

## Program

### Tuesday, July 13<sup>th</sup>

- 14:00 – 20:00 **Registration** *Registration desk in hotel Samokov*  
 19:00 – 21:00 **Get-together party** *Restaurant of hotel Samokov*

### Wednesday, July 14<sup>th</sup>

- 7:30 – 19:00 **Registration** *Registration desk in hotel Samokov*  
**Opening session; Chair: D. Langevin** **Hall A (Bulgaria)**

- 8:30 – 8:50 **P. Kralchevsky** – Opening  
 8:50 – 9:30 **F. Graner**  
*Plenary lecture: Foams as model systems: of complex fluids, of grain growth, of biological tissues*  
 9:30 – 10:00 **N. Kristen, N. Schelero, R. von Klitzing**  
*Invited lecture IL1: Control of foam film and wetting film stability by addition of (poly)electrolytes: electrostatics vs. ionspecificity (COST D43)*  
 10:00 – 10:30 **S. Hutzler, M.E. Möbius, D. Weaire**  
*Invited lecture IL2: Foam mechanics (COST P21)*

#### **Coffee Break**

- Session: Foam Rheology; Chair: D. Weaire** **Hall A (Bulgaria)**

- 11:00 – 11:30 **S. Neethling, M. Tong**  
*Invited lecture IL3: Modelling foam stability: From structural simulations to continuum models*  
 11:30 – 11:50 **S.J. Cox, A. Wyn, I.T. Davies, F. Boulogne**  
 O1: Topological changes in foam rheology  
 11:50 – 12:10 **A.-L. Biance, S. Cohen-Addad, R. Höhler**  
 O2: Dynamics of T1s in a 3D bubble cluster  
 12:10 – 12:30 **M.B. Sexton, T. Harris, M.E. Möbius, D. Weaire, S. Hutzler**  
 O3: Bubble fluctuations in simulations of sheared 2D foam

#### **Lunch**

*Restaurant of hotel Samokov*

- Session: Foam Structure and Modelling; Chair: S. Cox** **Hall A (Bulgaria)**

- 14:30 – 15:00 **M. Dennin**  
*Invited lecture IL4: Bubble Rafts: flowing and breaking foam in two dimensions*  
 15:00 – 15:30 **M. T. Kreutzer**  
*Invited lecture IL5: Partial Wetting in microchannel flows*  
 15:30 – 15:50 **P. Rognon, F. Molino, C. Gay**  
 O4: Understanding negative and positive static dilatancy in liquid foams

#### **Coffee Break**

- Parallel Session: Foam Structure and Modelling; Chair: S. Hutzler** **Hall A (Bulgaria)**

- 16:20 – 16:40 **C. Oquey**  
 O5: Long range topological correlations in cellular assemblies  
 16:40 – 17:00 **M. Fátima Vaz, S.J. Cox, P.I.C. Teixeira**  
 O6: Defects in bubble clusters: simulation and analytical approach  
 17:00 – 17:20 **M. Durand**  
 O7: Statistical mechanics of two-dimensional cellular patterns

- Parallel Session: Ind. Proc. & Sustainable Development; Chair: L. Arnaudov** **Hall B (Rodina)**

- 16:20 – 16:40 **A. Sher, J-C. Gummy, S. Livings, C. Jimenez-Junca, K. Niranjana**  
 O8: Bubble mechanics of milk foams generated by steam injection and mechanical whipping  
 16:40 – 17:00 **J. Merz, H. Zorn, B. Burghoff, G. Schembecker**  
 O9: Purification of a fungal cutinase by adsorptive bubble separation: A statistical approach  
 17:00 – 17:20 **W. Doelling, R. Poss, A.-S. Dreher**  
 O10: System level definition for deep-bed filtration using open pore nickel and iron-based alloy metal foams

- 17:30 – 19:30 **Poster session & light dinner** *Foyer of Hall A (Bulgaria)*

**Thursday, July 15<sup>th</sup>**

**Session: Particles in Foams, Solid Foams; Chair: L. Ligierrì**

Hall A (Bulgaria)

