
THE BRITISH SOCIETY OF RHEOLOGY



BSR BULLETIN Incorporating THE 3rd NEWSLETTER OF THE EUROPEAN SOCIETY OF RHEOLOGY

1998, Vol. 41, No. 3

CONTENTS

Officers & Members of BSR Council - 1998/9	ii
Editorial	71
Letters	71
Conference Reports	73
European Society of Rheology Newsletter	
ESR Announcements	81
Opening Address - The Fifth European Rheology Conference	82
The 1998 Weissenberg Award	84
Member Society News	86
Rheological Web sites	90
Conference Announcements	91
Industry News	104
Membership News	105
Conference Diary	106
Course Diary	107
Aims of the Society	108

Hon Editor:

Dr Paul Doody
Linx Printing Technologies plc
Burrell Road
St Ives
Cambridgeshire PE17 4LE

ISSN: 0045 3145

**THE BRITISH SOCIETY OF RHEOLOGY
OFFICERS & MEMBERS OF COUNCIL - 1998/99**

President:	Dr Richard Buscall ICI Technology, R336 Wilton Centre, PO Box 90, Wilton, Middlesborough, Teesside TS6 8JE	T: 01642 - 437613 F: 01642 - 437344 E: richard.buscall@ici.com
Honorary Secretary:	Prof Phil F G Banfill Dept of Building Engineering & Surveying, Heriot-Watt University, Riccarton, Edinburgh EH14 4AS	T: 0131 - 449 5111 F: 0131 - 451 3161 E: p.f.g.banfill@hw.ac.uk
Honorary Treasurer:	Dr Mike F Webster Dept of Computer Science, University of Wales, Singleton Park, Swansea SA2 8PP	T: 0179 - 229 5656 F: 0179 - 229 5708 E: m.f.webster@swansea.ac.uk
Honorary Membership Secretary:	Prof A Russell Davies Dept of Mathematics, University of Wales Aberystwyth, Aberystwyth, Ceredigion SY23 3BZ	T: 01970 - 622755 F: 01970 - 622777 E: ard@aber.ac.uk
Honorary Abstracts Editor:	Dr Nick E Hudson Dept of Pure & Applied Chemistry, University of Strathclyde, 295 Cathedral Street, Glasgow G1 1XL	T: 0141 - 548 2162 F: 0141 - 548 4822 E: n.e.hudson@strath.ac.uk
Honorary Bulletin Editor:	Dr Paul Doody Linx Printing Technologies plc, Burrell Road, St Ives, Cambridgeshire PE17 4LE	T: 01480-302197 F: 01480-302116 E: pdoody@linx.co.uk
Ordinary Members of Council:	Mr Derek Bell TA Instruments Ltd, Europe House, Bilton Centre, Cleeve Road, Leatherhead, Surrey KT22 7UQ	T: 01372-360141 F: 01372-360135 E: 100775.446@compuserve.com
	Dr Geoff Brownsey Institute of Food Research, Norwich Laboratory, Norwich Research Park, Colney, Norwich NR4 7UA	T: 01603 - 255201 F: 01603 - 507723 E: brownsey@bbsrc.ac.uk
	Mr Tom Dovey Acordis, PO Box 111, Lockhurst Lane, Foleshill, Coventry, West Midlands CV6 5RS	T: 01203-582192 F: 01203-582996 E: tom.dovey@acordis.com
	Mr John W E Gearing 1 Ashwell Street, Ashwell, Hertfordshire SG7 5QF	T: 01462-742007 F: 01462-742565 E: gearingsci@yahoo.com
	Dr Malcolm R Mackley Dept of Chemical Engineering, University of Cambridge, Pembroke Street, Cambridge CB2 3RA	T: 01223-334784 F: 01223-334796 E: mrm1@cheng.cam.ac.uk
	Dr P Rhodri Williams Department of Chemical Engineering, University of Wales, Singleton Park, Swansea SA2 8PP	T: 0179 - 229 5195 F: 0179 - 229 5708 E: p.r.williams@swansea.ac.uk

T: Telephone; F: Fax; E: eMail

The British Society of Rheology is registered as a Charity - Number 249967

EDITORIAL

Another European edition this time, with many thanks to Manfred Wagner for his sterling efforts in collating the European Society news. There seems to be an explosion in the number of rheology events that are being announced this time - partly due to the lateness of this edition of the Bulletin perhaps but mainly due to the interest that now seems to be gathering in our subject. It doesn't seem that long ago that Sherlock Holmes and Dr Watson were on the case of the Missing Industrialist - compare the situation then with the number of industrially co-sponsored events contained herein. Another successful case solved for the good detective? Perhaps, especially as he now seems to be immersed in communications with our American colleagues (JoR 43(1) 245-7, and response).

Three excellent conference reports this time and I would just like to echo Malcolm Mackley's comments about the Ilkley meeting. I was not fortunate enough to be able to attend anything but the first day, but I was very impressed by the content and organisation - well done to everyone at Leeds.

As this edition is significantly later than usual, I'll take the time to advise you that the next issue (41(4)) will be a special edition containing reports on the Isaac Newton meeting held in Cambridge last year, together with an update on the progress made since then. Normal service (Vol. 42(1)) will resume shortly afterwards.

Until next time,

Paul Doody

LETTERS

EURORHEO Mailing List

A number of mailings were sent in December about conferences. It is possible to inspect these on the web at <http://www.mailbase.ac.uk/lists/eurorheo/archive.html>

I have also updated the ESR web pages - especially as far as conference information is concerned. See the ESR home page <http://www.ncl.ac.uk/rheology/esr/> or more directly (linked to that) <http://www.ncl.ac.uk/rheology/conferences/>

If YOU have information about rheological conferences, or corrections to any of these pages, please send me an e-mail.

There are now nearly 300 members of the "eurorheo" mailing list and I hope it will prove useful to European (and other) rheologists. 95 of us have completed and sent the web-based form with which the ESR is trying to collect information for a European database. If you have not done this, you may find the form at <http://www.ncl.ac.uk/rheology/esr/mailform.html>

Many thanks to the other 94 who have completed the form.

Best wishes for 1999,

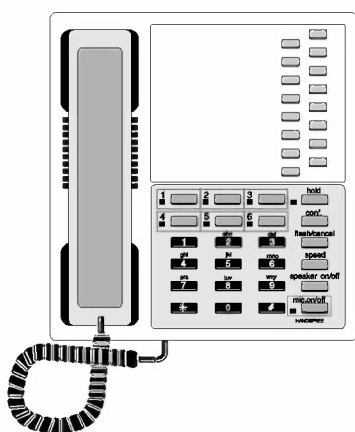
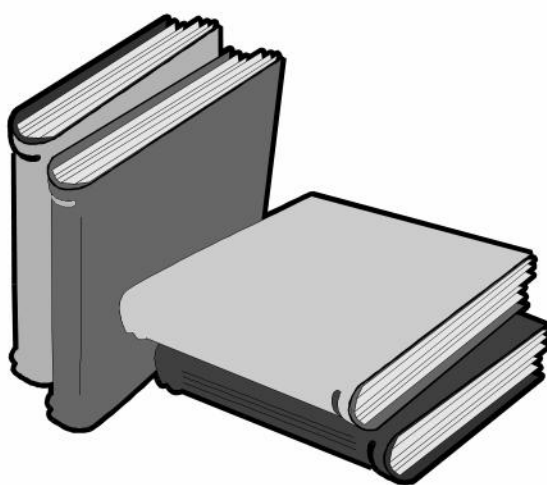
Chris Petrie



Your Abstracts Editor needs you!!

Rheology Abstracts survives through the work of the Abstractors - members of the BSR just like you. If you wish to join this select band, then let me know - it can take as little as a few minutes each week.

If you do not wish to be an Abstractor, but find an interesting article which contains some rheology, please pass it on to me, so that it can be included in Rheology Abstracts.



Honorary Abstracts Editor:

Dr Nick E Hudson, Dept of Pure & Applied Chemistry, University of Strathclyde, 295 Cathedral Street, Glasgow, G1 1XL

Tel: 0141 - 548 2162

Fax: 0141 - 548 4822

E-Mail: n.e.hudson@strath.ac.uk

CONFERENCE REPORTS

The Fifth European Rheology Conference

Portoroz, Slovenia, 7-11 September 1998

The Slovenian Society of Rheology undertook the task of organising this conference at the Fourth European Rheology Conference in Seville in 1994, just as discussions on the foundation of the European Society of Rheology (ESR) were getting under way. This, then, was the first European Rheology Conference to be held under the auspices of the ESR and it was marked by the first Weissenberg Award of the ESR, made to Professor G Marrucci of Naples.

The conference was held in the Bernardin hotel complex, on the Mediterranean coast of Slovenia, between the mediaeval town of Piran and the modern resort of Portoroz. Swimming, sailing and tennis were among the distractions which tempted some rheologists and no doubt rheological connections could be made with each. Apart from such natural temptations, our Slovenian hosts appeared to be determined to give us as many tastes of their country as possible and the social programme could even be likened to a marathon, but it was a most satisfying marathon. By the end of the meeting most of us were familiar with the short Slovenian coastline - 41 kilometres, sandwiched between Italy (Trieste) and Croatia. We travelled along much of this on both of the memorable excursions, an evening trip to the Postojna Caves and a half day spent in Ljubljana and Bled. The catering on each occasion was impressive, both for the variety of local delicacies and the efficiency of service.

