- **IATP Executive**

1. Professor William A. Wakeham
2. Professor Marc J. Assael
3. Dr Anthony Goodwin
4. Professor Alfred Leipertz
5. Professor Akira Nagashima
6. Professor Carlos A. Nieto de Castro
7. Professor Jan V. Sengers

- **IATP Members**

1. Professor Mikhail A. Anisimov
2. Dr Scott Bair
3. Dr Michael Bannish
4. Dr Antoine Baylaucq
5. Dr Robert F. Berg
6. Dr Eckard Bich
7. Professor Christian Boned
8. Professor Fernando Caetano
9. Dr John H. Dymond
10. Professor Joao M.N.A. Fareleira
11. Professor Josefa Fernandez
12. Professor Andreas Fröba
13. Dr Peter Gaal
14. Dr Guillaume Galliero
15. Dr. Ulf Hammerschmidt
16. Professor Ken Harris
17. Dr Robert Hellmann
18. Dr Marcia A. Huber
19. Dr Arno Laesecke
20. Professor Maria José V. Lourenço
21. Dr Kenneth N. Marsh
22. Dr. Jurgen Millat
23. Professor Yuji Nagasaka
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33. Dr Daniela Stroe
34. Professor J.P.Martin Trusler
35. Professor Velisa Vesovic
36. Professor Eckhard Vogel
37. Professor Libor Vozar
38. Professor Stephan Will
39. Professor Jochen Winkelmann
40. Professor Jiangtao Wu
41. Dr Kemal Tusat Yucel

The International Association for Transport Properties

- **The Aims**

The International Association for Transport Properties (IATP) is a non-profit group of scientists devoted to the advancement of the transport properties of materials. In particular, the association is engaged in the preparation of representations of the transport properties that are of value to engineering process design, and to the description of natural processes in the environment where international collaboration and agreement is especially significant. These developments consider the underlying science with the intention of improving out understanding.

IATP was formerly known as the Subcommittee on Transport Properties of the International Union of Pure and Applied Chemistry (1981 - 2001).
Further info at : http://transp.cheng.auth.gr

2001 - 2014 Chairman : Professor Sir W.A. Wakeham
Secretary : Professor M.J. Assael

- **List of Scientific Meetings**

1. 2001 Chalkidiki, Greece
2. 2002 Imperial College, London, U.K.
3. 2003 Boulder, Colorado, U.S.A.
4. 2004 Pau, France
5. 2005 Bratislava, Slovakia
6. 2006 Boulder, Colorado, U.S.A.
7. 2007 Istanbul, Turkey
8. 2008 Pau, France
9. 2009 Boulder, Colorado, U.S.A.
10. 2010 Santiago de Compostela, Spain
11. 2011 Thessaloniki, Greece
12. 2012 Boulder, Colorado, U.S.A.
13. 2013 Bremen, Germany

- **Books Published**

1. *Experimental Thermodynamics. Vol.III. Measurement of the Transport Properties of Fluids.*
   Eds. A. Nagashima, J.V. Sengers, W.A. Wakeham.
   Blackwell Scientific Publications (1991).
2. *Transport Properties of Fluids. Their Correlation, Prediction and Estimation.*
   Eds. J.H. Dymond, J. Millat and C.A. Nieto de Castro.
   Cambridge University Press (1996).
3. *Experimental Thermodynamics. Vol.IX. Advances in Transport Properties of Fluids.*
   Eds. M.J. Assael, A.R.H. Goodwin, V. Vesovic, W.A. Wakeham.
   Royal Society of Chemistry (2014).

14th
Meeting of the
International Association for Transport Properties

(former Subcommittee on Transport Properties of IUPAC Commission I.2: Thermodynamics)

Sunday, August 31st,2014

Room A2

Department of Chemistry and Biochemistry
Faculty of Science of the University of Porto
R. Campo Alegre, 687, Porto, Portugal

Program

Local Organising Committee

Prof. Luís M.N.B.F. Santos (lbsantos@fc.up.pt)

- All presentations are informal and are followed by a discussion period.

Sunday August 31st, 2014

09:00 Opening remarks.
W.A. Wakeham (UK).

Scientific Session A.

09:10 Diffusion Coefficients of Binary Mixtures of 1-Ethyl-3-methylimidazolium Tetracyanoborate with Dissolved Gases by Dynamic Light Scattering and Molecular Dynamics Simulations
T.M.Koller, A. Heller, M.H. Rausch, I.G. Economou, A.P. Fröba (Germany).

09:30 Vibrating-wire Viscometry in Highly-Conductive Fluids
C. Calabrese, G.C. Maitland, M. McBride-Wright. J.P.M. Trusler (UK).

09:50 A New Portable Absolute 2-wires Transient Hot-Wire Instrument for the Measurement of the Thermal Conductivity of Solids & Fluids
M.J. Assael, K.D. Antoniadis, I.N. Metaxa, S.K. Mylona., G. Matziaroglou, V. Efopoulos, J.-A.M. Assael,. K. Marini (Greece), J. Wu, M.X. Hu (P.R. China).

