



NATIONAL INSTITUTE FOR LASERS, PLASMA AND RADIATION  
PHYSICS

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## **COST ACTION P21 “ THE PHYSICS OF DROPLETS ”**

*JOINT CONFERENCE of the  
7<sup>TH</sup> MANAGEMENT COMMITTEE MEETING  
and  
WORKING GROUPS MEETINGS*

**May 4<sup>th</sup> - 6<sup>th</sup>, 2009**

**Romanian Parliament House  
Hall: Nicolae Balcescu,  
Entrance A3S2, Str. IZVOR  
Bucharest**

**Organisers**

**Management Committee Chair: Prof. Nicolas Vandewalle  
Dr. Stéphane Dorbolo**

**Local organiser: Prof. Mihail-Lucian Pascu  
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# SCIENTIFIC PROGRAMME

MAY 3<sup>rd</sup> 2009

## Arrival and accommodation

MAY 4<sup>th</sup> 2009 – DAY 1

**8:30 – 9:30**  
**Registration**

**9:30 – 10:00**  
**Opening session**

**10:00 – 10:30**  
**Plenary session**  
*Chair: Michele Adler*

S. Beauloye  
*General Presentation on COST and the Open Call*

**10:30 – 11:00**  
**COFFEE BREAK**

**11:00 – 11:30**  
**Working Group 2 meeting (joint with WG1 and WG3 meetings)**  
*Chair: Libero Liggieri*

**General Interest talk**  
S. Limage, M. Schmitt-Rozières, S. Vincent-Bonnieu, C. Dominici, M. Antoni  
*Nanoparticles stabilized emulsions: Behind the Venus veil of droplets*

**11:30 – 12:30**  
**Working Group 2 meeting (joint with WG1 and WG3 meetings) – continued**  
*Chair: Libero Liggieri*

**11:30 – 11:50**  
A. Javadi, J. Krägel, P. Pandolfini, G. Loglio, V.I. Kovalchuk, E. V. Aksenenko, F. Ravera,  
L. Liggieri, R. Miller  
*Short time dynamic interfacial tension as measured with drop capillary pressure technique*

**11:50 – 12:10**

S. Caserta, G. Tomaiuolo, S. Guido

*Non-Newtonian effects on drop deformation under microconfined shear flow*

**12:10 – 12:30**

A. Moskal

*Dynamics of aerosol aggregates - theory and practical applications*

**12:30 – 13:30**

**LUNCH (on place, in a room adjacent to the conference hall)**

**13:30 – 15:30**

**Working Group 2 meeting (joint with WG1 and WG3 meetings) – continued**

*Chair: Thodoris Karapantsios*

**13:30 – 13:50**

L. Liggieri, F. Ravera, E. Santini, M. Ferrari, R. Miller, G. Loglio, V. Dutschk, C. Whitby, D. Fornasiero, J. Ralston.

*Interfacial properties of nanoparticle-surfactant systems*

**13:50 – 14:10**

K.G. Marinova, E.S. Basheva, I.B. Ivanov

*Physico-chemical factors controlling the foamability and foam stability of milk proteins*

**14:10 – 14:30**

T. Karapantsios, M. Kostoglou

*Electrical resistance tomography for foam and emulsion stability measurements*

**14:30 – 14:50**

A. Niecikowska, M. Krasowska, J. Ralston, K. Malysa

*Influence of surface charge and hydrophobicity on kinetics of the three phase contact formation during bubble collision with TiO<sub>2</sub> surface*

**14:50 – 15:10**

Y. Couder, A. Eddi, E. Fort

*Droplets walking on a liquid interface: a macroscopic type of wave-particle duality*