The programme for accompanying persons included sightseeing along the coast, a visit to salt pans by boat and a fish picnic on the way. The other trip from which delegates were excluded took in the Karst region and a study of vineyards and the curing of ham. Some delegates were encouraged by reports from these trips to find time for a walk to Piran, a town which bears many signs of Venetian influence.

The conference banquet was the occasion of a demonstration that Europe is not culturally homogeneous, in an unfortunate way. Our hosts had arranged several courses of a musical entertainment interspersed with the edible courses and many of us were not educated to expect the first of these, after we had taken our seats and started to converse with our neighbours, but before any food appeared. The first set of musicians was not given a fair hearing, unlike the later musical offerings, which did not have to compete with hunger and the desire for conversation. I offer our hosts an apology for the lack of good manners shown on that occasion.

The conference was not organised for sightseeing or gastronomic reasons and this report must turn to rheology. The opening ceremony showed how the Slovenian "old boy network" operates - the Secretary of State for Science and Technology, the Mayor of Portoroz and the President of the Slovenian Society of Rheology all proved to be friends and former colleagues of the conference chairman, Professor Igor Emri. On a sadder note, the President of the ESR, Professor Ken

Walters, paid tribute to the late Carl Klason and Jim Ferguson, two rheologists who had played significant parts in the early days of the ESR. This was followed by the presentation of the Weissenberg Award, a small sculpture, to Pino Marrucci, who then delivered a masterly lecture covering both the contribution of Karl Weissenberg to rheology and the award winner's more recent work on polymer melts and reptation theories.

After being taken through an exposition of the work of Doi and Edwards and such mysteries as the "independent alignment approximation", just when we thought it was all becoming clear, we were brought up short with the remark "This all makes sense, but it doesn't fit the data". We need not have worried; there was a way forward through taking into account "convective constraint release". Then we were told that there was new data which was closer to the predictions of the older (discredited) theory than the new theory, and left with a report of work in progress to bring the theory back into line with elliptical tubes in place of circular ones. It would be unfair to liken the progress to a Gilbert and Sullivan song; in any case, is that a suitable allusion to make in a European context? In fact we had been treated to an exposition, by example, of the scientific method in action with progress being made through the interplay of experimental observation and theoretical reasoning. This was a very hard act to follow, but the rest of the conference was by no means an anticlimax.

There were 218 papers presented orally (including the plenaries and keynotes), together with 84 posters. Thirty-three countries were represented at the meeting by 287 rheologists, there being 2 from Australia, 3 from Asia, 12 from the Americas, 19 from Eastern Europe and 251 from Western Europe. These figures are from the organisers and the detail shows some interesting choices in the classification - "Eastern" and "Western" are relative terms in Europe in these post-Iron Curtain days and only four countries were included in their "Eastern" category.

Slovenia itself, with 18 participants, classified itself as "Western" and accorded the same dubious honour to Poland, the Czech Republic and Hungary. The only countries whose participants outnumbered the hosts were Germany (50), France (46) and the United Kingdom (22). In terms of national society membership, the UK's showing looks poor (though it should be recalled that the BSR has many overseas members). One might say that with such a showing, Germany earned the privilege (and the hard work) of hosting the next European Rheology Conference.

A report like this cannot cover even a few of the papers presented. There were three plenary lectures, the first being the Weissenberg lecture. The second was by Professor Nick Tschoegl on "Time-dependence in materials". An important point which he stressed was the difference between curve-fitting and constitutive equations. The former allows predictions for a single mode of deformation (such as shear or uniaxial elongation) while the latter has something fundamental to say about the constitution of the material whose behaviour it describes in deformations of all types. The lecture was preceded by an introduction by Professor WG Knauss outlining the career of the speaker, from Brno via the Hungarian artillery and New South Wales University of Technology to rheology in Madison and California. Later in the conference, a session was dedicated to Nick Tschoegl on the occasion of his 80th birthday.

Another special session was the one on Industrial Rheology in memory of the late, and still much missed, Gianni Astarita. My spelling checker comes up with "Giant" as a preferred alternative to Gianni, and that seems appropriate. The European Federation of Chemical Engineers' working party on industrial rheology keeps up work in which he was very much involved.

The third plenary lecture was delivered, on his 50th birthday, by Professor Manfred Wagner. The title, "A constitutive analysis of uniaxial, equibiaxial and planar extension of linear and branched polyethylene melts", did not win the prize for the longest title of a paper - one or two shorter papers had titles that were twice as long. Manfred Wagner's lecture acknowledged the high quality data which continues to come from the laboratory of Joachim Meissner and his pupils and followed a route which bore some similarities to that of the Weissenberg lecture. The question of time-strain separability is central to the development of simple constitutive equations and the conclusion was that it is valid for commercial polymers under industrially relevant conditions. The lecture concluded with the citation of Confucius: "There are three ways to wisdom - through contemplation, through imitation, through experience. The last one is the most difficult one". Mathematicians may question this, but there is no doubt that the scientific method relies fundamentally on experience.

As a mathematician, I can offer no useful report on the mysteries of rheological instruments which were exhibited. There were knots of people gathered round many of the stands, as usual, so I assume that the exhibitors were well pleased. Publishers, too, were exhibited their wares, and at least one sample book proved too tempting to someone (though I hope the request for its return was honoured). Among the technological novelties which I did notice were the almost instant photographs, on display thanks to digital camera technology. As a consequence of the hard work of the ubiquitous photographer, a CD Photo Archive was available for participants to purchase, and this is an excellent souvenir of the occasion. A few of the 1345 photographs are already displayed on the ESR web site

(at <http://www.ncl.ac.uk/rheology/esr/erc5.html>).

Were there aspects of the meeting one could criticise? Of course; no-one expects perfection. The rheological community is an extremely friendly one and a friendly word may help future conference organisers. The problem of parallel session scheduling is impossible to solve to the satisfaction of everyone but, for example, it was very hard for many to choose between Kausch, Laun and Munstedt (giving three keynote lectures in competition) and similarly between Moldenaers, Pearson and Sestak. In each of these cases, there were two other parallel sessions with "ordinary" lectures. The aptly named Nautilus Room, 11 floors down from the "Upper Ground Level", was not actually below sea level, but seemed a very long way from the rest of the conference. It was the scene of some interesting discussions in spite of its isolation, but obviously moving between sessions was a little time-consuming. The poster sessions were extremely cramped (what did I just write about the friendliness of the rheological community?) and one could be trapped by enthusiastic discussions on utterly foreign topics. Other criticisms were heard, but in many cases they are contradictory; for example "the conference should not be in a holiday resort" and "being in a holiday resort improves the interaction between participants".

Pleasing aspects of the conference were the variety of keynote speakers and their topics, the many multinational teams of authors and the impressive presentations by a number of young rheologists. If a subject has lively young people like these, then its future health is assured and the older generation can happily take to their chairs. We have not yet adopted the device of offering prizes for presentations at these events, and maybe a competitive element is undesirable, so I shall not single out particular speakers for praise. It was clear that no particular country had a monopoly of talent. The breadth of topics covered has been summarised by the organisers, by whose reckoning there were 43 papers on materials characterisation, 37 on suspensions, emulsions, dispersions and gels, 34 on rheometry, experimental methods and instrumentation and 29 on polymer melts and polymer processing. Other topics attracting between 10 and 20 papers were fluid mechanics (20), constitutive theories and equations (18), liquid crystals (14), blends (13), molecular dynamics and theories (13), numerical simulations (12), surfactants (12), food rheology (11) and industrial rheology (10).

The last day of a conference can be a depressing time for speakers, but the stamina of the audience made for a reasonable turnout, with over fifty in one of the three parallel sessions. This was the more remarkable since a full bus had left for Ljubljana airport before the sessions started. A closing remark on the smooth operation of the transport is in order here. The organising team did an excellent job in conveying participants to and from the airport, indeed they made fewer apparent mistakes than the professionals at the airport. A final message for future conference organisers is that a friendly and efficient welcome at the airport sets the mood for a conference most effectively. The organisation by our Slovenian friends deserves, and gets, the heartfelt thanks of the visiting rheologists - if you were not there, envy us!

Chris Petrie

Gearing Scientific

- * Automatic lab capillary rheometer with twin dies. Gear pump means no hot barrel to clean & refill!
- * Reliable on-line rheometers
- * Fast & simple portable viscometers for the 50cP to 100,000cP range. Bench option to 150°C. Low cost!
- * Autosampled DMTA larger static/dynamic strains. 10,000 secs/cycle to 1kHz.
- * Spares/service/ training on old ex-PL DMTAs on site. DMTAs recycled if no longer needed! Several Universities would still welcome yours!
- * Automate the paper-clip gel test for thermoset resins etc
- * Special polymers for standards or research. Widest choice!