- 9:00 – 9:40 **O. Velev**  
Plenary lecture: Foam superstabilization and functionalization by particles with engineered structure and properties
- 9:40 – 10:10 **T. Horozov**  
Invited lecture IL6: Solid particles in thin liquid films
- 10:10 – 10:40 **S. Stoyanov, E. Pelan, V.N. Paunov**  
Invited lecture IL7: Foams stabilised by shape anisotropic particles

**Coffee Break**

**Session: Particles in Foams, Solid Foams; Chair: J. Banhart**

Hall A (Bulgaria)

- 11:10 – 11:40 **O. Pitois, E. Lorenceau, N. Louvet, F. Rouyer**  
Invited lecture IL8: Liquid foams as soft particulate filters
- 11:40 – 12:00 **A. Stocco, F. Garcia-Moreno, J. Banhart, D. Langevin**  
O11: Nanoparticle-stabilised aqueous foams
- 12:00 – 12:20 **J. Rodrigues, J. Bobroff, E. Rio, D. Langevin, H. Herzog, W. Drenckhan**  
O12: Indestructible magnetic foams under magnetic fields
- 12:20 – 12:40 **S. Karakashev, O. Ozdemir, M.A. Hampton, E.D. Manev, A.V. Nguyen**  
O13: Effect of particle shape on foam stability
- 12:40 – 13:00 **D.P. Papadopoulos, H. Omar, N. Michailidis, F. Stergioudi, D. N. Tsipas**  
O14: Structure comparison of dolomite and titanium hydride Al metal foams

**Lunch**

*Restaurant of hotel Samokov*

**Session: Role of interfacial properties; Chair: M. Durand**

Hall A (Bulgaria)

- 14:30 – 15:00 **B. Selva, I. Cantat, M.-C. Jullien**  
Invited lecture IL9: Migration of a bubble towards higher surface tension under the effect of thermocapillary stresses
- 15:00 – 15:30 **B. Dollet**  
Invited lecture IL10: Dynamics of bubble and films: Role of interfacial rheology
- 15:30 – 15:50 **E. Santini, F. Ravera, M. Ferrari, L. Liggieri**  
O15: Investigation on the interfacial properties of carbonaceous particles plus CTAB dispersions and on the stability of the corresponding foams and emulsions

**Coffee Break**

**Parallel Session: Foam Rheology; Chair: M. Dennin**

Hall A (Bulgaria)

- 16:20 – 16:40 **C. Raufaste, S.J. Cox, P. Marmottant, F. Graner**  
O16: Orientational effects in the flow of liquid foams
- 16:40 – 17:00 **I. Irausquin, J.L. Perez-Castellanos**  
O17: Finite element model for the analysis of a closed-cell metal foam under compression
- 17:00 – 17:20 **E. Ashoori, D. Marchesin, W.R. Rossen**  
O18: The roles of dynamic foam behavior in enhanced petroleum recovery

**Parallel Session: Physical Chemistry of Foams, Thin Liquid Films;  
Chair: T. Horozov**

Hall B (Rodina)

- 16:20 – 16:40 **A-L. Fameau, B. Houinsou-Houssou, F. Cousin, F. Boue, J-P. Douliez, B. Novales**  
O19: Impact of the structure of fatty acids supramolecular assemblies on the interfacial and foaming properties
- 16:40 – 17:00 **A. Salonen, M. In, J. Emile, A. Saint-Jalmes**  
O20: Solutions of surfactant oligomers: A model system for tuning foam stability by the surfactant Structure
- 17:00 – 17:20 **H. Petkova, Khr. Khristov, D. Exerowa, J. Beetge, J. Venter**  
O21: Molecular structure of "star-like" diethylenetriamine-based polymeric surfactants and the properties of foam films

