

RHEOLOGY BULLETIN

Publication of The Society of Rheology, Inc.

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August, 1976

47th ANNUAL MEETING
February 27 - March 2, 1977
Biltmore Hotel
New York, N. Y.
(This is the official 1976 meeting)

CALL FOR PAPERS

Deadline for Submission - November 1, 1976

An Abstract of 250 words or less is required prior to November 1, 1976. Abstracts should be sent *directly* to the appropriate symposium chairman whose address is given below.

Symposium on Suspension Rheology

CHAIRMAN: Irvin M. Krieger
Chemistry Department
Case Western Reserve University
Cleveland, Ohio 44106

Symposium on the Rheology of Plastics Processing

CO-CHAIRMEN: James L. White and D. C. Bogue
Department of Chemical Engineering
University of Tennessee
Knoxville, Tennessee 37916

Symposium on the Rheology of Food Products

CHAIRMAN: Alina S. Szczesniak
General Foods Corporation
Corporate Research
White Plains, New York 10625

Symposium on Biorheology

CHAIRMAN: Larry V. McIntire
Department of Chemical Engineering
Rice University
Houston, Texas 77001

General Papers Session

CHAIRMAN: C. D. Han
Department of Chemical Engineering
Polytechnic Institute of New York
Brooklyn, New York 11201

The Program Committee consists of C. D. Han, Chairman, I. M. Krieger, L. V. McIntire, J. C. Miller, and J. L. White. Acceptance of submitted abstracts will be based on technical content and relevance to rheology.

Several invited lectures will be given on topics of broad general interest to the Society.

Local Arrangements Committee Chairman is John C. Miller, Union Carbide Corp., Bound Brook, New Jersey 08805.

48th ANNUAL MEETING

The 48th Annual Meeting of the Society is scheduled for Madison, Wisconsin, tentatively mid-to-late October 1977.

SHORT COURSE ON RHEOLOGY

A short course on "Deformation and Fracture of Polymers", conducted by T. Smith, IBM, San Jose, California, and S. S. Sternstein, RPI, Troy, New York, will be offered Saturday, February 26 and Sunday, February 27, 1977 at the Biltmore Hotel in New York.

The course is an attempt to bridge the gap between the continuum mechanics and molecular aspects of the subject and is intended for people with little or no training in either or both of the areas involving the phenomenological description of deformation and constitutive equations and the molecular and experimental aspects of the mechanical behavior of polymers.

The fee for the course and notes is \$100.00 prior to January 1, 1977. A late registration penalty of \$25.00 is acceptable thereafter. Student rates are one-half of the above.

Further information may be obtained from Edward A. Collins, B. F. Goodrich, Avon Lake, Ohio 44012 (telephone: 216-933-6181).

ANNOUNCEMENTS

Charles L. Sieglaff has been named a large member of the Executive Committee to fill the unexpired term of Elliot A. Kearsley, who is on assignment in Japan.

R. S. Rivlin, whose four-year term as representative of the Society of Rheology on the U.S. National Committee on Theoretical and Applied Mechanics terminates on October 31, 1976, has been elected to serve as Chairman of that committee for a two-year term effective on that date.

Syoten Oka, professor emeritus of Tokyo Metropolitan University (now at Kyorin University) has been awarded the 1976 Fujiwara Prize. Professor Oka received the prize for work on the mathematical theory of blood flow in arteries and veins.

OTHER MEETINGS

The U.S. National Committee on Theoretical and Applied Mechanics (USNC/TAM) which represents the United States in IUTAM meets in Delft August 30 - September 4, 1976.

Any SOR member who has an interest in the affairs of Mechanics, may contact the Committee's Secretary:

Francois N. Frenkiel
Computation and Mathematics Department
Naval Ship Research and Development Center
Bethesda, Maryland 20034

RHEOLOGY BULLETIN
Raymond R. Myers, Editor
Department of Chemistry
Kent State University
Kent, Ohio 44242

ADVANCED SEMINAR ON APPLICATIONS OF BIFURCATION THEORY

The Mathematics Research Center at the University of Wisconsin-Madison will hold an advanced seminar on Applications of Bifurcation Theory, *October 27-29, 1976*. The seminar will consist of 12 invited addresses dealing mainly with the applications of bifurcation theory to a diverse range of fields such as fluid dynamics, elasticity theory, astrophysics, geophysics, and chemical kinetics.