*
1 Ashwell St,
Ashwell,
Herts., SG7 5QF,
England
Tel: +44 1462 742 007
Fax: +44 1462 742 565
gearingsci@yahoo.com

HSR'98

Heraklion, Crete

The 2nd Meeting of the Hellenic Society of Rheology, which was an International Symposium, was held between August 31 and September 2, 1998, at the Foundation for Research and Technology - Hellas (FO.R.T.H.) near Heraklion, the chief city of Crete. This was a highly successful meeting, which attracted 60 participants from all over the world, from Australia, Mexico, Canada and the USA as well as Europe. Many of the North American contingent had Greek connections but this was not a necessary condition for participation.

The opening remarks of the outgoing chairman of the Hellenic Society of Rheology (HSR), Professor Evan Mitsoulis, included the news that the HSR was now affiliated to the ICR and also the reminder that there is an association between Heraklion and Heraklitos, whose face and well-known saying (*ta panta rhei*) adorn the HSR emblem. We were welcomed by the Director of the research organisation, which hosted the meeting, FO.R.T.H., who regaled us with some interesting statistics.

The first plenary lecture was given by Louis Zapas, formerly with the National Bureau of Standards, USA, with the title "A Short History of Rheology". Since he included some discussion of Heraklitos, a somewhat obscure figure, there was a lot of ground to cover before the 1928 invention of the word "rheology" by Bingham. The account was entertaining and a satisfying mixture of historical fact and personal reminiscence - but maybe I am confusing the lecture with the conversation throughout the meeting, which was lively and enjoyable.

The second plenary lecture, "Shear-Induced Particle Diffusion and its Effect on the Rheology of Concentrated Suspensions" was delivered by Professor Andreas Acrivos, of the City College of the City University of New York, and Director of the Levich Institute for Physico-chemical Hydrodynamics. He discussed viscous resuspension of particles, an experimental observation, which appears to run counter to the expectation of reversibility in creeping flow.

The key-note lectures were given by Professors Manfred Wagner, University of Stuttgart, Germany; Bill Schowalter, University of Illinois at Urbana-Champaign, USA; Gerry Fuller, Stanford University, USA; Patrick Navard, Ecole des Mines de Paris, Sophia-Antipolis, France; Roger Tanner, University of Sydney, Australia; Roland Keunings, Universite Catholique de Louvain, Belgium. There were, in addition, 30 papers in sessions on Polymer Melts and Processing, Suspensions, Structure and Viscoelasticity, and Numerical Simulation. The programme was relaxed, with time for discussion in and outside the formal sessions. There was a good mix of theorists, experimenters, engineers and physicists which made for some interesting discussions and a very pleasant meeting.

The participants had the opportunity to visit the ancient ruins of Knossos, centre of the Minoan Civilisation, near Heraklion. There was also a memorable Conference Dinner in a taverna along the coast from our hotel, where we ate in the open air, enjoying the south Mediterranean climate and traditional Cretan cooking. With careful attention to costs (because week long stays are encouraged by airlines) it was possible for some of us to combine the three day conference with some serious sightseeing, and Crete can be thoroughly recommended as a place in which to combine rheology and a full spectrum of relaxation activities.

Our hosts are to be congratulated on their efficient and unobtrusive organisation. They had the delightful idea of presenting the plenary and keynote speakers with copies of the Disc of Phaistos, made in their laboratories, with the name of the recipient laser etched upon it. The rest of us were well looked after too and we came away with a clear impression of a most hospitable island. The "reward" for Dimitris Vlassopoulos was that he was elected as the second President of the HSR, and we hope that he will have the same team to organise a rheological visit to another Greek island (Corfu is in mind for 2001)

Chris Petrie

Partners In Rheology

Ilkley, December 1998

Over ninety delegates journeyed from parts of Britain, Europe, indeed the world to attend a three day BSR Conference which was masterminded by Professor Tom McLeish and ably supported by his enthusiastic Leeds University team. The venue was the Craiglands Hotel, a Victorian structure on the edge of the famous Ilkley Moor and a perfect setting for a period piece Agatha Christie or alternatively a rheology conference.

Paul Callaghan from Massey University, New Zealand started proceedings with a beautifully crafted talk connecting NMR to rheological events. This talk exemplified Tom's desire in the title of the conference to "connect" rheology to other scientific and technological themes. There is more to life than just rheology!

The presence of Professor Mike Cates and Tom McLeish ensured that there was an excellent group of European rheologists and physicists present. Professor Decruppe from Metz spoke about viscoelastic properties of micellar solutions and Patrick Navard from Nice showed how light scattering techniques can usefully be applied to flow induced crystallisation studies. This was subsequently followed up by Dr Choon Chai from B P Laverre who demonstrated the power of rheo-optics over rheology!

Our BSR President Richard Buscall linked zero shear viscosity behaviour with solution and suspension microstructure. A truly challenging objective which sounded most convincing. Mike Cates choose to talk about the "jamming" of concentrated colloidal particles invoking a mechanism inspired by numerical simulations from Dr John Melrose. Professor Joachim Meissner talked with his usual authority and flair on his experimental journey through life measuring extensional viscosities and this was followed by Professor Chris Petrie addressing "Why bother with extensional flow!" I am glad to report he came to the conclusion that it was in fact a good idea to bother about it, as it did matter in a number of technological situations!

There were of course many other interesting papers and posters including nice vortex motion experimental observations presented by Professor Phil Coates from work done at Bradford University. Ali Franck was given the honour of giving the final presentation and he demonstrated the new Rheometrics software that will enable us to move from G' , G'' measurements to molecular mass distributions.

The venue was perfect. The food excellent and the spirit of the meeting good. There were lots of new (and young) faces about and the Leeds team are to be congratulated on putting the BSR back on track in organising high quality and friendly meetings. Well done!

Malcolm Mackley

NEWSLETTER OF THE EUROPEAN SOCIETY OF RHEOLOGY

**ANNOUNCEMENTS OF
THE EUROPEAN SOCIETY OF RHEOLOGY (ESR)**

ESR AND THE WORLD-WIDE WEB

Prof. Chris Petrie has volunteered to create WWW pages for the ESR, and he has been named webmaster of the ESR. I personally find these pages already very helpful in retrieving information concerning rheology in Europe, and I would like to thank Chris very much for his service to the ESR.

After an introductory period, the **official ESR Webpage** is now at

<http://www.ncl.ac.uk/rheology/esr/>

Chris has also set up an **e-mail mailing list** which you are invited to join. This e-mail list is intended to provide rapid dissemination of rheological information for Europe and beyond.

To join the list send the message

```
join eurorheo <Firstname> <Lastname>  
stop
```

to the e-mail address

mailbase@mailbase.ac.uk

with <Firstname> <Lastname> replaced by your first and last names. You will be asked by e-mail to confirm that you want to join the list, and then asked to supply more information for an ESR database which we hope will be useful to rheologists worldwide, to be set up and maintained by Patrick Navard at CEMEF (Sophia-Antipolis, France).

If you want to send a message to all members of the list, send your message also to the above address. Note that the list is moderated to avoid junk mail.

Please do make use of the webpage and the e-mail list to the benefit of European rheology!

Manfred Wagner

NEWSLETTER OF THE EUROPEAN SOCIETY OF RHEOLOGY

5th European Rheology Conference

Portoroz, Slovenia, 1998

Opening Address by Professor Ken Walters FRS, President ESR

Mr Secretary, Mr Mayor, fellow rheologists, I am honoured to be given the task of opening this conference. I do so in my capacity as President of the European Society of Rheology. I remind delegates that, although this is the 5th European Conference, it is the first to be officially sponsored by the European Society of Rheology. Indeed, the ESR has only been in existence for two years, although discussions about possible European collaboration go back much further than that.

The European Society of Rheology is a simple expression of a more general idea of European co-operation. As with more exalted initiatives European co-operation is never straightforward and there was some initial resistance - from the UK of course, who else? But the Nordic Society also had initial misgivings. However, it all came together in 1996, largely due to the vision and industry of Professor Jean-Michel Piau and Professor Manfred Wagner with some help along the way from Professor Howard Barnes, Dr. Ralph Oliver and others.

The summer of 1996 saw the inauguration of the Society at the Isaac Newton Institute in Cambridge and the first meeting of delegates took place in Leuven, Belgium, on March 4, 1997. The committee meeting was well attended, by many leading rheologists on the international stage.

Sadly two of those who attended that meeting are no longer with us. Professor Carl Klason, who represented the Nordic Society, died on the 27th of July 1997 after a short illness, and Professor Jim Ferguson, who represented the British Society of Rheology, died on July 10th of this year, also after a brief illness. They will be sorely missed. Carl was secretary of the 1976 International Congress in Gothenburg and Jim organised the 1990 European Congress in Edinburgh. The fact that men of such stature supported the European ideal is immensely encouraging for the future of rheology on this continent. May I ask you to stand for a moment in silence and respect.

So the ESR is alive and well, but what difference does the information of the ESR make? What difference can it make? Well, in the first place, we now have a formal procedure for placing future European Congresses. Indeed, the ESR committee will be meeting tomorrow to decide on the location of the next European Conference, scheduled for the year 2002.

NEWSLETTER OF THE EUROPEAN SOCIETY OF RHEOLOGY



The Secretary of the European Society of Rheology (ESR), Prof. Manfred H. Wagner, unveils the Logo of the ESR at the Eurorheo Conference 97/1 "2nd International Conference on the Dynamics of Polymeric Liquids", which was held in Capri (May 7th-10th, 1997). The emblem has now become the official Logo of the ESR.