17:30 – 19:00 **Poster session**

*Foyer of Hall A (Bulgaria)*

20:00 – 24:00 **Gala dinner**

*Restaurant of hotel Samokov*

**Friday, July 16<sup>th</sup>**

**Session: Modern applications; Chair: Th. Karapantsios**

Hall A (Bulgaria)

- 9:00 – 9:40 **A. Lips**  
Plenary lecture: Successes and future challenges for foam science
- 9:40 – 10:10 **M. Edirisinghe, E. Stride**  
Invited lecture IL11: Bubbling, foaming and capsule preparation

**Session: Emulsions as bi-liquid foams; Chair: Th. Karapantsios**

- 10:10 – 10:40 **A. Colin**  
Invited lecture IL12: Flow of concentrated emulsions

**Coffee Break**

**Session: Foam Stability: Drainage, Coarsening, and Coalescence; Chair: R. Miller**

Hall A (Bulgaria)

- 11:10 – 11:40 **R. Krastev**  
Invited lecture IL13: Gas permeability of single foam films
- 11:40 – 12:00 **J. Goyon, F. Bertrand, G. Ovarlez, O. Pitois**  
O22: Study of shear induced drainage of foamy emulsions through MRI
- 12:00 – 12:20 **A. Delbos, O. Pitois, E. Lorenceau, M. Vignes-Adler**  
O23: Forced foam flow through a pore
- 12:20 – 12:40 **B. P. Binks, P. D. I. Fletcher, M. P. Gahagan, E. L. Sharp**  
O24: Non-aqueous foams in lubricating oil systems
- 12:40 – 13:00 **F. Garcia-Moreno, A. Stocco, I. Manke, J. Banhart, D. Langevin**  
O25: X-ray tomography of aqueous foams

**Lunch**

*Restaurant of hotel Samokov*

**Parallel Session: Experimental Techniques; Chair: M. Adler**

Hall A (Bulgaria)

- 14:30 – 14:50 **K. Niranjana, C. Jimenez-Junca, J-C. Gomy, A. Sher**  
O26: Non-isothermal destabilization of steam injected milk foams: characterization and interface visualization
- 14:50 – 15:10 **R.A. Kil, Q.P. Nguyen, W.R. Rossen**  
O27: Determining trapped gas in foam in porous media from CT images
- 15:10 – 15:30 **R.M. Guillermic, M. Erpelding, I. Ben Salem, B. Dollet, J. Crassous, A. Saint-Jalmes**  
O28: New experimental results on foam acoustics
- 15:30 – 15:50 **A. Bretagne, V. Leroy, C. Derec, F. Elias**  
O29: Probing foams with ultrasound

**Parallel Session: Physical Chemistry of Foams, Thin Liquid Films;  
Chair: S. Stoyanov**

Hall B (Rodina)

- 14:30 – 14:50 **D. Varade, D. Carriere, W. Drenckhan, E. Rio, A. Stocco, D. Langevin**  
O30: Superstable foams made from catanionic surfactant mixtures
- 14:50 – 15:10 **L.N. Arnaudov, S.D. Stoyanov, S.A. Semerdzhiev, M.A. Cohen Stuart**  
O31: Highly efficient interface-assisted colloid fabrication
- 15:10 – 15:30 **C. Stubenrauch**  
O32: Mixtures of n-dodecyl- $\beta$ -D-maltoside and hexaoxyethylene dodecyl ether - surface properties, foam films, and foams
- 15:30 – 15:50 **T. Gambaryan-Roisman**  
O33: Dynamics of free liquid films during formation of polymer foams

**Coffee Break**

**Closing session; Chair: M. Adler**

Hall A (Bulgaria)

- 16:20 – 16:50 **L.K. Shrestha, K. Ariga, K. Aramaki**  
Invited lecture IL14: Highly stable nonaqueous foams in glycerol-based nonionic surfactant/oil systems
- 16:50 – 17:10 **N. Denkov**  
Closing and presenting next Eufoam 2012 conference