Members of the Program Committee are: P. H. Rabinowitz (Chairman), C. C. Conley, R. W. Dickey, and R. E. L. Turner. A detailed program of the seminar and information on registration and accommodations will be available about August 20, 1976. Requests for the program and all related inquiries should be directed to Professor P. H. Rabinowitz, Mathematics Research Center, University of Wisconsin-Madison, 610 Walnut Street, Madison, Wisconsin 53706.

EUROPEAN MEETING

A Joint Meeting on Polymer Processing and Rheometry by the British, Netherlands, and Italian Societies of Rheology will be held at Pisa, Italy, April 13-15, 1977.

Deadline for papers - *October 31, 1976*

The submission of contributed papers (title and 1-page abstract only) is open to members and non-members of the 3 Societies. Depended on the submitted contributions, the meeting will be organized in sessions. Suggested topics for the sessions thus far include (1) Influence of processing on structure in polymers and (2) Mechanical properties and their measurement.

The use of English as the meeting language is recommended. The abstracts should be sent to the scientific secretaries of the appropriate Society:

United Kingdom:
F. N. Cogswell
67 Daniells
Welwyn Garden City
Herts, A17 1QT, United Kingdom

The Netherlands:
H. C. Booij
DSM Research and Patents
P.O. Box 18
Geleen, The Netherlands

Italy:
D. Acierno
Istituto di Ingegneria Chimica
viale delle Scienze
I-90128 Palermo, Italy

The host organization is the Italian Society of Rheology. E. Butta of the University of Pisa is chairman of the organizing committee.

PRESIDENT'S MESSAGE

In your dues bill from AIP, which you will receive in September or October, there will be an insert requesting that you check three interest areas out of several that will be listed. This insert should be returned with your dues payment. The information will then be coded into the computer so that a member listing by interest can be obtained in the future. There are two main reasons for this request: *First*, our membership in 1976 is almost the same as it was in 1967-1968—approximately 850-900. This means almost no growth in 8-9 years. However, we took in over 600 new members in that time period. Even if we excluded those who joined just to go on the charter flights, it means we have had a tremendous turnover in members. By following the membership by interest area we can see if we are neglecting certain areas of our membership, and as a result are losing members. Also, we can get a better idea of how to balance our programs to the interests of the membership. *Second*, by having a membership by interest listing, we can find more people to assist in setting up symposia, etc., at our annual meetings. So, *please* return the interest insert with your payment.

In 1979, the Society of Rheology will be 50 years old. To celebrate our 50th Anniversary, we hope to have an outstanding meeting. In addition, we hope to have available a rather detailed history of the Society for those who are interested. The founding of our Society was initiated by a group of scientists attending the Third Plasticity Symposium. After much preliminary work and the assistance of a large group of European scientists, the Society had its first charter meeting in Washington, D. C. in December, 1929. In 1945 to celebrate the 15th Anniversary, Dr. E. C. Bingham, one of the founders, wrote a short history of the Society. It is now time to expand his report and extend it to include the period of 1945-1976. I have formed a History Committee composed of R. S. Marvin, H. Markowitz and myself to work to this goal. We hope to obtain taped interviews with early members, collect or copy correspondence files of past presidents and early members, and in general seek out information regarding our heritage. If any of you have any information about the Society which would be of interest to other members, let any member of the History Committee or the Executive Committee know about it.

I mentioned in the last issue about the placement service of AIP available to SOR members. The details are in the insert with this Bulletin. Although it is not ideal for rheologists, it certainly will get to an additional group of employers over those using the Employment Clearing House of the American Chemical Society. Feel free to use it and also to write to AIP about positions available.

I have formed an ad hoc committee to recommend those changes needed to update and modify the Constitution and Rules of the Society of Rheology. A copy of the present Constitution and Rules is in the front of your membership directory. If you have the time, I would appreciate your reading through it and letting me know your suggestions as to areas needing change.

Jack R. Knox

MINUTES OF THE EXECUTIVE COMMITTEE MEETING

APRIL 4, 1976
NEW YORK, N. Y.

Executive Committee members present: J. R. Knox, I. M. Krieger, R. A. Mendelson, R. R. Myers, R. S. Rivlin, C. L. Sieglaff (replacing E. A. Kearsley). The meeting was called to order by President Knox at 12:15 PM. An agenda with appendices was provided by the President to all present, and material appearing therein will not be copied here.