The first Weissenberg Award is given to Professor Giuseppe (Pino) Marrucci



NEWSLETTER OF THE EUROPEAN SOCIETY OF RHEOLOGY
THE 1998 WEISSENBERG AWARD

*Introduction of the Weissenberg Awardee,
Professor Guiseppe Marrucci,
by Professor Ken Walters FRS, President ESR*

As the European Society of Rheology, we felt we needed a medal, an award, to recognise rheological excellence in Europe, something to match the Bingham medal awarded annually by the American Society of Rheology. After much heart searching, we alighted on the Weissenberg award, our reasoning being that Karl Weissenberg has been a distinguished rheologist with impressive European credentials, having been associated, at one time or another, with Austria, Germany, the United Kingdom and the Netherlands.

The Weissenberg Award is now in place. It will be awarded every two years. We are here today to recognise and honour the first recipient.

The first Weissenberg Award is given to Professor Giuseppe (Pino) Marrucci. Pino was born in 1937. His academic career has been very much associated with the University of Naples. It was there that he received a doctorate in Chemical Engineering in 1961. There followed a period as Assistant to the Chair of Industrial Chemistry, before he became Associate professor of Chemical Engineering in 1961. He later moved to the University of Palermo in Sicily to take up a Chair of Principles of Chemical Engineering. Italian bureaucracy being what it is, the move to Palermo was not smooth and the 1970-71 academic year saw Pino virtually holding down two faculty positions, one in Naples and one at Palermo, something that required serious commuting!

Pino remained at Palermo until 1976. He then returned to the University of Naples to the Chairs of non-Newtonian Fluid Mechanics and Thermodynamics. He has remained at Naples ever since.

Pino's early association with the late Gianni Astarita was influential and helped to establish the University of Naples as a centre of excellence in rheology, something it has maintained in subsequent years. Those early years saw Pino's research concentrated on *phenomenological* approaches to non-Newtonian flow. During his tenure at Palermo, a new research interest was fostered involving the *molecular* modelling of the rheology of polymeric liquids, something that has become a dominant feature in Pino's research in later years. His present activity is concentrated on the molecular modelling of the rheology and rheo-optics of polymers, both regular and liquid crystalline.

Here we have an Award winner at the very top of his profession, universally respected and admired, a man of warmth, charm and culture. As we shall see, he is a lucid lecturer and expert communicator.

I give you Professor Pino Marrucci, the first recipient of the ESR Weissenberg Award.

NEWSLETTER OF THE EUROPEAN SOCIETY OF RHEOLOGY
NOMINATIONS FOR THE WEISSENBERG AWARD IN 2000



The Committee of the ESR has decided that the Weissenberg Award will be bestowed every two years, and will be presented at a major rheology conference in Europe (2000: Cambridge; 2002: Erlangen). The officers of the ESR will act as the Weissenberg Award Committee. Submissions of suggestions from Rheology Groups and individuals to the Secretary of the ESR are encouraged immediately, but not later than March 1st, 1999. The following guidelines apply:

The Weissenberg Award will be bestowed biannually, delivered at a conference location covered by the ESR. The award will be given for outstanding, long-term achievements. Eligible are rheologists whose centre of scientific activities lies in Europe. Nominations shall include:

A brief scientific biography;

A review of the nominee's accomplishments advancing the science of rheology upon which the nomination is based;

A curriculum vitae with publication list;

Supporting letters from other rheologists addressing the nominee's achievements.

**ANNOUNCEMENT: 6TH EUROPEAN
RHEOLOGY CONFERENCE 2002**

The 6th European Rheology Conference will be organised by Helmut Münstedt and the German Society of Rheology (DRG), and will be held at Erlangen, Bavaria (Germany), in early September 2002.

NEWSLETTER OF THE EUROPEAN SOCIETY OF RHEOLOGY

ANNOUNCEMENTS OF THE LOCAL EUROPEAN SOCIETIES

VINOGRADOV SOCIETY OF RHEOLOGY

The 19th Symposium of the Vinogradov Society of Rheology was held on June 22-26, 1998, in Klaipeda (Lithuania). More 50 rheologists from Russia, Lithuania, Ukraine, Belorussia, Germany and Poland have participated in this Meeting.

The most interesting discussion was initiated by the section of biomedical rheology, which was organised in September 1997. The main panel discussion was devoted to rheology of blood. Prof. Z. Shulman reported about activities of his group in the field of hydrodynamic modelling of blood stream in live organisms. Dr. S. Novikova has announced a discovery of new methods of artificial vessels coating by compositions containing proteins, biopolymers and drugs with very high tromboresistent and antiseptic functions. Such vessels have been tested on animals with highly positive effects, including laminarisation of blood stream, and they are recommended for clinical trials now. A group of medical doctors (E.Roitman, N.Samsonova, V.Ionova and others) paid attention to diagnostic problems and to the correctness of blood viscosity measurements. A decision was accepted to verify all viscometers used in clinical practice and to design a new instrument for measuring the yield stress of blood.

The meeting of Society members has solved two important questions:

- 1) The 20th Symposium will be held in June of 2000 in the Moscow area and will be dedicated to the 90th anniversary of G.V. Vinogradov's birthday. We intend to invite many foreign rheologists to participate at this scientific event.
- 2) The Committee on Vinogradov's prize was elected (chair is Prof. Z. Shulman).
- 3) The group of scientists dealing with plasticity of metals and ceramics was accepted as a section of the Society.

Valery Kulichikhin

CONSTITUTION OF THE PORTUGUESE SOCIETY OF RHEOLOGY

After some years as an informal group of rheologists, the decision to constitute a formal Society was taken some time ago. An Installing Committee of the Portuguese Society of Rheology was constituted by:

President:	Professor António Correia Diogo (I.S.T., Lisboa)
Voters:	Professor José Gomes Covas (University of Minho, Braga)
	Professor Maria Pilar Gonçalves (F.E.U.P., Porto)

NEWSLETTER OF THE EUROPEAN SOCIETY OF RHEOLOGY

Eng. Manuel Frias de Almeida e Sá, Eng. (CMP / EME, Lisboa)
and the Portuguese Society of Rheology was formally constituted on December 11, 1997 (VAT number 504 030 108).

The first Electoral Meeting was in May 7, 1998. The Constitution of the Portuguese Society of Rheology was approved there.

According to the Constitution of the Portuguese Society of Rheology, any individual or entity which has applied for membership before May 7, 1998 was considered as founder member of the Society. The list of founder members includes 68 individuals and collective entities. The Council Boards were also elected on May 7, 1998. Their elected members were:

Board

President:	Prof. Dr. Antonio José Boavida Correia Diogo
Vice-President:	Prof. Dr. José António Colaço Gomes Covas
Secretary:	Prof. Dr. Maria do Pilar Figueroa Gonçalves

General Meeting

President:	Eng ^o Manuel Frias de Almeida e Sá
1st Secretary:	Prof. Dr. Isabel Maria Nunes de Sousa
2nd Secretary:	Dr. João Manuel Luís Lopes Maia

Auditing Board

President:	Dias de Sousa Ltd.
1st Officer:	Prof. Dr. Olga Machado de Sousa Carneiro
2nd Officer:	Prof. Dr. Fernando Tavares de Pinho

The General Meeting of May 7, 1998, approved (by unanimity) the application of the Portuguese Society of Rheology for membership of the International Committee of Rheology and of the European Society of Rheology (ESR).

António C. Diogo

GROUPE FRANCAIS DE RHEOLOGIE (GFR)

The GFR has edited a new directory of the laboratories and industrial companies involved in research and development activities in rheology, in France. The directory has been delivered to the GFR members.

The second "JOURNEES des JEUNES RHEOLOGUES" were organised in May, 26 - 27, 1998, in Yonnax. The "Journées des Jeunes Rheologues" (JJR) (Young Rheologists' Days) were created by the GFR, about 3 years ago. JJR is a rheology workshop only open to graduate students, i.e. those who expect to defend their Ph.D. during the current or the following year, or who have obtained their doctorate in the present or the previous year. So, they can meet each other, present their results (in French !), have discussions together and start collaborations very freely, without the interference of experienced scientists or any other in attendance. Indeed, only 2 or 3 "senior scientists" are invited to

NEWSLETTER OF THE EUROPEAN SOCIETY OF RHEOLOGY

participate to the JJR. Their role is to lead the discussions and to present keynote lectures. All the "junior" participants present a paper.

The first JJR were organised in 1996 at Autrans (near Grenoble) in the beautiful French Vercors by the Laboratoire de Rheologie (Profs P. Attane, N. El Kissi and J.M Piau) and was very successful. Because of the attendance conditions, the number of possible participants being limited, the JJR are held every 2 years.