### List of Poster presentations

#### **A - Foam Structure and Modelling**

- PA1: S.J. Cox, E. Flikkema, "The minimal perimeter for N confined deformable bubbles of equal area".
- PA2: B. Embley, P. Grassia "Viscous froth simulations of sheared bubble staircases with surfactant mass transfer and Marangoni effects".
- PA3: S. Ubal, C.H. Harrison, P. Grassia, W. Korchinsky, "Simulation of mass transfer in circulating drops with applications to liquid-liquid extraction".
- PA4: H.K. Chan, A.J. Meagher, A.M. Mughal, D. Weaire, S. Hutzler, "Spontaneous ordering of micro-bubbles in a capillary tube".
- PA5: I. Irausquin, F. Teixeira-Dias, V. Miranda, J.L. Perez-Castellanos, "Modelling of sandwich plates with aluminum foam core subjected to drop-weight impact".
- PA6: N. Kalchukova, R. Guerra, U. Teicher, A. Nestler, "Numerical models of metal foams for the simulation of machining".
- PA7: G. Katgert, M. van Hecke, "Jammed static foam packings: Contacts, tessellations and forces".
- PA8: G. Katgert, W.C.K. Poon, "Point response in foams: correlated rearrangements".
- PA9: H. Vila-Real, M.H. Ribeiro, M. Emília Rosa, "Processing conditions and structure of sol-gel matrice".
- PA10: M. Saadatfar, A. Jones, S. Hutzler, M. Mukhrejee, G. Schroeder-Turk, F. Garcia-Moreno, J. Banhart, U. Ramamurty, D. Weaire, "Structural and finite element analysis of tomographic data for closed cell aluminium foam subject to uni-axial compression".
- PA11: S. Hutzler, J.D. Barry, S.T. Tobin, B. Bulfin, D. Weaire, "Ordered dry foams in tubes with circular, triangular and square cross-section".

#### **B - Foam Rheology; Microfluidics of Bubbles and Drops**

- PB1: N. Bennani, P. Jop, V. Mansard, A. Colin, L. Bocquet, "Droplets rearrangement rates of flowing monodispersed emulsions".
- PB2: T.S. Chan, J.H. Snoeijer, "Two-phase hydrodynamic model for air entrainment at the advancing contact line".
- PB3: S. Costa, R. Höhler, K. Krishan, S. Cohen-Addad, "Origin of fast linear relaxations in foams".
- PB4: S.A. Jones, S.J. Cox, "The flow of foam through a contraction".
- PB5: D. Dimitrova, S. Tcholakova, K.G. Marinova, N. Denkov, K.P. Ananthpadmanabhan, "Surface rheological properties of surfactant mixtures".
- PB6: K. Golemanov, S. Tcholakova, N.D. Denkov, K.P. Ananthpadmanabhan, A. Lips, "Role of surfactants in foam rheology".

#### **C - Particles in Foams; Solid Foams**

- PC1: L. Alexandrova, M. Nedyalkov, "Thin wetting film from aqueous solution of polyoxyalkylated diethylenetriamine polymeric surfactant".
- PC2: S. Faure, Q. Couzet, D. Tiffes, G. Boutevin, C. Loubat, "New solid particles for liquid foam stabilization".
- PC3: G. Morris, S.J. Neethling, J.J. Cilliers, "Thin films stabilised by randomly packed spherical particles".
- PC4: D. Michalantzaki, E.N. Peleka, Th.D. Karapantsios, M. Kostoglou, K.A. Matis, "Experimental approach of particle – bubble interactions in a flotation system".
- PC5: F. Schüller, M. D. Gilchrist, C. Stubenrauch, "Functionally graded polystyrene foams as advanced cushioning materials".
- PC6: R. Wüstneck, J. Krägel, R. Miller, "Highly stable pickering-emulsions and the role of interfacial network formation".