10:10 Current Developments in IoNanofluids Thermophysical Properties
C.A.N. de Castro, J.M. Franca, M.J.V. Lourenco, F.J.V. Santos, S.M.S. Murshed (Portugal).

10:30 After 20 years of Nanofluids, are we Anywhere Nearer in Predicting their Thermal Conductivity Enhancement?
G. Tertsinidou, I.N. Metaxa, E.K. Mihailidou, M.J. Assael (Greece), W.A. Wakeham (U.K.).

10:50 Coffee

Scientific Session B.

11:10 An Improved Kinetic Theory Approach for Calculating the Thermal Conductivity of Polyatomic Gases
R. Hellmann, E. Bich (Germany).

11:30 On the Mobility of Dialkyladipates
J. Ascenso, G. Rubio, J.C.F. Diogo, F.J.P. Caetano, J.M.N.A. Fareleira (Portugal).

11:50 Characterization of the Temperature Dependence of the Viscosity and Density of Several Perfluoropolyether Oils
T. J. Fortin, A. Laesecke (USA).

12:10 Reference Correlation of the Viscosity of Cyclohexane from the Triple Point to 873 K and up to 110 MPa.
U. Tariq, A.R.B. Jusoh, N. Riesco, V. Vesovic (UK).

12:30 International Standards for Viscosity in Broad Ranges of Temperature and Pressure: Squalane and Krytox 102
M.J.P. Comuñas, F.M. Gaciño, X. Paredes, J. Fernández (Spain), K.R. Harris (Australia), J.P. Bazile, C. Boned, J.L. Daridon, G. Galliero, J. Pauly (France), S.K. Mylona, M.J. Assael (Greece), A.R.H. Goodwin (USA).

12:50 High-pressure Viscosity Standards for the Calibration and Validation of Equipment Designed for the Accurate Measurement of the Viscosity of Heavy Oils
C.D. Castillo Gómez, H. Quiroz Villareal, S.E. Quiñones-Cisneros (Mexico).

13:10 Lunch

Scientific Session C.

14:40 Assessment of thermal probe for measurement of thermal conductivity
B. Ruet, H. Humaish, L. Marmoret, H. Béji (France).

15:00 Research at the Technische Thermodynamik Bremen at a Glance
B. Rathke, J. Kiefer (Germany).

15:20 High-Viscosity Reference Liquids at High Pressures
J.C.F. Diogo, F.J.P. Caetano, J.M.N.A. Fareleira (Portugal).

15:40 CoolProp - An Open-source Reference-grade Thermophysical Property Library for the 21st century
I. Bell, S. Quoilin, V. Lemort (Belgium), J. Wronski (Denmark)

Business Session.

15:50 Announcements.

- Projects Concluded
- Continuing Collaborative Projects
  1. Reference correlations for the viscosity and thermal conductivity of fluids over extended temperature and pressure ranges.
     S.K.Mylona,E.K. Michailidou, E. Sykioti, S. Avgeri, M.J. Assael (Greece), M.L. Huber, R.A. Perkins (USA)
  2. High-temperature high-pressure viscosity standards
     J.M.N.A. Fareleira, F. Caetano (Portugal), W. A. Wakeham, J.P.M. Trusler (UK), A.P. Froba, A. Leipertz, B. Rathke (Germany), K. Harris (Australia), A.R.H. Goodwin, A. Laesecke (USA), J. Fernandez (Spain), K. Schmidt (Canada), Chr. Boned (France)
  3. Three new volumes on experimental thermodynamics series published under the auspices of IUPAC
     W.A. Wakeham - Coordinator, V. Vesovic (UK), A. Goodwin, M. Huber, J. Sengers (USA), M.J. Assael (Greece)
  4. Round Robin project on ionic liquids viscosity, and thermal conductivity measurements.
     J.M.N.A. Fareleira, C.A. Nieto de Castro (Portugal), A. Leipertz, A. Fröba, U. Hammerschmidt, B. Rathke (Germany), J. Fernandez (Spain), R. Perkins (USA), K. Harris (Australia), M.J. Assael (Greece)
  5. Mexico research perspectives in the rheology of heavy oils.
     S.E. Quiñones-Cisneros (Mexico)
- New Collaborative Projects
  6. Diffusion nomenclature in the IUPAC Definitions of Symbols & Units
     A.R.H.Goodwin (USA), W.A. Wakeham (UK), C.A. Nieto de Castro (Portugal), J. Fernandez (Spain), K. Harris (Australia), M.J. Assael (Greece).

16:30 Coffee

- Future Collaborative Projects: Proposals
- Membership - Future Meetings

17:00 Meeting Adjourn

17:40 Meetings of Project Committees