15 is the last date for preregistering at the reduced fee.

Electronic mail to: Chris_Petrie@Newcastle.AC.UK on the EARN/BITNET networks or, on JANET, Chris_Petrie@U.K.AC.Newcastle. Telephone: 44 (0) 91-222-6000, Ext. 6230; FAX: 44 (0) 91-261-0191.

September 27-29, 1990: International Regional Meeting on Rheology and Polymer Processing organized by The Korean Society of Rheology and The Polymer Processing Society will be held in Seoul, Korea. Deadline for the submission of abstracts (200 words) is 02/28/90. Further details can be obtained from Dr. Kwang Ung Kim, Polymer Processing Laboratory, KIST, Seoul 136-791, KOREA. Telephone: (82) 2-962-8801 ext, 3441; FAX: (82) 2-963-4013.

October 7-9, 1991: Rolla, Missouri. The Twenty-Second Midwestern Mechanics Conference will be hosted by the Department of Mechanical and Aerospace Engineering and Engineering Mechanics and the School of Engineering at the University of Missouri-Rolla. For further information contact Prof. R. C. Batra, or Mr. W. L. Ries, Continuing Education, University of Missouri, Rolla, MO 65401. Telephone: (314) 341-4132.

October 21-25, 1990: Annual Meeting, Society of Rheology. See page 1 of this bulletin for details.

October 24-26, 1990: 38th Rheology Symposium of the Society of Rheology, Japan. In Tsukuba. (See May 17-18 announcement for source of further information.)

November 11-16, 1990: The Annual Meeting of the American Institute of Chemical Engineers will include a substantial number of sessions of interest to rheologists. Abstracts of papers to be presented must be sent on an A.I.Ch.E. form to Dr. A. M. Kraynik (address is on p. 1 of this bulletin), the meeting coordinator, prior to March 1. A copy of the form should also be sent to the chairman of the particular session, as follows:

Particulate and Multiphase Flows: J. F. Brady or D. Koch.

Viscous Flow at Low Reynolds Number: D. A. Saville or E. S. G. Shaqfeh.

Viscoelastic and Non-Newtonian Flows: J. D. Goddard or G. Ryskin.

Interfacial Flows: E. Herbolzheimer or B. Higgins.

Numerical Methods: A. N. Beris or S. Kim.

Please see our Membership Directory for further addresses.

December 3-6, 1990: "Experimental Identification of the Mechanical Characteristics of Composite Materials and Structures" will be held in St. Etienne, France. Contact: Professor A. Vautrin, Department of Mechanical and Materials Engineering, Ecole des Mines de St-Etienne, 42023 St. Etienne Cedex 2, France.

January 15-17, 1991: "Response of Shear Flows to Imposed Unsteadiness" will be held in Aussois, France. Contact: Dr. G. Binder, Institut de Mécanique de Grenoble, B.P. 53 X, 38041 Grenoble Cedex, France.

CHANGE OF ADDRESS

If you are moving, be sure to inform:

Ms. Margaret Ensley
American Institute of Physics
335 East 45th Street
New York, NY 10017

TELEPHONE AND FAX NUMBERS

The editor of the Society would find it very helpful to have telephone and FAX numbers of the members. Would you please send him yours? The address is on p. 2 of this Bulletin.

MEMBERSHIPS IN OTHER RHEOLOGICAL SOCIETIES

Members of any one of the world-wide rheology societies may also find it advantageous to join some of the others. As an experiment to this end, we are providing information on THE BRITISH SOCIETY OF RHEOLOGY for our members and that society, in turn, will publish information on our behalf.

THE BRITISH SOCIETY OF RHEOLOGY, founded in 1940, has as its objectives the promotion of scientific enquiry and the diffusion of knowledge of pure and applied rheology, rheology being defined as the science of the deformation and flow of matter. The Society began as the very informal British Rheologists Club and although it has expanded greatly from its small beginnings, positive effort has been made to preserve the informality. All offices in the Society are honorary appointments. An elected Council is the governing body.

Membership is diverse and includes people from academic and industrial fields, and from many scientific disciplines including mathematics, physics, chemistry, biology, metallurgy, engineering and medicine.

MEMBERSHIP

Any person who is concerned with Rheology may apply for membership and forms for this purpose may be obtained from the Honorary Membership Secretary. An entrance fee of £1 is payable and the subscription is £6 p.a. due in advance on 1st October. Bona fida students pay no entrance fee.

There are at present almost 800 members in the Society, approximately two thirds of whom work in Great Britain. The remaining one third are distributed widely throughout the world. For example, in the United States the Society has some 60 members.

To encourage younger rheologists the society funds the Scott Blair Scholarship and administers the Pergamon Biorheology Scholarship. The Society also administers the Scott Blair collection of books and papers on Rheology held at the University of Wales in Aberystwyth.

PUBLICATIONS

In collaboration with Pergamon Press, the Society publishes the quarterly Rheology Abstracts which contains abstracts of most of the published papers likely to be of interest to practicing rheologists in all fields. Over 100 journals are abstracted regularly. Also published quarterly is The Bulletin which contains reports on conferences and other Society activities, review articles on rheological topics, notes on future meetings, and a general notes and news section. Members of the Society receive both these journals free of charge.