## D - Physical Chemistry of Foams; Thin Liquid Films

- PD1: Zh.K. Angarska, A.A. Elenskiy, G.P. Yampolskaya, K.D. Tachev, "Foam films from mixed solutions of proteins and *n*-dodecyl- $\beta$ -D- maltoside".
- PD2: N. Buchavzov, D. Varade, E. Carey, J. Boos, C. Stubenrauch, "Foam films stabilized by *n*-dodecyl- $\beta$ -D-maltoside, hexaethyleneglycol monododecyl ether, and their 1:1 mixture".
- PD3: R. Cohen, N. Christova, B. Tuleva, I. Terziev, I. Stoineva, "Foam film studies of a rhamnolipid biosurfactant produced from a new *Pseudomonas aeruginosa* BN10".
- PD4: R. Cohen, R. Todorov, G. Vladimirov, D. Exerowa, "Effect of rhamnolipids on pulmonary surfactant foam films".
- PD5: C. Derec, W. Drenckhan, S. Hutzler, V. Leroy, A. Möller, M. Saadatfar, C. Stubenrauch, F. Elias, "Vibration of a soap film".
- PD6: G. Gotchev, H. Petkova, Khr. Khristov, T. Kolarov, D. Exerowa, "Steric stabilization of black foam and oil-in-water emulsion films from polymeric surfactants".
- PD7: G. Gotchev, V. Pradines, V.B. Fainerman, J. Krägel, R. Miller, "Interfacial properties of mixed  $\beta$ -lactoglobulin/C<sub>n</sub>TAB layers at the hexane/water interface".
- PD8: R.M. Guillermic, J. Emile, A. Saint-Jalmes, "Thermo-responsive interfaces, films and foams".
- PD9: D. Ivanova, Zh. Angarska, S. Karakashev, E. Manev, "Drainage of foam films stabilized by an ionic- or a non-ionic surfactant and their mixture".
- PD10: N.A. Ivanova, R.G. Rubio, V.M. Starov, V.B. Fainerman, "Equilibrium and dynamic surface properties of aqueous solutions of trisiloxane surfactants".
- PD11: A. Jamil, S. Caubet, T. Kousksou, K. El Omari, Y. Zeraouli, B. Grassl, Y. Le Guer, "Thermal properties of oil-in-water highly concentrated emulsions".
- PD12: S.I. Karakashev, R. Tsekov, R. Slavchov, E.D. Manev, "Effect of ionic strength on drainage of planar foam films".
- PD13: V. Papoti, T.D. Karapantsios, G. Doxastakis, "Comparison of foaming activity of lupin protein solutions obtained with isoelectric precipitation versus ultrafiltration".
- PD14: B. Soklev, D. Arabadzhieva, E. Mileva, "Comparative investigation aqueous solutions of C12E3, C12E4 and C12E5".
- PD15: I. Grozev, R. Todorov, E. Mileva, "Foam film drainage of aqueous solutions of glycine compounds".
- PD16: B. Rullier, M. Axelos, D. Langevin, B. Novales, "Understanding the role of protein aggregates at air/water interfaces: a multiscale approach".
- PD17: J. Delacotte, E. Rio, F. Restagno, D. Langevin, "Withdrawn films: The importance of surface rheology".
- PD18: A. Salonen, A. Knyazev, N. Von Bandel, J. Degrouard, D. Langevin, W. Drenckhan, "A novel pyrene-based surfactant: bulk, interfacial and foaming behaviour".
- PD19: V. Ulaganathan, J. Krägel, V. Pradines, R. Wüstneck, B. Bergenstahl, R. Miller, "Shear rheology of mixed  $\beta$ -lactoglobulin/surfactant adsorption layers at the water/oil interface".
- PD20: G. Varas, V. Vidal, J.-C. Gémard, "Dynamics of a thin liquid film: A proxy for bubble bursting".
- PD21: P.R. Garrett, L. Ran, "The Antifoam Behaviour of Saturated Fatty-Acid Triglyceride Mixtures in Aqueous Surfactant Solutions"

