



**Sunday November 4**

1800 - 2000: Registration and Welcome reception with buffet

**Monday November 5th**

0900 - 0930: Registration

0930 - 1000: *Plasticity enhanced toughness of interfaces: implications from strain gradient plasticity*  
John W. Hutchinson, Yueguang Wei

1000 - 1030: *Modeling micropillar deformation using mechanism-based discrete dislocation plasticity*  
Padubidri J. Guruprasad, A. Amin Benzerga

1030 - 1100: Break

1100 - 1130: *Constitutive model development using dislocation dynamics*  
Tom Arsenlis, Moono Rhee, Lin Yang, Meijie Tang, Vasily V. Bulatov

1130 - 1200: *Linking plastic deformation to recrystallization in metals, using digital microstructures*  
Roland Logé, M. Bernacki, H. Resk, H. Digonnet, Y. Chastel, T. Coupez

1200 - 1330: Lunch

1330 - 1400: *An internal variable model of micropolar elastic-viscoplasticity*  
Douglas Bamman, David L. McDowell, Jason Mayeur

1400 - 1430: *Stress screening by dislocations*  
Istvan Groma, G. Gyorgyi, P.D. Ispanovity

1430 - 1500: *Size effects during compression of passivated micropillars: a dislocation dynamics study*  
Lucia Nicola, Erik van der Giessen, Alan Needleman

1500 - 1530: Break

1530 - 1600: *Plastic deformation of freestanding Cu thin films: The effects of film thickness and passivation conditions*  
Joost J. Vlassak

1600 - 1630: *Application of strain gradient plasticity to Lüders bands*  
Martín Idiart, Norman Fleck

1630 - 1700: *On stress/strain gradient theories*  
Elias C. Aifantis

## Tuesday November 6

- 0900 - 0930: *Dislocation dynamics simulations of the relaxation of intrinsic stress in thin films*  
Can Ayas, Erik van der Giessen, Alan Needleman
- 0930 - 1000: *3D studies on orientation patterning and size effects in nanoscale mechanical tests using 3D tomographic electron microscopy and dislocation density based crystal plasticity finite element simulations*  
Dierk Raabe, Franz Roters, Nader Zaafarani, Florian Weber
- 1000 - 1030: Break
- 1030 - 1100: *A small-deformation strain-gradient theory for isotropic elastic-viscoplastic materials*  
Lallit Anand, Suvrat Lele
- 1100 - 1130: *"Small is ugly": dislocation avalanches, strain bursts, and the limits of formability on the micron scale*  
Michael Zaiser
- 1130 - 1200: *On higher order boundary conditions at elastic-plastic boundaries in strain gradient plasticity*  
Christian F. Niordson
- 1200 - 1330: Lunch
- 1330 - 1400: *Micromechanical experiments and simulations of thin free-standing metal films for RF MEMS*  
Jaap den Toonder, Boudewijn van Schaik, Vincent Burg, Auke van Dijken, Marcel Brekelmans, Marc Geers
- 1400 - 1430: Deterministic modelling of dislocation pile-up: from discrete to continuum  
Ron Peerlings
- 1430 - 1500: FE modeling of bainitic steels using crystal plasticity  
N. Osipov, B. Marini, A.-F. Gourgues, F. Nguyen, V. Mounoury, G. Cailletaud
- 1500 - 1530: Break
- 1530 - 1600: *Variational framework for nonlocal standard dissipative solids in physical and material space: application to plasticity and fracture*  
Christian Miehe, F. Welschinger, D. Zimmermann
- 1600 - 1630: *Multipurpose on-chip nanomechanical laboratory for testing the size-dependent strength and ductility of submicron metallic films*  
N. André, M. Coulombier, V. De Longueville, D. Fabrègue, T. Gets, S. Hourri, A. Safi, J.-P. Raskin, Thomas Pardoen
- 1800 - 2300: Visit DAF museum with buffet

## Wednesday November 7

- 0900 - 0930: *Large indentation of crystalline solids*  
Alan Needleman
- 0930 - 1000: *Size-effects at a crack-tip interacting with a number of voids*  
Viggo Tvergaard, Christian F. Niordson
- 1000 - 1030: *An analysis of void growth due to plastic deformation using discrete dislocation dynamics*  
Javier Llorca, Ignacio Romero, Javier Segurado
- 1030 - 1100: Break
- 1100 - 1130: *Multiscale modeling of dislocation/grain boundary interactions*  
William Curtin, M.P. Dewald
- 1130 - 1200: *Multiscale modelling of nanoindentation*  
Marc Fivel
- 1200 - 1330: Lunch
- 1330 - 1430: Poster introduction session (3 minutes introductory presentations)
- 1430 - 1530: Poster discussion session with drinks
- 1530 - 1800: Multi-Scale Experimental Lab-Market and social get-together

## Thursday November 8

- 0900 - 0930: *Computing the deformation of polycrystalline aggregates with a view to comparison with full field measurements*  
Samuel Forest, Asmahana Zéghadi, Filip Siska, Franck NGuyen
- 0930 - 1000: *Multiscale modeling and simulation of experimentally-determined orientation fields in mesocrystals*  
Bob Svendsen, Vladislav Levkovitch, Mark Henning, Horst Vehoff
- 1000 - 1030: Break
- 1030 - 1100: *Grain boundary structure, properties and implications for dislocation/disclination mechanics in FCC Metals*  
Mark A. Tschoopp, Garritt Tucker, Jason Mayeur, David L. McDowell
- 1100 - 1130: *Micro-mechanical modelling of plasticity and damage induced by martensitic transformations in TRIP-assisted carbon steels*  
Akke S.J. Suiker, Sergio Turteltaub, Denny D. Tjahjanto
- 1130 - 1200: *Multiscale modelling of viscoplastic polycrystals using statistical approaches at the mesoscale*  
Ricardo A. Lebensohn, Carlos N. Tomé, Pedro Ponte Castañeda
- 1200 - 1330: Lunch
- 1330 - 1400: *Meso-scale numerical simulation of plasticity in polycrystalline metals*  
Laurent Stainier
- 1400 - 1430: *A field theory for mesoscopic dislocation mechanics*  
Satya Varadhan, Vincent Taupin, Luc Tartar, Anish Roy, Raurabh Puri, Claude Fressengeas, Amit Das, Armand Beaudoin, Amit Acharya
- 1430 - 1500: *Bauschinger effect in thin metal films on compliant substrates*  
Johan Hoefnagels, Joost Vlassak
- 1500 - 1530: Break
- 1530 - 1600: *Collective dislocation dynamics and statistical foundation of crystal plasticity theory*  
Anter El-Azab, Jie Deng, B.C. Larson
- 1600 - 1630: *Hardening and softening mechanisms at decreasing microstructural length scales*  
Peter Gudmundson, Carl F.O. Dahlberg
- 1830 - 2400: Departure bus to Kasteel Heeze & Symposium banquet