CONFERENCES

Two or three conferences for the reading of original papers are held each year. The Society will celebrate its Golden Jubilee by hosting the Third Conference of European Rheologists to be held in Edinburgh from September 3rd - 7th 1990.

OFFICERS

The president is Dr. J. Ferguson of the University of Strathclyde, Department of Pure and Applied Chemistry, Telephone: 041-552-4400; FAX: 041-552-4775; Telex: 77472.

The membership secretary is Mr. H. Schimanski, Carri-Med Ltd, Vincent Lane, Dorking, Surrey RH4 3YX. Telephone: 0306-886180; FAX: 0306-885863; Telex: 859115 CARIN G.

TREASURER'S REPORT: OCTOBER, 1989 (5 PARTS)

1. 1990 TREASURER'S ESTIMATE

ESTIMATE BALANCE IN ACCOUNT JANUARY 1, 1990 \$110,000.00

RECEIPTS

Dues 1989, 1990, 1991	\$46,000.00	
Interest	4,000.00	
Page charges for J of Rheology	4,000.00	
J of Rheology Volume 34	17,200.00	<u>71,200.00</u>
		<u>\$181,200.00</u>

DISBURSEMENTS

Charges for billing & collection @ \$2.75	3,300.00	
Charges for preparation & maintenance @ \$3.00	3,600.00	
Financial handling AIP 5/8 of 1%	1,000.00	
Member society dues 1990 @ \$2.00	2,400.00	
Journal of Rheology Vol. 32 & 33 (1988 & 1989)	31,000.00	
Bulletins & abstracts	4,000.00	
Administrative AIP (Sec)	6,000.00	
President's discretionary fund	1,000.00	
Treasurer's discretionary fund	1,000.00	
Physics Olympiad (AIP)	500.00	
Society of presidents dues	150.00	
Miscellaneous postage/UPS	9,000.00	
Secretarial services	1,000.00	
Liability insurance	150.00	
Executive meeting expenses	1,000.00	
Bingham Award expenses	1,000.00	<u>66,100.00</u>

Estimated Balance December 31, 1990 \$115,100.00

2. JOURNAL OF RHEOLOGY

Statement of Income and Expense, 1990

Pages	1,200
Nonmember subscriptions	570
Subscription Price	290

INCOME

Page Charges, 50% honored @ \$10/page	0
Reprint Sales, @ \$5/page	6,000
Royalties	500
Nonmember Subscription Income	165,300
TOTAL	171,800

EXPENSE

Composition, Illustrations, Editorial Mechanics, Gratis	
Reprints, Reprints, Printing, Paper, Mailing @ \$92.50/page	111,000
Editorial Management	15,000
Subscription Fulfillment @ \$15/nonmember sub.	8,600
Marketing	<u>20,000</u>
TOTAL	<u>154,600</u>
NET INCOME	<u>17,200</u>

**3. AMERICAN INSTITUTE OF PHYSICS INCORPORATED
FOR
THE SOCIETY OF RHEOLOGY**

Statement of Receipts and Disbursements Year Ended December 31, 1988

Balance in Account - December 31, 1987		\$86,796.00
Receipt (January 1 - December 31, 1988)		
Dues Collections - 1987, 1988, 1989	\$43,596.31	
Sales of Mailing Lists: Less Processing Costs	479.45	
Interest	4,386.53	
Journal Page Charges	6,690.00	
Atlanta Annual Meeting	5,924.37	
		<u>61,076.66</u>
		<u>\$147,872.66</u>
Disbursements (January 1 - December 31, 1988)		
Charge for Dues Billing and Collection (\$2.75 per Item Billed-Annual Charge)	\$2,857.25	
Charge for Prep. & Maintenance Member records \$3/per	3,243.00	
Financial Handling Charge-Year 1988 (5/8 of 1%)	350.00	
Member Society Dues-Year 1988, \$2/member	2,354.00	
Renewal Billing Costs	1,085.04	
The Journal of Rheology: Volume 31(1-8)	11,552.12	
Editorial Charges	7,871.72	
Other:		
Administrative Services	2,100.00	
Membership Brochures	396.75	
February 1989 Meeting Mailing	455.81	
Miscellaneous Office Costs	276.60	
Short Course (Atlanta) Expenses	1,551.85	
Commercial Press Bulletin, Abstracts	2,679.89	
Banking Services	17.97	
Meeting Expenses	1,534.46	
Liability Insurance	148.00	
Final Variance	653.50	<u>\$39,127.96</u>
Balance in Account December 31, 1988		<u>\$108,744.70</u>

4. SOCIETY OF RHEOLOGY

BALANCE AS OF OCTOBER 15, 1989

ACCOUNT	DUE	RATE %	BALANCE
33-15-778-375	04/12/90	8.0	\$9,531.23
33-15-778-032	11/14/89	8.0	15,709.84
33-15-738-264	03/03/91	9.1	28,480.65
9-960-115	Checking	6.5	19,579.54
AIP (June 30, 1989)		0.	50,508.17
		TOTAL	<u>\$123,809.43</u>

5. OUTSTANDING LIABILITY

J of Rheology Volume 32, 1988	\$12,000.00
J of Rheology Volume 33, 1989	\$19,000.00