The second JJR were organised by the Laboratoire de Rheologie et Thermodynamique des Matériaux Macromoléculaires (Prof. C. Wolff) of the CNAM (Paris) and held and hosted by the Ecole Supérieure de Plasturgie (ESP) (Dr. R. Favier), at Oyonnax in May 1998. Oyonnax is a small city within the beautiful French Jura mountains, but is also a major location of the plastics industry. 17 young rheologists attended the 2 days workshop. Dr. Jacques Chappuis (senior scientist at Lafarge), Prof. Jacques Guillet (Univ. Saint-Etienne) and Dr. Jacques Lefebvre (research director, INRA, Nantes) successfully accepted the heavy responsibility to guide and to control (to some respect) the "juniors". They shared also their experience in research on various materials, cement and concrete, plastics and food, and they supervised the wine and food tasting and the extracurricular activities of the workshop at the hotel-restaurant "Melody". The workshop concluded with a short visit organised by Dr. Favier of the laboratories of ESP and of the pilot and production plant of the Pole Européen de Plasturgie. The next JJR will be held in 2000 in the south of France, and it is planned to open the workshop to French speaking juniors from the European Union.

The GFR is preparing now its **33rd Annual Meeting** to be held in **Biarritz**, from **12 to 14 October 1998**. The meeting is organised in collaboration with the Spanish group of rheology (GERRSFQ). Information can be found at:

<http://www.univ-pau.fr/RHEOLOGIE>.

The topic of the conference is Rheology of Multi-Phase Systems: Role of Interfaces and Interphases.

Madeleine Djabourov

CZECH GROUP OF RHEOLOGY

The 18th Discussion Conference PMM "**Mechanical Behaviour of Polymeric Materials**" was held in the Institute of Macromolecular Chemistry, Academy of Sciences of the Czech Republic, Prague, 20 - 23 July, 1998 under the auspices of the International Union of Pure and Applied Chemistry. The Conference was attended by 127 participants from 24 countries (88 participants from abroad). 10 main lectures, 19 special lectures and 74 poster communications reported on various aspects of the interrelations between hierarchical structure and macroscopic mechanical behaviour of polymeric materials. Two panel discussions were devoted to: (1) "Mechanical behaviour of high-performance polymers" and (2) "Strength and toughness of oriented polymer systems, composites and blends". Dr. Miroslav Raab served as the chairman of the scientific programme committee.

NEWSLETTER OF THE EUROPEAN SOCIETY OF RHEOLOGY

The 19th Discussion Conference PMM "**Rheology of polymer systems**" will be held in the Institute of Macromolecular Chemistry, Academy of Sciences of the Czech Republic, Prague, 19 - 22 July, 1999 under the auspices of the International Union of Pure and Applied Chemistry (IUPAC). The Conference will be focused on the description of structure, formation and development as well as on problems of rheometry and processing of molten multiphase polymer systems. Dr. Ivan Forteln will serve as the Conference chairman. Detailed and topical information is available at

<http://www.imc.cas.cz>

(see "scientific meetings").

Miroslav Raab and Jiri Sestak

ITALIAN SOCIETY OF RHEOLOGY

On the occasion of the past Joint Conference of Italian, Austrian and Slovenian Rheologists (Trieste, May 1998), the Italian rheologists decided to merge the two societies (the Italian Group of Rheology and Rheotech). The name of the combined society is "Italian Society of Rheology", whose officers and by-laws are the same as of the previous Italian Group of Rheology.

The Joint Conference met a good success, and will be followed by a Joint meeting with the Spanish Group of Rheology (to be held in Italy in September 1999).

Romano Lapasin

SWISS GROUP OF RHEOLOGY (Fachgruppe Rheologie der PGS)

The Swiss Group of Rheology has currently 72 members. A Technical Meeting was held in Zurich on August 31, 1998. Prof. Erich Windhab gave a lecture entitled: "Stroemungssprozesse zur Erzeugung funktioneller Mikrostruktur".

Afterwards a general members' meeting took place, at which a new Executive Committee was elected. The new Executive Committee also held its first meeting.

The new officers elected are:

Prof. Dr. Hans Christian Öttinger (Speaker/President)
ETH Zürich, Polymer Physics,
ETH-Zentrum, ML J19
CH-8092 Zürich, SWITZERLAND
Tel: 41 1 632 4633
Fax: 41 1 632 1076
e-mail: hco@ifp.mat.ethz.ch

NEWSLETTER OF THE EUROPEAN SOCIETY OF RHEOLOGY

Dr. Dimiter Hadjistanov
Ciba Speciality Chemicals Schweizerhalle Inc.
WSH-2093.215
CH-4133 Pratteln 1, SWITZERLAND
Tel: 41 61 468 2294
Fax: 41 61 468 2658

Dr. Heribert J. Watzke
Nestle AG, Centre de Recherche Nestlé
Vers-chez-les-Blanc
1000 Lausanne 26
Tel: 41 21 785 8026
Fax: 41 21 785 8554
e-mail: heribert.watzke@rdls.nestle.com

Dr. Andre Luciani
EPF Lausanne,
Lab. de Technologie des Composites et Polymères
CH-1015 Lausanne, SWITZERLAND
Tel: 41 21 693 5813
Fax: 41 21 693 5880
e-mail: andre.luciani@epfl.ch
Prof. Dr. Erich Windhab
ETH Zürich, Lebensmittelwissenschaft,
ETH-Zentrum, LFO E12.1
CH-8092 Zürich, SWITZERLAND
Tel: 41 1 632 5348
Fax: 41 1 632 1155
e-mail: windhab@ilw.agrl.ethz.ch

Future Meetings of the Swiss Group of Rheology: The Executive Committee agreed on organizing the following meetings:

- (1) Spring Meeting April/May 1999: "Interfaces and Rheology"
The keynote speakers will be Masao Doi and Leszek A. Utracki.
- (2) Fall Meeting 1999: General topic meeting.

Updated Information about Rheology in Switzerland is now available on the Internet. You can find this on the web by using the address:

http://www.ar.ethz.ch/AR_FR_FIT/

This gives you all the latest on:

- (i) Swiss Group of Rheology of the Polymer Group of Switzerland,
- (ii) Swiss F.I.T. Rheocenter,
- (iii) Applied Rheology International Journal (revived by members of the ETH Zürich).

Hans Christian Öttinger

RHEOLOGICAL WEB SITES

European Society of Rheology (ESR)	<u>www.ncl.ac.uk/rheology/esr</u>
British Society of Rheology (BSR)	<u>www.ncl.ac.uk/rheology/bsr</u>
Nordic Rheology Society (NRS)	<u>www.sik.se/nrs</u>
Dutch Rheological Society (NRV)	<u>www.mate.tue.nl/nrv/</u>
German Rheological Society (DRG)	<u>www.bam.de/partner/drq/</u>
Hellenic Society of Rheology (HRS)	<u>www.genie.uottawa.ca/profs/evmpc/HSRwebpage.htm</u> <u>!</u>
American Society of Rheology (SoR)	<u>www.uchme.maine.edu/SoR</u>

CONFERENCE ANNOUNCEMENTS

XI International Workshop on Numerical Methods in Viscoelastic Flows

to be held at Vaals, The Netherlands, August 25-28, 1999

We have planned a 4 day meeting, beginning at noon on Wednesday, August 25th, with a lunch, and ending at noon on Saturday 28th, with a lunch. The format will be 6 half day lectures, in the usual workshop format.

The meeting location is a historic castle in the south of the Netherlands: Hotel Vaalsbroek. Registration cost includes housing, all breakfasts, lunches and dinners (including conference dinner) and a visit to downtown Maastricht on Friday evening. Hotel Vaalsbroek is located in a scenic region of the Netherlands close to Maastricht. Maastricht can be conveniently reached by train from Schiphol airport, Amsterdam.

Registration fees, due before April 1, 1999:

Single Room	Dfl.	1200
Double Room	Dfl.	1100
Accompanying Person	Dfl.	750

The number of participants is limited, therefore it is critical to respond early. Registration and submission of abstracts will be via our web-site.

Further information about the workshop can be found on the web page:

<http://www.mate.tue.nl>

or direct <http://www.mate.tue.nl/workshop>

We are confident that the meeting will be of equal quality as prior meetings in this series and would like to stimulate as much as possible active interchange of results and ideas, and ample time will be reserved to achieve this.

Over the past few years we have witnessed a strong development of numerical methods for viscoelastic flow simulations, and emphasis is shifting towards confrontation with experimental results, enhanced constitutive modelling, stochastic simulations, molecular modelling and multi-dimensional, time-dependent simulations. A continued evolution along these lines is expected and encouraged for the 1999 International Workshop on Numerical Methods in Viscoelastic Flows.

First Southern Europe Conference on Rheology

Hotel Cinquestelle in Sangineto (CS) Italy, September 7 to 11, 1999

This Conference is essentially devoted to bring together academic and industrial researchers from different fields of recognized relevance with the expectation that they will learn from one another and discover ways to work together synergistically.

The Conference goal is to favour the scientific exchange and to encourage the cooperation among Italian, Greek, Portuguese, Slovenian and Spanish rheologists, and to consolidate the international experience and the role of the National Groups, in accordance with the spirit of the European Society of Rheology. The technical program will include oral and poster presentations on various topics of fundamental and practical interest and an equipment exhibition will be held. English will be the official language and no translation will be provided.

The Scientific Committee will decide for allocation of the paper in the oral or poster sessions taking into account the preference of the author(s) and the technical organization of the Conference as well.