**15:10 – 15:30**

K. Szczepanowicz, D. Dronka-Góra, L. Szyk-Warszyńska, P. Warszynski

*Encapsulation of emulsion drops*

**15:30 – 16:00**

**Working Group 3 meeting (joint with WG1 and WG2 meetings)**

*Chair: Mihail Lucian Pascu*

**General Interest talk**

M. Muradoglu

*Impact and spreading of a microdroplet on a solid wall*

**16:00 – 16:30**  
**COFFEE BREAK**

**16:30 – 18:30**

**Working Group 3 meeting (joint with WG1 and WG2 meetings) – continued**

*Chair: Michele Ferrari*

**16:30 – 16:50**

D. Kiselev, M. Moret, L. Bonacina, J.P. Wolf

*Use of microdroplets in the aerosol analysis*

**16:50 – 17:10**

M.L. Pascu, I.R. Andrei, C. Ticos, V. Nastasa, T. Beica

*Laser beams interactions with microdroplets*

**17:10 – 17:30**

K. Sadlej, M.L. Ekiel-Jezewska, E. Wajnryb

*Destabilization of suspension drops conveyed by Poiseuille flow inside a channel*

**17:30 – 17:50**

S. Antohe, I. Enculescu, L. Ion

*Preparation and characterization of  $A_2B_6$  nanowires arrays for photovoltaic applications*

**17:50 – 18:10**

F. Albert, M. Schmidt

*Laser droplet joining – systems, process and applications*

**18:10 – 18:30**

M. Weigl, M. Schmidt

*Laser droplet welding of dissimilar materials*

***18:30 Visit of the Romanian Parliament Building***

**19:30**  
**DINNER**

## MAY 5<sup>th</sup> 2009, DAY 2

**9:00 – 9:30**

**Working Group 1 meeting (joint with WG2 and WG3 meetings)**

*Chair: Frieder Mugele*

**General Interest talk**

M. T. Kreutzer, V. van Steijn, C.R. Kleijn, P. Parthiban, S.A. Khan  
*Instabilities in segmented flow – bubble formation and partial wetting*

**9:30 – 10:30**

**Working Group 1 meeting (joint with WG2 and WG3 meetings)**

*Chair: Frieder Mugele*

**9:30 – 9:50**

M. Schmitt-Rozières, J. Krägel, D.O. Grigoriev, L. Liggieri, R. Miller, S. Vincent-Bonnieu, M. Antoni

*From spherical to polymorphous droplets in water/oil emulsions*

**9:50 – 10:10**

Y. Tsori, S. Samin

*Phase separation transition in liquids and polymers induced by electric field gradients*

**10:10 – 10:30**

S. Tcholakova, N. Denkov, D. Hristova,

*Emulsification and emulsion stability of silica-charged silicone oils*

**10:30 – 11:00**  
**COFFEE BREAK**

**11:00 – 12:40**

**Working Group 1 meeting (joint with WG2 and WG3 meetings) - continued**

*Chair: Nicolas Vandewalle*

**11:00 – 11:20**

N. Denkov, S. Tcholakova, K. Golemanov, A. Lips

*Jamming in sheared foams and emulsions, explained by critical instability of the films between neighboring bubbles and drops*

**11:20 – 11:40**

D. Terwagne, T. Gilet, N. Vandewalle, S. Dorbolo

*A drop of spectroscopy*

**11:40 – 12:00**

A. Rozhkov, B. Prunet-Foch, M. Vignes-Adler

*Impact of drops of surfactant solutions*

**12:00 – 12:20**

M.L. Ekiel-Jeżewska, E. Wajnryb

*Micro-droplets of a dense suspension settling under gravity in a viscous fluid*

**12:20 – 12:40**

V. Palero, J. Lobera, P. Brunet, M.P Arroyo,

*3D velocity measurement in an oscillating drop*

**12:40 – 13:40**

**LUNCH (on place, in a room adjacent to the conference hall)**

**13:40 – 15:30**

**POSTER SESSION (See the List of Posters at the end of this program): POSTERS TO BE DISPLAYED ON 4<sup>th</sup> OF MAY AT 12:30**

**15:30 – 16:00**

**FREE DISCUSSIONS ABOUT JOINT WG1, WG2, WG3 PROJECTS**

**16:00 – 16:30**

**COFFEE BREAK**

**16:30 – 18:00 Management Committee meeting (part I)**

### **Draft Agenda - Seventh Management Committee Meeting**

- 1. Welcome to participants**
- 2. Adoption of agenda**
- 3. Minutes of last meeting**
- 4. Report from the Scientific Officer**
  - News from the COST Office
  - Status of Action
  - Number of Signatories
  - Budget Status, budget allocation process
- 5. Year Budget planning**
- 6. STSM status, applications**
- 7. Publications, annual report**
- 8. Evaluations**
- 9. Request for new members**
- 10. Non-COST participations**
- 11. Web news**
- 12. Progress report of working groups**
- 13. Long-term planning**
- 14. Time and place of next meeting**
- 15. AOB**

