

SECOND ANNOUNCEMENT AND CALL FOR PAPERS

**Eighteenth Symposium on
Thermophysical Properties**



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<http://thermosymposium.boulder.nist.gov>

**June 24 - 29, 2012
University of Colorado at Boulder**

Organized by:

- National Institute of Standards and Technology
- Joint ASME-AIChE Committee on Thermophysical Properties
- American Institute of Chemical Engineers
- American Society of Mechanical Engineers

CALL FOR PAPERS

*Abstracts of 200-300 words must be received by **November 23, 2011**.*

The abstracts must be submitted through the Symposium web page at <http://thermosymposium.boulder.nist.gov>. Please refer to the website for the most recent information.

The content of the abstracts will be the basis for acceptance for presentation at the Symposium.

Oral, Poster and Database Demonstration Sessions will be held as part of the Eighteenth Symposium on Thermophysical Properties. All presentations will receive equal recognition as Symposium contributions. Prospective authors will be asked to indicate whether a poster presentation, oral presentation, or database demonstration is preferred. The organizers will attempt to honor requests for each type of presentation, although the assignment of sessions may necessitate changes. Information on this subject will be included in the acceptance letters to be sent in December 2011.

Papers describing all work presented at the Symposium are encouraged, but not required. Papers received by June 29, 2012 will be reviewed, and those accepted will be published in special proceedings issues of the *International Journal of Thermophysics*, *Fluid Phase Equilibria*, and the *Journal of Chemical and Engineering Data*. Electronic submission of manuscripts is mandatory, and early submission is encouraged.

PLENARY AND KEYNOTE SPEAKERS

Prof. Gang Chen

Carl Richard Soderberg Professor of Power Engineering,
Mechanical Engineering,
Massachusetts Institute of Technology

Dr. Patrick D. Gallagher

Under Secretary of Commerce for Standards and Technology,
Director, National Institute of Standards and Technology

Prof. Athanassios Z. Panagiotopoulos

Susan Dod Brown Professor,
Chemical and Biological Engineering,
Princeton University

Prof. E. Dendy Sloan

Professor Emeritus,
Director, Center for Hydrate Research
Colorado School of Mines



TECHNICAL AREAS AT THE 18th SYMPOSIUM

- Correlations and Engineering Equations of State
Eric Lemmon (NIST) & Roland Span (Ruhr Universität - Bochum)
 - Databases and Software
Richard Rowley (BYU) & Ken Kroenlein (NIST)
 - Fluctuation-Induced and Mesoscopic Properties of Fluids
Mikhail Anisimov (Univ. Maryland)
 - Fluid Property Measurements
Arno Laesecke (NIST) & Rakesh Srivastava (Dow)
 - Instrumentation and Measurement Techniques
Tom Bruno (NIST) & Zhuomin Zhang (Georgia Tech)
 - Inverse Problems and Non-destructive Evaluation
Andreas Mandelis (Univ. Toronto) & Roberto LiVoti (Univ. Rome)
 - Ionic Liquids
Luis Paulo Rebelo (Univ. Nova de Lisboa) & José Nuno Canongia Lopes (Instituto Superior Técnico - Lisbon)
 - Molecular Simulation
Vince Shen (NIST) & Andrei Kazakov (NIST)
 - Non-equilibrium Thermodynamics
Dick Bedeaux (Norwegian Univ. of Science and Technology) & Jan Sengers (Univ. Maryland)
 - Optical and Thermal Radiative Properties
Zhuomin Zhang (Georgia Tech) & Leonard Hanssen (NIST)
 - Photothermal and Photoacoustic Techniques
Andreas Mandelis (Univ. Toronto)
 - Properties for Material Science at High Temperatures
Doug Matson (Tufts Univ.) & Gernot Pottlacher (TU Graz)
 - Properties of Alternative Fuels and Chemicals
Carl Lira (Michigan State Univ.)
 - Properties of Aqueous Systems
Andre Anderko (OLI Systems) & Josef Šedlbauer (Univ. of Liberec)
 - Properties of Fossil Fuels
Sergio Quiñones - Cisneros (UNAM) & Tony Goodwin (Schlumberger Technology Corp.)
 - Properties of Polymers
John Dorgan (Colorado School of Mines) & Jeff Gilman (NIST)
 - Properties of Solids
Heng Ban (Utah State)
 - Properties of Working Fluids including Refrigerants
Stephanie Outcalt (NIST) & Mark McLinden (NIST)
 - Theory of Thermophysical Properties
Clare McCabe (Vanderbilt Univ.) & Coray Colina (Penn State Univ.)
 - Thermal Properties of Nanostructured Materials
Xinwei Wang (Iowa State Univ.) & Ronggui Yang (Univ. of Colorado)
 - Thermophysical Methods for Biomaterials and Biosystems (Biothermophotonics and other Analytical Methods)
Andreas Mandelis (Univ. Toronto) & Juan Jose Alvarado-Gil (CINVESTAV IPN)
 - Wetting, Interfaces, and Membranes
Marcus Müller (Univ. Göttingen) & Carolyn Koh (Colorado School of Mines)
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- Posters
Joe Magee (NIST) & Jason Widegren (NIST)
 - Software Demonstrations
Rob Chirico (NIST)

ABOUT THE CONFERENCE

This is the Eighteenth Symposium of the well-established series of conferences on thermophysical properties. The Symposium is concerned with theoretical, experimental, simulation, and applied aspects of the thermophysical properties of gases, liquids, and solids, including biological systems. Appropriate topics are:

- *Thermodynamic Properties*, including equations of state, phase equilibria, p-V-T behavior, heat capacity, enthalpy, thermal expansion, sound speed, and critical phenomena.
- *Transport Properties*, including thermal and electrical conductivity, viscosity, mass diffusion, thermal diffusion, non-Newtonian behavior, thermal, thermoacoustic, and other diffusion waves.
- *Optical and Thermal Radiative Properties*, including dielectric constant, refractive index, emissivity, reflectivity, and absorptivity.
- *Interfacial Properties*, including solid-solid interfaces, surface tension, interfacial profiles, interfacial transport, and wetting.
- *Data Correlation*, including data evaluation and prediction, reference data, databases, and storage and retrieval of thermophysical property data.

GENERAL INFORMATION

All technical sessions will be held at the University of Colorado, Boulder, Colorado, U.S.A. The Symposium is organized by the National Institute of Standards and Technology, the American Society of Mechanical Engineers, and the American Institute of Chemical Engineers. The Eighteenth Symposium email address is: symp18@boulder.nist.gov:

Chair of the Symposium:

Dr. Daniel G. Friend

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Fax: (1) 303-497-5044

Vice-Chair for Solids:

Dr. Neil T. Wright

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Michigan State University
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Vice-Chair for Fluids:

Dr. Marcia Huber

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Conference Secretary: *Lorene Celano* Phone: (1) 303-497-3220

For further information, please access the Symposium web site at <http://thermosymposium.boulder.nist.gov>, or contact the organizers at symp18@boulder.nist.gov.