

Amherst Rheology Course (ARC15): “Synergy of Experiment with Theory in Rheology”

Two-Day Rheology Course co-directed by:

H. H. Winter, Amherst Massachusetts/USA and M. H. Wagner, Berlin/ Germany

Location: Berlin/Germany. Time: October 1-2, 2015

Language: English

Acceptance is limited to 35 participants

Objective of Course: A new approach to rheology is presented and taught in tutorials. It allows the “common” rheologist to access the most advanced data analysis and molecular theory. Short lectures on rheology will be combined with hands-on tutorials with the purpose of generating an interdisciplinary environment for discussing rheological experiments and theory and application. On the first day, participants will be shown to master rheology on a quantitative level and also will learn the underlying concepts that lead to the quantitative results. Tutorials on the second day will allow participants to see the rheology of their own materials in new ways, discover, and draw quantitative results. Experiment and theory are well integrated in the new teaching tools of the course.

Teaching Tool: Teaching tool is the IRIS software for exploring rheological properties. While IRIS focuses on linear viscoelasticity, it has been extended to include some molecular theory and non-linear viscoelasticity, see <http://rheology.tripod.com/>. The participants will learn to merge experiment with theory graphically on the PC screen. The user-friendly IRIS platform allows exploration of the newest developments in rheology.

Request: Participants are requested to bring their own PC so that they can practice the tutorial projects “hands-on”.

Lecturers: Experimentalists and theoreticians will teach the course jointly: Jonathan Rothstein, Amherst MA, USA; Manfred Wagner, Berlin, Germany; H. Henning Winter, Amherst MA, USA

Who Should Participate? Interest has been shown by a most diverse group of rheologists and future rheologists. The course is worth your consideration (for example)

- if you plan to expand your quantitative skills in rheology, or
- if you feel that rheology is a useful tool for your work, or
- if you do not have a rheometer and rely on someone else’s data, or
- if you are overwhelmed with a large volume of rheological data and need help with your data analysis and documentation, or
- if you need to relate molecular architecture to viscoelastic properties, or simply
- if you enjoy discovery in an interactive environment of experiment and theory in rheology.

The only prerequisites for participants are an elementary knowledge of rheology and some familiarity with PCs (no knowledge of computer language needed).

Enrollment at (<http://rheology.tripod.com/ARCEnrollBerlin.html>)

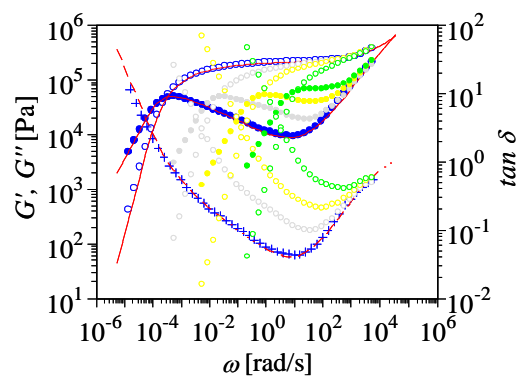
Regular Fee: 890 € - (720 € - if enrolled by August 7, 2015).

Fee for Academic Participants: 360 € - (295 € - if enrolled by August 7, 2015).

Special offer at ARC15 to new users of IRIS: add 1200.- € to include one-year IRIS Rheo-Hub license.

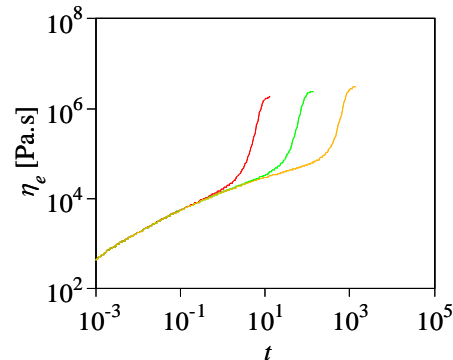
The enrollment fee includes two lunches but does not include lodging or transportation.

Request Information at winter@ecs.umass.edu or look under <http://rheology.tripod.com/ARC.htm>



Schausberger data of PS at 180°C

with G', G'' from PSW - ~~not published~~



MSF theory of Wagner (2003):
extensional viscosity of a HDPE