

The 10th Conference of the Italian Society of Rheology

RAVENNA, ITALY
MAY 18–21, 2008



This 10th Italian Conference on Rheology, 18 – 21 May in Ravenna, marked a continuing success for one of the traditions of the Italian Society of Rheology (currently under the guidance of Bruno de Cindio, Università della Calabria), providing rheologists and material engineers with an opportunity to discuss about the latest research of this area. The symposium included sessions on fundamental and applied rheology, polymer melts and solutions, polymer blends and composites, emulsions, suspensions, food rheology and bio-

materials, instrumentation and numerical simulations. The aim of these conferences is to bring together the rheology community and to strengthen the cooperation among the research groups. It was felt by all participants that this framework, bringing together participants from a wide range of applications who do not normally work together was very successful.

This year's conference also marked the debut of an organizing committee of industrial affiliation, namely scientists from Polimeri

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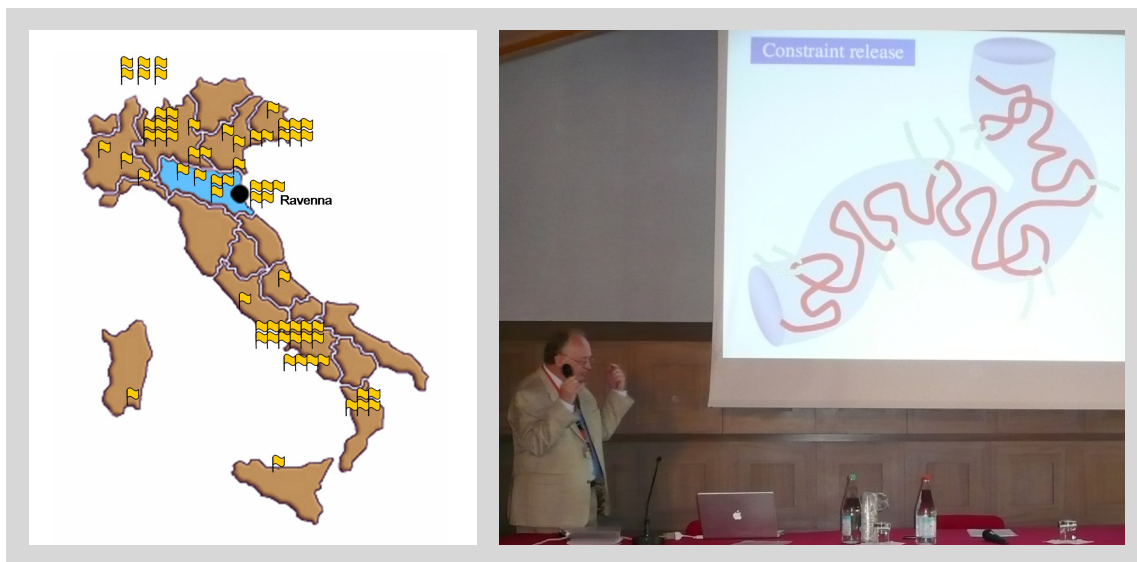


Figure 1 (left above): Main geographic distribution of the conference participants.

Figure 2 (right above): Christian Bailly during his keynote lecture.

Figure 3 (left below): Bruno de Cindio, president of the Italian Society of Rheology.

Figure 4 (right below): Giuseppe Marrucci and Bruno de Cindio opening the 2nd day of meeting.

Europa, a society of the Italian petrochemical group ENI, active in Ravenna with a production site and its Research Centre for elastomers.

Attendance to the conference was high, with foreign guests and Italian researchers from inside and outside Italy. Very stimulating discussions took place during the presentations. The meeting allowed to share ideas and discuss topics that will contribute to the advancement of applied and theoretical rheology. All the participants valued the hospitality of Ravenna with her history and excellence in food tradition. The conference location was an historical building of the Renaissance period in the city centre. Folklore suggests that it was the birthplace of the ill-fated mistress in Dante's Divine Comedy Francesca da Polenta, wife of Gianciotto Malatesta.

Ravenna, place of art and culture, is an ancient city that 1600 years ago became the capital of the western Roman empire, of the kingdom of Theodoric the Goth and of the Byzantine empire in Europe. The magnificence of this period has left Ravenna with a great heritage of historical buildings. There are no less than eight buildings declared World Heritage by UNESCO.