The registration fees are:

Delegates

(members of the National Societies) 400.000 Italian lire

(non members) 500.000 Italian lire

(registration covers attendance at the technical sessions as well as reception cocktail, coffee breaks and lunches, gala dinner, and a copy of the Proceedings)

Students 200.000 Italian lire

(registration covers attendance at the technical sessions as well as reception cocktail, coffee breaks and lunches)

The hotel, right on the sea-front, is surrounded by a park and offers about 150 bedrooms at very interesting prices. Hotel facilities: swimming pool, roof garden, tennis courts, five-a-side court, evergreen garden, children's corner.

I hope that you will plan to attend the Conference and my colleagues of the Organizing Committee and I look forward to welcoming you in Sangineto in 1999.

Bruno de Cindio, Chairman.

For further information, please contact us by e-mail:

rheol.conference@unical.it;

bruno.decindio@unical.it

Organizing and Scientific Committee

Antonio Correia Diogo, PorSocRheol; Paolo D'Antona, EniTecnologie; Bruno de Cindio, ItSocRheol; Crispulo Gallegos, SpSocRheol; Romano Lapasin, ItSocRheol; Claudio Maria Pollini, Pavan; Dimitris Vlassopoulos, HelSocRheol; Miha Zumer, SloSocRheol

Local Organizing Committee

Bruno de Cindio, Chairman; Vincenza Calabro'; Stefano Curcio; Domenico Gabriele

Southern Europe Conference on Rheology
Dept. of Chemical Engineering and Materials
University of Calabria

2nd International Symposium on Food Rheology and Structure *ETH Zurich, Switzerland, March 12-16, 2000*

Co-sponsored by

Institute of Food Science ETH Zurich; Swiss Committee to the International Union of Food Science and Technology IUFoST; Swiss Polymer Group PGS / Rheology Group; Swiss F.I.T. Rheocenter; and Applied Rheology

We are pleased to announce the 2nd International Symposium on Food Rheology and Structure which will be held at the Federal Institute of Technology (ETH) in Zurich, March 12-16, 2000. Three plenary lectures and ten keynote lectures will be presented by well known scientists from the fields of structure and food rheology. In addition, contributed papers will be presented, and poster sessions as well as an exhibition on equipment and additives will be held. All papers will be published in the conference proceedings, which will be available at the opening of the Symposium. We hope that scientists and interested experts from industry from all over the world will endeavour to meet in Zurich, and make this 2nd International Symposium on Food Rheology and Structure a success from a scientific and industrial point of view.

Chairman:

E. J. Windhab, Zurich

Members:

F. E. Escher, Zurich; H. C. Ottinger, Zurich; J. Meissner, Zurich; B. Conde-Petit, Zurich; P. Fischer, Zurich

1. Call for Papers

Authors are asked to submit - submission via e-mail is preferred - an abstract (not exceeding 300 words) to the secretary of the congress, to arrive no later than April 30, 1999. Authors will be notified by July 31, 1999 of acceptance. The camera ready manuscript is required by October 31, 1999

2. Symposium Topics

Rheology of Food Systems (Theory and Experiment): a. Biopolymer solutions, colloidal dispersions and gels; b. Multiphase food systems; c. Semi-solid foods; d. Food rheology; e. Rheological modelling

Food Structure: a. Macromolecular structures, networks; b. Interfaces; c. Disperse structures; d. Techniques for structure analysis

Relationships between Processing - Structure - Rheology and Food Quality: a. Structure - rheological relationships; b. Structure, rheology, and sensory evaluation; c. Influence of processing on structure and rheology; d. Structure and rheology related food quality; e. Numerical methods

3. Invited Speakers

3a. Plenary Lectures:

A. M. Hermansson (Goteborg, S); M. Kulicke (Hamburg, D);
E. J. Windhab (Zurich, CH)

3b. Opening Lecture:

E. Dickinson (Cambridge, UK)

3c. Keynote Speakers:

W. Buchheim (Kiel, D); L. Choplin (Nancy, F); F. Escher (Zurich, CH);
C. Gallegos (Sevilla, E); J. Hardy (Nancy, F); J. Kokkini (New Brunswick, USA);
P. Lillford (Bedford, UK); J. Meissner (Zurich, CH); H. C. Ottinger (Zurich, CH);
P. Schurtenberger (Zurich, CH); P. Tanguy (Montreal, CDN);
T. van Vliet (Wageningen, NL); H. Watzke (Lausanne, CH)

4. Registration

We kindly ask you to complete the registration form at: <http://www.isfrs.ethz.ch/>
If the registration via WWW is not possible please email or fax the following form.

5. Registration fees

Delegates

before December 1, 1999	CHF 700,-
after December 1, 1999	CHF 750,-

Students/Graduates:

before December 1, 1999	CHF 200,-
after December 1, 1999	CHF 250,-

Full registration covers attendance at the technical session as well as the Conference Proceedings, banquet and coffee breaks. Students registration covers attendance at the technical sessions, Conference Proceedings and coffee breaks.

Accompanying persons: CHF 200,-

Covers a banquet, Zurich City Tour, visit to a museum in Zurich.

Cancellations

In the case of cancellation, an amount of CHF 150,- (for students CHF 100,-) will be retained before reimbursement. There will be no refunds after February 1, 2000.

See FAXBACK form overleaf

FRC 2000 - Composites for the Millennium
Eighth International Conference on Fibre Reinforced Composites
13th - 15th September 2000 - University of Newcastle upon Tyne

Details of the First Announcement and Call for Papers for FRC 2000 are now available on the Centre for Composite Materials Engineering website:

<http://www.ncl.ac.uk/~nccme>

Please contact me if you would like to receive further information.

Louise Blackburn
Conference Organiser
Conference Design Consultants
Tel: +44-191-284-7590

FAX

FAX +41 1 632 11 55

Institute of Food Science,
Laboratory of Food Engineering
e-mail: secretary@isfrs.ethz.ch

ISFRS 2000,
LFO E19,
ETH Zurich,
8092 Zurich,
Switzerland

I plan to attend the 2nd International Symposium on Food Rheology and Structure, March 12-16, 2000
in Zurich:

Name:

Organisation:

Title:

Address:

Tel:

City:

Fax:

ZIP Code:

Email:

Country:

I wish to present a Paper
 Poster

in the Symposium on the topic (see under symposium topics):

with the title

**The EUROPEAN SOCIETY OF RHEOLOGY
and the BELGIAN GROUP OF RHEOLOGY**

announce the :

6th European School Of Rheology
Hosted by the KU Leuven, Belgium
September 6th-10th, 1999

Following the successful previous two editions in Leuven the course format will be a short course on

**"RHEOLOGICAL MEASUREMENTS:
APPLICATIONS TO POLYMERS, SUSPENSIONS AND PROCESSING"**

Location

The course is hosted by the Lab of Applied Rheology and Polymer Processing of the Department of Chemical Engineering of the K.U. Leuven. The lectures will be held at the Arenberg Castle of the Campus Toegepaste Wetenschappen, Kardinaal Mercierlaan 46, B-3001 Leuven. The four two hour lab sessions will take place in the Department of Chemical Engineering.

Aim

The aim of the course is to give practicing engineers and chemists, as well as young PhD students an understanding of :

- the fundamentals of rheology
- principles of measurements
- practical experience
- fundamentals of molecular modelling
- introduction of computational rheology
- applications to problem solving

Faculty

Prof. Gerald G. Fuller, Stanford University (USA)
Prof. R. Keunings, Universitat Catholique de Louvain (B)
Prof. C.W. Macosko, University of Minnesota (USA)
Prof. G. Marrucci, University of Naples (I)
Prof. J. Mewis, K.U. Leuven (B)
Prof. P. Moldenaers, K.U. Leuven (B)
Dr. J. Vermant, K.U. Leuven (B)
Prof. M. Wagner, Stuttgart University (G)

For more information on the course or to request a detailed program brochure,
see the web-page at:

<http://www.cit.kuleuven.ac.be/cit/ltrk/course.html>

Or contact Jan Vermant - E-Mail: jan.vermant@cit.kuleuven.ac.be

**2nd International Symposium on: Rheology
- Chain Structure Relationships in Polymers,
April 22nd * 23rd, 1999, Amsterdam, The Netherlands**

The first symposium on *Rheology * Chain Structure Relationships in Polymers* was organised in May 1996 at the Newton Institute in Cambridge, UK. In 1999 a second symposium will be held, this time in Amsterdam, the Netherlands. The symposium is organised by the Dutch members of the Working party on Industrial Rheology of the European Federation of Chemical Engineering and supported by the Dutch Society of Rheology and the European Society of Rheology. DSM is again initiator and sponsor of the symposium.