## E - Foam Stability: Drainage, Coarsening and Coalescence

- PE1: M. Baszczynski, P. Novák, T. Branyik, M.C. Ruzicka, J. Drahoš, "Decay of beer foam".
- PE2: I. Ben Salem, I. Cantat, B. Dollet, "Rupture criterion of a 2D foam subject to a sudden overpressure".
- PE3: A.-L. Biance, A. Delbos, O. Pitois, "The micro-macro link for liquid foam stability".
- PE4: T.B.J. Blijdenstein, P.W.N. de Groot, S.D. Stoyanov, "On foam disproportionation and surface rheology of molecular food foaming agents".
- PE5: E. Carey, C. Stubenrauch, "Tuning foam properties of a non-ionic/cationic surfactant mixture".

- PE6: N. Louvet, E. Lorenceau, F. Rouyer, O. Pitois, "Foam permeability: a reappraisal of Lemlich's assumptions".
- PE7: A. Meagher, D. Weaire, S. Hutzler, "Evolution of a monodisperse crystalline microfoam containing a component of insoluble gas".
- PE8: T. Mönch, S. Odenbach, "Gas injection in high temperature metal melts".
- PE9: P. Novak, M. Baszczynski, T. Branyik, M. Ruzicka, J. Drahos, "Foam stability: effect of physico-chemical properties of beer".
- PE10: L. Saulnier, E. Rio, W. Drenckhan, D. Langevin, "Liquid foams aging".
- PE11: S.T. Tobin, A. Meagher, B. Bulfin, M.E. Möbius, D. Weaire, S. Hutzler, "An interactive study of the lifetime distribution of soap films".
- PE12: M. Tong, K. Cole, S. Neethling, "An integrated numerical model for predicting the evolution of the bubble size distribution in 2D foam".
- PE13: T. Trittel, Th. John, A. Eremin, R. Stannarius, "Thermotropic liquid crystal foams".
- PE14: R. Verdejo, F.J. Tapiador, M.M. Bernal, N. Bitinis, M.A. Lopez-Manchado, "Fluid dynamics of evolving foams".
- PE15: R. Petkova, S. Tcholakova, D. Sidzhakova, N.D. Denkov "Role of polymer-surfactant interaction for foam formation and stability"
- PE16: N. Alexandrov, K.G. Marinova, C. Bilke-Krause, K.D. Danov, "Effect of the EO-groups and counterions on the surface dilatational rheology, foamability and foam stability".
- PE17: R. Stanimirova, K.G. Marinova, N. Alexandrov, T. Schörck, T. Winkler, C. Bilke-Krause, "Impact of the SLES structure (number of EO-groups) and the additives on the surface rheology and foam drainage".

### G - Experimental Techniques

- PG1: E. Kolodziejczyk, S. Garcia, C. Appolonia-Nouzille, C. Curschellas, J.-M. Jung, M. Leser, C. Gehin-Delval, "Foam bubble size characterization: comparison between different techniques".
- PG2: R. Mokso, U. Kaydok, F. Marone, M. Stampanoni, "Ultra-fast X-ray tomography as a tool to study foams behaviour in 3 dimensions".
- PG3: P. Bárczy, J. Szőke, B.M. Somosvári, P. Szivoczka, T. Bárczy, "FOCUS: Foam evolution and stability in microgravity".
- PG4: N. Michailidis, F. Stergioudi, H. Omar, D. Papadopoulos, D.N. Tsipas, "Experimental and FEM Analysis of the Material Response of Porous Metals Imposed to Mechanical Loading".

### H - Industrial Processes and Sustainable Development

- PH1: I. Högberg, F. Andersson, A. Almesåker, M. Norgren, E. Hedenström, H. Edlund, "Novel surface active chelating agents with potential applications in sustainable industrial processes".
- PH2: M. Ferrari, F. Ravera, E. De Angelis, F. Suggi Liverani, L. Navarini, "Interfacial Properties of Green Coffee Oils".
- PH3: A. Turbin, G. Della Valle, J.L. Doublier, D. Marion, B. Novales, "Foaming and rheological properties of the soluble phase of wheat flour dough".