The art of mosaics finds here its greatest expression. It was here that Christian iconology originated, a mixture of symbolism and realism, of Roman, barbarian and Byzantine influence.

More than 60 people took part in this event. 40 oral contributions and 15 poster contributions were collected in 7 sessions (chairmen are reported):

- Polymers (Fabio Bacchelli, Polimeri Europa Ravenna, Luigi Balzano, TU Eindhoven, Elvira Somma, Università di Salerno)
- Biomaterials and Cosmetics (Domenico Gabriele, Università della Calabria)
- Colloids (Massimo Migliori, Università della Calabria)
- Rheometry (Dino Ferri, Polimeri Europa Mantova)
- Blends and Composites (Giovanni Filippone, Università di Napoli "Federico II", Massimiliano Grosso, Università di Cagliari)
- Food Rheology (Sergio Caserta, Università di Napoli "Federico II")
- Suspensions (Marco Laurati, University of Düsseldorf)



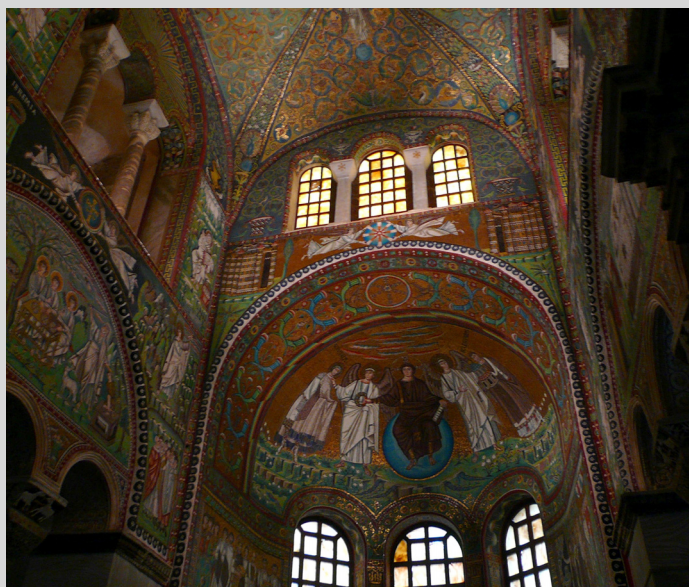


Figure 5 (left):
The mosaics in the Basilica
di San Vitale.



Figure 6:
The guided tour in Ravenna.

Presentations were given in Italian and in English. Christian Bailly (Université Catholique de Louvain, Belgium) opened the conference with a keynote lecture entitled “Probing the foundation of tube models: comparisons between model and experimental scalings for linear entangled polymers” (C. Bailly, R. Keunings, C. Y. Liu). He summarized recent findings about three issues: 1. the molecular weight dependence of the plateau modulus, 2. the molecular weight dependence of the terminal relaxation time and 3. the experimental evidence of monomer redistribution in the tube. The plenary lecture, given on the 2nd day by Giuseppe Marrucci (Università di Napoli “Federico II”), was focused on “Anomalous nonlinearities in the rheology and rheo-optics of polymeric liquids” (G. Marrucci, G. Ianniruberto). He pointed out that well known nonlinear effects can be explained by the tube theory of entangled polymers and further improved. However, some other nonlinear effects have been observed, though more rarely and less systematically. In some cases, such effects can be explained with the classical theory, while in other cases a different interpretation appears necessary. One possible cause for anomalous effects could perhaps be found in elastic heterogeneities.

A permanent poster exhibition was available and poster sessions held during the coffee breaks were filled with stimulating discussions. A small exhibition was also set up close to the conference room, so that the participants

was given the possibility to discuss about measuring techniques with representatives of important rheometer producers. Oral contributions in term of advances in rheometry were presented by Göttfert, Anton Paar, Malvern, Ceast, Haake and ACA Systems. TA Instruments, Rheologica, Alpha Technologies, Collin and Viscomate were also present at the conference. A seminar organized by Ta Instruments was held after the Conference closing ceremony.

Beside the scientific work, a special event was organized. A guided tour in the hearth of Ravenna, to discover the relationships between roman, barbarian and christian culture was proposed and entrusted to the competence of the local historian Gianni Morelli. This event was followed by a traditional regional dinner located in an old country farm. As already experienced in previous editions, this conference has been an incredible opportunity because of the chances it offered to learn, discuss and socialize in the short span of three days.

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