Programme of the meeting:

Thursday April 22nd, afternoon session (14.00-18.00 hrs)

- T.C.B. McLeish, University of Leeds, UK
"From Molecular Structure to Complex Flow of Long-Chain Branched Polymer Melts"
- H.-M. Laun, BASF AG, Germany
"Unaddressed Problems in Industrial Rheology"
- P. Wood-Adams and J. M Dealy, McGill University, Canada
"The Effect of Molecular Structure on the Rheology of Metallocene Polyethylenes"
- C.K. Chai and R. Giraud, BP Research Centre, France
"Melt Strength Behaviours of Conventional and Metallocene Polyethylenes"
- M. Wilhelm, Max-Planck Institute, Mainz, Germany
"Time-dependent non-linear Response of Polymers analysed via the higher Harmonic Generation"

Friday April 23rd, morning session (9.00-13.00 hrs)

- C. Friedrich, University Freiburg, Germany
"The Influence of Tacticity on the Rheological Properties of Polymers"
- M. Gahleitner, Borealis, Austria
"Shear Sensitivity of Linear and Long-Chain Branched Polyolefins"
- R.H. Colby, Pennstate University, USA
"Rheology of Randomly Branched Polymers"
- P. Steeman, DSM Research, The Netherlands
"A Numerical Study of various Rheological Polydispersity Measures"

The symposium will take place in the Amsterdam Marriott Hotel in Amsterdam, the Netherlands. Amsterdam Airport *Schiphol* is at a very convenient distance from the Hotel. To facilitate easy travelling, the symposium will start on Thursday April 22nd, 1999 at 14.00 hrs, and end on Friday April 23rd early in the afternoon. The symposium fee is 600 Dutch guilders, including Thursday night dinner and lunch on Friday.

To ensure a place, please send name and address to the chairman of the symposium:

Dr. P.J. Hamersma
University of Amsterdam
Department of Chemical Engineering
Nieuwe Achtergracht 166
1018 WV Amsterdam,
The Netherlands
Phone: +31-20-5255265

Rheologie des Materiaux du Vivant
Rheology in life sciences and technologies
34th Annual General Meeting of the French Group of Rheology GFR
Paris October 18-20, 1999

Subjects covered will include :

- Biorheology (fluids and soft tissues)
- Rheology of biopolymers
- Rheology of biocompatible materials
- Rheology of powders
- Rheology of controlled release systems

The scope of the meeting is to bring together academic and industrial scientists especially those speaking french, papers in english will be also accepted.

Scientific Committee :

Chairman : P.G. de Gennes

M. Baquet, L. Dubertret, G. Couarraze, B. Launay, J-L. Morancais,
C. Oddou, D. Quemada, J-F Stoltz.

The meeting will be held at the
CONSERVATOIRE NATIONAL DES ARTS ET METIERS
292 rue Saint Martin
PARIS

Registration fees :

The registration fee will cover attendance at the technical sessions,
the Conference Proceedings, a banquet, the lunches and coffe breaks.

Members of the GFR and the ESR affiliated societies : 1300FF

Students : 900FF

Others: 1600FF

Dead line for submission of abstracts : April 7th 1999

Dead line for inscription: September 7th 1999

All correspondance should be addressed to :

Pr. Patrice Flaud

Secretariat du 34eme Colloque du GFR

Universite Paris 7 - Denis Diderot

LBHP - case 7056

2 place Jussieu

75 251 PARIS cedex 05

FRANCE

Tel : +33 01 44 27 40 07

FAX : +33 01 44 27 43 35

Email : gfr@lbhp.jussieu.fr

More details : <http://www.lbhp.jussieu.fr>

"Rheology and Interfaces"
Meeting of the Swiss Group of Rheology
Lausanne, Switzerland May 5, 1999

Keynote speakers: Masao Doi and Leszek A. Utracki

Scope of the meeting:

The relations between macrostructure and rheology of multiphase fluids is of great importance in many different applications ranging from food processing to polymer blends compounding. The scope of the meeting is to bring together people from both academic and industrial backgrounds to discuss the scientific and technologic aspects of flow in multiphase systems.

Scientific program:

The program will consist of two plenary lectures given by prominent scientists in the field of polymer research and four additional invited presentations. The two plenary lectures will be given by Dr. Leszek A. Utracki who will present an overview on flow and mixing in polymer blends while Prof. Masao Doi will put more focus on modeling aspects of flow understanding. Four invited presentations will also be given by industrial and academic researchers on related topics. An open poster session will be proposed for people attending the meeting. All those intending to participate are encouraged to submit an abstract for this poster presentation.

Meeting Location:

The meeting will be held at the
NESTLÉ Research Center
Vers-chez-les-Blanc
Case postale 44
CH - 1000 Lausanne 26

The Conference Language is English.

Registration Fees:

PGS members	CHF. 50.-
Non Members	CHF. 110.-
Student	CHF. 30.-

All correspondence should be addressed to:

Meeting of the Swiss Group of Rheology
Dr. André Luciani
EPFL- DMX- LTC
CH- 1015 Lausanne
Switzerland
Tel: (41) 21 693 4677
Fax: (41) 21 693 5880
EMail: luciani@epfl.ch

<http://www.ar.ethz.ch/FRmeeting.html>

INDUSTRY NEWS

Technical Support for Rheometer Users (TA Instruments)

Throughout 1998 TA Instruments has continued to expand, adding several new employees to aid with customer support for our rheology products. This expansion is against current industry trends in the UK.

In January of this year Daniel Slater joined to cover for Gill Saunders' sales role in the South during her maternity leave. Gill gave birth to a baby boy in April and has recently returned to her sales role, with Daniel Slater relocating to cover the UK North territory.

Jim Joannou joined the applications laboratory in June, teaming up with Peter Hodder and Bernard Costello our existing rheology application engineers. Jim has over 26 years experience in the applications role and was previously employed by another rheometer manufacturer.

July saw Dr. Trevor Gregory signing up as a consultant for TA Instruments'. Trevor has great experience in the area of colloid rheology and will be available for consultancy to TA Instruments' customers as well as participating in the various courses and seminars that we organize.

Aideen McCarthy joined us from the Laboratory of the Government Chemist in August to provide additional resources for sales and service support in the office. As a result of this addition our switchboard will now be manned for an extra hour, opening at 8am instead of 9am.

Last but not least we welcomed Andrew Heritage to our team in September. Andrew has over 10 years experience in the rheology industry and will be providing both applications and software support to our rheology customers.

As many of you are aware, rheology is not the easiest of techniques to become involved with. Our applications laboratory is now manned by four personnel and is equipped with a freephone hotline offering free technical advice and assistance for all of our customers (0800 0180363).

For further information please call Steve Goodyer on +44 (0)1372 360363.

Steve Goodyer

BSR MEMBERSHIP NEWS

The following were elected to membership on 16 December 1998.

UNITED KINGDOM

Miss Kim Fisher
Department of Mathematics
University of Wales
Aberystwyth SY23 3BZ (kmf95@aber.ac.uk)

Dr Shaun Sellers
School of Mathematics
University of East Anglia
Norwich NR4 7TJ (sellers@uea.ac.uk)

Dr Samantha Jane Evans
Chemdal Ltd
East Street
Birkenhead L41 1FG (evanss@chemdal.co.uk)

Dr Tennyson Nguty
Aeromech Department
Newton Building
Salford University
Manchester M5 4WT (t.nguty@amme.salford.ac.uk)

Dr Peter D Olmstead
Department of Physics and Astronomy
University of Leeds
Leeds LS2 9JT (p.d.olmstead@leeds.ac.uk)

Mr Stephen Smith
Reologica Instruments
40 Weir Road
Milnrow
Rochdale OL10 3UX (ssmith98@compuserve.com)

EUROPE

Mr Terje Glomsaker
Department of Applied Mechanics, Thermodynamics and Fluid Dynamics
Norwegian University of Science and Technology
N-7034 Trondheim
Norway. (Terje.Glomsaker@mtf.ntnu.no)

OVERSEAS

Yogesh Moreshwar Joshi
Chemical Engineering Division
National Chemical Laboratory
Pune 411008
India (ymjoshi@che.ncl.res.in)

CONFERENCE DIARY

You are also advised to visit the BSR home pages where an extensive list of conferences is maintained by Chris Petrie:

<http://www.ncl.ac.uk/rheology/conferences/index.html>

1999	
20 Apr Runcorn UK	POLYMER COLLOIDS SYMPOSIUM Angela Cowell (on behalf of the Macro UK Group of the SCI and RSC) T: +44 161 721 1882 F: +44 721 5200 E: angela.cowell@hexagon.zeneca.com
22-23 Apr Amsterdam NL	2ND INTERNATIONAL SYMPOSIUM ON: RHEOLOGY - CHAIN STRUCTURE RELATIONSHIPS IN POLYMERS Dr P J Hamersma, University of Amsterdam, Dept of Chemical Engineering, Nieuwe Actergracht 166, 1018 WV Amsterdam, The Netherlands T: +31 20 525 5265 F: +31 20 525 5604 E: hamersma@chemeng.chem.uva.nl
5 May Lausanne CH	RHEOLOGY AND INTERFACES Dr André Luciani, EPFL-DMX-LTC, CH-1015 Lausanne, Switzerland T: +41 21 693 4677 F: +41 21 693 5880 E: luciani@epfl.ch Info: www.ar.ethz.ch/Frmeeting.html
17 Jun Glasgow UK	MEMORIAL TRIBUTE TO PROFESSOR JIM FERGUSON Reception and Lecture by Professor Claude Wolff assisted by Dr Nick Hudson E: n.e.hudson@strath.ac.uk
30 May-1 Jun Halifax CA	7TH ANNUAL CONFERENCE OF THE CFD SOCIETY OF CANADA Julio Militzer, Dalhousie University, Halifax E: cf99@dal.ca
31 May-4 Jun 's-Hertogenbosh NL	15TH ANNUAL MEETING OF THE POLYMER PROCESSING SOCIETY E: marleen@wfw.wtb.tue.nl
7-10 Jun St Petersburg RU	MOLECULAR MOBILITY AND ORDER IN POLYMER SYSTEMS Mrs Irina Kovalenko, Institute of Macromolecular Compounds, St Petersburg, Russia (or for North America) Mrs Mira Norell, Business Bureaus International, Mays Landing, NJ, USA E: IMC@macro.spb.su OR BBIntl@aol.com
22 Jun Manchester UK	JELLY AND CREAM Dr A McFarlane (on behalf of the Manchester Section of the SCI and RSC) T: +44 151 548 6060 F: +44 151 548 2412
23-26 Jun Prague CZ	PROBLEMS IN FLUID MECHANICS AND HYDROLOGY Conference Secretary, Institute of Hydrodynamics, Academy of Sciences of the Czech Republic, Pod Pat'ankou 5, 116 12 Prague 6, Czech Republic F: +420-2-322181
27-30 Jun Zielona Góra PL	INTERNATIONAL CONFERENCE ON ENGINEERING RHEOLOGY - ICER 99 Prof Edward Walicki, Conference Co-ordinator, ICER 99, Dept of Mathematics, Technical University of Zielona Góra, ul. Szafrana 2, PO Box 47, 65-516 Zielona Góra, Poland T: +48 68 325 48 31 x 472 f: +48 68 324 55 97 E: e.walicki@wm.pz.zgora.pl
27-30 Jun Blacksburg, VA USA	VISCOPLASTICITY AND ITS CURRENT APPLICATIONS at the 1999 ASME JOINT APPLIED MECHANICS AND MATERIALS SUMMER CONFERENCE Tomasz Lodygowski, Poznan, Poland, or the local organizers at Virginia Polytechnic Institute and State University E: lodygowski@put.poznan.pl Info: www.esm.vt.edu/mmconf/
12-14 Jul Plymouth UK	FIFTH INTERNATIONAL CONFERENCE ON FLOW PROCESSES IN COMPOSITE MATERIALS Mrs Denise Horne E: dhorne@plymouth.ac.uk
July Prague CZ	RHEOLOGY OF POLYMER SYSTEMS - PRAGUE MEETINGS ON MACROMOLECULES Info: sympo@imc.cas.cz

1999	
25-28 Aug Vaals NL	XI INTERNATIONAL WORKSHOP ON NUMERICAL METHODS IN VISCOELASTIC FLOWS Info: www.mate.tue.nl
7-11 Sep Sanginetto (CS) IT	FIRST SOUTHERN EUROPE CONFERENCE ON RHEOLOGY Southern European Conference on Rheology, Dept of Chemical Engineering and Materials, University of Calabria, I-87036 Arcavac di Rende (CS) - Italy T: +39 984 492080 F: +39 984 492058 E: rheol.conference@unical.it
17-21 Oct Madison, WI USA	71ST ANNUAL MEETING OF THE SOCIETY OF RHEOLOGY Prof A Jeffrey Giacomin, Chair, Rheology Research Center, University of Wisconsin, 309 Mechanical Engineering Building, 1513 University Avenue, Madison, WI 53706-1572 T: +1 608 262-7473 F: +1 608 265-2316 E: giacomin@engr.wisc.edu
18-20 Oct Paris FR	RHEOLOGIE DES MATERIAUX DU VIVANT (RHEOLOGY IN LIFE SCIENCES AND TECHNOLOGIES) Pr Patrice Flaud, Secretariat du 34 ^{eme} Colloque du GFR, Universite Paris 7 - Denis Diderot, LBHP - case 7056, 2place Jussieu, 75 251 Paris cedex 05, France T: +33 1 44 27 40 07 F: +33 1 44 27 43 35 E: gfr@lbhp.jussieu.fr Info: www.lbhp.jussieu.fr
2000	
12-16 Mar Zurich CH	2ND INTERNATIONAL SYMPOSIUM ON FOOD RHEOLOGY AND STRUCTURE Institute of Food Science, Laboratory of Food Engineering, LFO E19, ETH Zurich, 8092 Zurich, Switzerland F: +46 1 632 11 55 E: secretary@isfrs.ethz.ch
21-26 Aug Cambridge UK	RHEOLOGY 2000 - XIIITH INTERNATIONAL CONGRESS ON RHEOLOGY To be organised by the BSR with the assistance of the European Society of Rheology. Chairman of the Executive Committee: Prof K Walters FRS, University of Wales, Dept of Mathematics, Penglais, Aberystwyth, Dyfed, SY23 3BZ, Wales, UK T: +44 (0)1970 622750 F: +44 (0)1970 622777 Info: http://abbey4.swan.ac.uk/rheology2000/
13-15 Sep Newcastle UK	FRC 2000 - COMPOSITES FOR THE MILLENNIUM: EIGHTH INTERNATIONAL CONFERENCE ON FIBRE REINFORCED COMPOSITES Louise Blackburn, Conference Organiser, Conference Design Consultants T: +44 191 284 7590 F: +44 191 285 6993 Info: www.ncl.ac.uk/~nccme
T: Telephone; F: Facsimile; E: Email; Info: WWW URL	

COURSE DIARY

1999	
6 May Leatherhead UK	Introduction to Rheology Dr Bernard Costello, TA Instruments Ltd, Europe House, Bilton Centre, Cleeve Road, Leatherhead, Surrey, KT22 7UQ, UK T UK: 0800 0180363 T (other): +44 1372 360363 F: +44 1372 360135 E: bcostello@taeurope.co.uk
25-28 May Loch Lomond UK	Theoretical, Experimental and Industrial Aspects of Rheology Dr N E Hudson, Dept of Pure & Applied Chemistry, University of Strathclyde, 295 Cathedral St, Glasgow G1 1XL, UK T: +44 141 548 2162 F: +44 141 548 4822 E: n.e.hudson@strath.ac.uk
15 Jul Leatherhead UK	Introduction to Rheology Dr Bernard Costello, TA Instruments Ltd, Europe House, Bilton Centre, Cleeve Road, Leatherhead, Surrey, KT22 7UQ, UK T UK: 0800 0180363 T (other): +44 1372 360363 F: +44 1372 360135 E: bcostello@taeurope.co.uk
T: Telephone; F: Facsimile; E: Email; Info: WWW URL	

1999	
6-10 Sep Leuven BE	6TH EUROPEAN SCHOOL OF RHEOLOGY E: jan.vermant@cit.kuleuven.ac.be Info: www.cit.kuleuven.ac.be/cit/ltrk/course.html
16 Sep Leatherhead UK	Introduction to Rheology Dr Bernard Costello, TA Instruments Ltd, Europe House, Bilton Centre, Cleeve Road, Leatherhead, Surrey, KT22 7UQ, UK T UK: 0800 0180363 T (other): +44 1372 360363 F: +44 1372 360135 E: bcostello@taeurope.co.uk
11-15 Oct Leatherhead UK	Applied Rheology School 11 Oct Introduction to Rheology 12-13 Oct Practical Rheology 14 Oct Advanced Techniques 15 Oct Rheology of Solids Steve Goodyer, TA Instruments Ltd, Europe House, Bilton Centre, Cleeve Road, Leatherhead, Surrey, KT22 7UQ, UK T: +44 1372 360363 F: +44 1372 360135 E: sgoodyer@taeurope.co.uk
25-29 Oct Newbury UK	School of Industrial Rheology and School of Industrial Surface Chemistry 1999 25 Oct Back to Basics - Rheology (B2B) * 26-27 Oct School of Industrial Rheology (SIR 99) * 28-29 Oct School of Industrial Surface Chemistry (SISC 99) * sponsored by BOHLIN INSTRUMENTS Mrs Bernadette Franklin, Camtel Ltd, 5 Carrington House, 37 Upper King Street, Royston, Herts SG8 9AZ, UK T: +44 1763 244280 F: +44 (0)1763 244298 E: info@camtel.co.uk Info: www.camtel.co.uk
1-5 Nov Glasgow UK	Process Rheology Dr N E Hudson, Dept of Pure & Applied Chemistry, University of Strathclyde, 295 Cathedral St, Glasgow G1 1XL, UK T: +44 141 548 2162 F: +44 141 548 4822 E: n.e.hudson@strath.ac.uk
18 Nov Leatherhead UK	Introduction to Rheology Dr Bernard Costello, TA Instruments Ltd, Europe House, Bilton Centre, Cleeve Road, Leatherhead, Surrey, KT22 7UQ, UK T UK: 0800 0180363 T (other): +44 1372 360363 F: +44 1372 360135 E: bcostello@taeurope.co.uk
T: Telephone; F: Facsimile; E: Email; Info: WWW URL	

AIMS OF THE SOCIETY

The way liquids flow and solids deform affects all aspects of life.

Extraction and processing of crude oil, moulding of plastics, use of toothpaste, spreading of margarine, painting and the lubrication of joints in the human body are all examples of processes depending upon rheological behaviour. Rheology is defined as the science of the deformation and flow of matter.

If your work is concerned with rheology in any way, then you have much to gain by joining the British Society of Rheology - publications, conferences and access to fellow members who, while working in a different discipline or industry, may be facing similar problems to yours.

The Society is non-profit making and is registered as a charity.