1. The minutes of the Oct. 26, 1975, Executive Committee meeting were approved as submitted by Secretary Mendelson. The Secretary had no new information not covered in the agenda to report to the Committee.
2. The Treasurer's Report (sent to all members of the Executive Committee and therefore not reproduced here), consisting of (1) Annual Treasurer's Report for 1975, (2) Balance Sheet for Savings Account, (3) Cumulative Sheet for Interest since 1973, (4) Summary of Annual Balance Sheets 1965-1975, (5) Summary of Meeting Locations 1963-1977, and (6) Summary Financial Statements Annual and Winter Meetings 1964-1975, was presented by Knox for Treasurer Collins. Knox indicated that, since the compilation of the statement, the Wiley publication bill for Vol. 19 of the Transactions had been paid, reducing the account of AIP to \$12,718.66. Several technical questions arose requiring referral to Collins. Consequently, it was agreed to obtain clarification from Collins before requesting Executive Committee approval by mail.
3. Knox raised the question of interpretation of Article I, Sect. 6 of the Rules, with regard to termination of those working rules of order for the control and operation of the Society promulgated by previous Executive Committees. While it was the sense of the Community that this should not be interpreted to interrupt continuity of operations, it was suggested that this section should be clarified and perhaps rewritten by the Committee on Constitution and rules.
4. The Editor's Report was presented by Editor Myers and a copy is appended. The report was accepted by the Executive Committee. Discussion took place on means of expanding the rheological interests represented in Transactions papers, including meeting symposia in food rheology and biorheology with encouragement to authors to publish in the Transactions. Discussion also clarified that the Editor has authority to appoint as many Assistant Editors as may be necessary. The Executive Committee granted (through the Editor) to John Wiley and Sons permission to reproduce Transactions material along lines requested by A. Wittman of Wiley.
5. Knox announced committee appointments. Additions and corrections were made, and the final list of committee appointments is appended to this set of minutes. Committee reports were received (either by previous mail, agenda appendix or directly) from (1) J. T. Bergen, Comm. on Industrial-University Relations; (2) E. A. Collins, Comm. on Short Courses; (3) C. L. Sieglaff, Comm. on Nomenclature; and (4) E. A. Collins, Comm. on Site Selection.
6. Future Meetings:
 - a. The 1976 Annual Meeting is scheduled to be held Feb. 28 - March 2, 1977, at the Biltmore Hotel in New York. Program and Local Arrangements committee membership is given in the committee appointment listing. Program Chairman Han has announced specific symposia, and deadline for abstracts of Nov. 1, 1976, has been set.
 - b. The 1977 Annual Meeting has been scheduled for Oct. 23-27, 1977, at the University of Wisconsin, Madison, Wis. Food rheology, biorheology and oil recovery symposia have already been set.
 - c. Reservations concerning our participation in a proposed joint meeting with the British Society of Rheology in England, March or April 1978, were expressed due to the limited extent of U.S. Society attendance which might be expected. It was agreed that Krieger would discuss this question with the British during a forthcoming visit of his and report back.
 - d. Proposals have also been made to combine a Society meeting either directly with a 1979 Hawaiian meeting of the ACS Polymer Chem. Division or directly following that meeting in a joint meeting with the Japan Society of Rheology. Clarification of timing and nature of the proposal from either F. Bailey or N. Culbertson of ACS Polym. Div. is required.
 - e. A tentative proposal for a Winter Meeting in Houston in 1979 has been received.
 - f. It was moved, seconded, and passed that Meeting Program Chairmen shall have the authority to waive the registration fees of up to (and including) five invited speakers.
 - g. The invitation by University of Tennessee to hold the VIIIth International Congress on Rheology at the University of Tennessee in 1980 was reaffirmed to the Society. It was pointed out that 1979 is the 50th anniversary of the Society, and the NBS has suggested a meeting (either Annual Meeting or a moved-up International Congress) at the NBS to commemorate this event. It presently appears unlikely that the International Committee on Rheology will accept a U. S. Invitation for 1980 (or 1979), but it was agreed that Knox would go to Gothenberg (Sweden) with a strong invitation. The specific location to be recommended would depend in part of the discussions with NBS, but would likely be NBS first and University of Tennessee second. It was further agreed that if an International Congress could not be held at NBS, consideration would be given to holding the 1979 Annual Meeting there.
7. A number of proposed changes to the Society's brochure were referred to the Committee on Publicity and Public Relations.
8. A series of proposed changes to the Constitution and to the Rules were discussed and referred to the Committee on Constitution and Rules.
9. It was moved, seconded and passed to continue the Society's affiliations with the National Committee on Theoretical and Applied Mechanics and with the International Committee on Rheology. The question of specification of representation of the Society to various organizations in Article VI of the Rules was referred to the Committee on Constitution and Rules.
10. It was moved, seconded and passed to donate \$50 to the Committee of Scientific Society Presidents (CSSP) for the calendar year 1976.
11. Purchase of the Bingham Award Medal for 1976 was moved, seconded and passed. It was also noted that the Bingham Award should be written into the Society Rules.