**19:00 OPTIONAL DINNER**

**MAY 6<sup>th</sup> 2009, DAY 3**

**9:00 – 10:30**

**FREE DISCUSSIONS ABOUT JOINT WG1, WG2, WG3 PROJECTS – continued**

**10:30 – 11:00**

**COFFEE BREAK**

**11:00 – 12:30 Management Committee meeting (part II)**

**12:30 – 13:30**

**LUNCH (on place, in a room adjacent to the conference hall)**

**13:30 END OF THE MEETING**

***! A social program is organised on the 6<sup>th</sup> of May to visit Dracula's real tomb at 40 km north of Bucharest.***



## LIST OF POSTERS

1. **A. J. Meagher, A. van der Net, D. Weaire, S. Hutzler**, *Diffusion properties of crystalline microbubbles.*
2. **C. Surdu-Bob, M. Badulescu**, *Synthesis of metal spheres obtained in an anodic arc plasma in high vacuum.*
3. **D. Dimitrova, F. Ravera, L. Liggieri, S. Tcholakova, K. Marinova**, *Surface dilatational rheological properties of surfactant mixtures.*
4. **F. Ravera, L. Liggieri, M. Ferrari, G. Loglio, P. Pandolfini**, *Dilatational viscoelasticity measurement by the oscillating bubble/drop techniques using a capillary pressure tensiometer.*
5. **M. Dicu, A. Staicu, A. Smarandache, I. R. Andrei, M. Ferrari, L. Liggieri, L. Frunza, M. L. Pascu**, *Spectral studies of medicines to be delivered in microdroplets form.*
6. **M. Ferrari, L. Liggieri, F. Ravera, M. L. Pascu, M. Dicu**, *Wetting of solvents for drug delivery on superhydrophobic surfaces*
7. **N. Vandewalle**, *Antibubbles, liquid onions and mayonnaise droplets.*
8. **S. Henin, Y. Petit, D. Kiselev, J. Kasparian, J. P. Wolf**, *Contribution of droplet explosion to charge release in laser-assisted condensation.*
9. **S. Kevorkian, A. Manea, A. Dinischiotu, M. Dicu, M. L. Pascu, M. Costache, B. Carstocea**, *Preliminary study of vancomycin on a normal epithelial retinal cell line.*
10. **T. Beica, I. Zgura, L. Frunza, L. C. Nistor, C. Morosanu**, *Wettability properties of textile materials by water droplets, optically visualized.*
11. **T.R. Sosnowski**, *Atomization of pharmaceutical solutions.*
12. **T. Beica, I. Zgura, L. Frunza, I. R. Andrei, M. Dicu, M. L. Pascu**, *Surface tension of drug solutions.*
13. **I. R. Andrei, M. Ferrari, L. Liggieri, M. Dicu, V. Nastasa, M. L. Pascu**, *Characterization of microdroplets which contain solutions of medicines.*
14. **M. P. Boneva, K. D. Danov, N. C. Christov, P. A. Kralchevsky**, *Strong hybrid electro-gravity-induced capillary attraction between charged particles at a fluid interface*
15. **L. Liggieri, G. Loglio, R. Miller, A. Steinchen, M. Antoni, M. Roziere, D. Clause, L. del Gaudio, C. Dalmazzone, T. Karapantsios, V. Dutschk, R. G. Rubio, G. Picker, T. Dewandre, O. Minister, S. Vincent-Bonnieu**, *“FASES: an instrument for Fundamental and Applied Studies of Emulsions Stability”*

## POSTERS POST-DEADLINE

- 16. J. Moreno, M.A. Trelles, M. L. Pascu, J. Royo de la Torre, *Effect of a Nd:YAG laser in the treatment of varices of the great saphenous vein after polidocanol microfoam injection.***