12. The Society regularly receives requests for nominations for various scientific awards and functions. This matter was discussed, and, in particular it was suggested that Krieger be proposed to NSF as a panelist on the Research Initiation and Support (RIAS) Program. Action on this proposal will be taken at a future date.
13. It was agreed that information concerning AIP's Placement Information Service should be placed in the Rheology Bulletin in order to inform the membership of the service.
14. AIP is examining alternative sites and plans relative to its future operations and has requested comments from the member societies. It was agreed that the Secretary should inform AIP that the sense of the Executive Committee is that we wish to see the most efficient operation of AIP to hold costs down, but that the executive offices and physics center be kept in New York.
15. It was moved, seconded and passed that the Society pay for a suitable congratulatory scroll to be presented to the ACS on the occasion of its 100th Anniversary at its New York meeting.
16. The meeting was adjourned at 4:30 PM.

Respectfully submitted,
R. A. Mendelson, Secretary

COMMITTEES

Executive Committee:

Jr. R. Knox (President)
I. M. Krieger (Vice-President)
E. A. Collins (Treasurer)
R. A. Mendelson (Secretary)
R. R. Myers (Editor)
R. S. Rivlin (Past-President)
S. S. Sternstein
C. L. Sieglaff

Program Committees

(1976 Annual Meeting)

C. D. Han (Chairman)
L. V. McIntire
I. M. Krieger
J. L. White

Local Arrangements Committee

(1976 Annual Meeting)

J. C. Miller (Chairman)
K. F. Wissbrun
S. J. Kurtz
L. H. Gross

Program Committee

(1977 Annual Meeting)

L. V. Cancio (Co-Chairman)
W. W. Graessley (Co-Chairman)

Local Arrangements Committee

(1977 Annual Meeting)

R. B. Bird
A. S. Lodge

Bingham Award Committee (1976)

E. H. Lee, (1976)
R. L. Ballman, (1976)
W. W. Graessley, (1977) (Chairman)
R. S. Stein, (1977)
N. H. Mohsenin, (1978)
C. E. Miller, (1978)

Nomenclature Committee

R. Schapery (Chairman)
C. Sieglaff
R. B. Bird

Site Selection and Topics Committee

E. A. Collins (Chairman)
E. J. Tolle
C. T. Hill

Committee on Membership

G. E. Fulmer (Chairman)
G. J. Savins
L. V. McIntire

Committee on Industrial - University Relations

N. Nakajima (Chairman)
J. L. Kardos
J. T. Bergen

Representative on International Committee on Rheology

N. W. Tschoegl

Representative on National Committee on Theoretical and Applied Mechanics

R. S. Rivlin

Short Courses

J. L. White (Chairman)
E. A. Collins
C. W. Macosko

Constitution and Rules

J. R. Knox (Chairman)
I. M. Krieger
L. J. Zapas
R. S. Rivlin

Publicity and Public Relations

J. R. Knox (Chairman)
R. S. Porter

EDITOR'S REPORT TO THE EXECUTIVE COMMITTEE

APRIL 4, 1976

Transactions published during the year 1975 (Volume 19) amount to 38 articles comprising 655 pages. 61 manuscripts were submitted in calendar year 1975 (this does not include those sent directly to the assistant editors); 11 were rejected or withdrawn; 36 were accepted and sent to the publishers. The other 14 are still in the hands of the reviewers or have gone back to the authors for major revisions.

Volume 20 starts with the Eirich Issue and promises to be on target of 800 pages. The publisher has approximately 32 manuscripts on hand and the various assistant editors are processing 20 papers. Thus far at the end of the first quarter of 1976, we have received a total of 14 manuscripts, four of which have already been accepted and three have been returned to the authors for very minor revisions.

During this year, Graessley and Bagley resigned. Dennis Onogi has taken on the task of foreign editor with extreme competence; we are still scouting for a European assistant editor.*

Miss Jeanne Rich is no longer with Wiley; we now work with Miss Susan Alexander and Miss Leslie Frutkin of the Journals Department.

We have made progress in having individuals write tutorial papers for TSOR, but so far have not received any completed manuscripts.

The Bulletin will issue in only two parts this year; one in early April and one in August, announcing the particulars of the 1976 Annual Meeting to be held in late February 1977.

Raymond R. Myers
Editor

* (Editor's Note: Since this time, A. Silberberg has been named as Assistant Editor for Europe & the Near East.)