

Session 1 (Tues pm) Chair: Shaun HowardArthur Sakellariou *Welcome*

- (*)John Sader Dynamic Force Measurements and Mechanics of AFM Cantilevers in fluids
 Drew Evans A Stress-ful PhD: Theory and Experiments
 Christine Henry Nanorheology, the story so far
 Nobuo Maeda SFA analysis of air and its implications
 Esben Thormann Single molecule dynamic force spectroscopy: The effect of molecular compliance on unbinding kinetics

Session 2 (Wed am) Chair: Gerd Schroeder

- (*)Yildiray Cinar An experimental and numerical investigation of crossflow effects in two-phase displacements
 Viet Nguyen Simulating fluid imbibition using network model of reservoir rock
 Abid Ghous Formation Evaluation using X-Ray micro-computed tomography
 Michael Turner Tomographic analysis of partially saturated unconsolidated sediments
 Holger Averdunk Watersheds and their discontents
 Adrian Sheppard Dynamic Tomography

Session 3 (Wed pm) Chair: Vanessa Robins

- (*)Olaf Delgado Patterns in space, Part II: Nets
 Toen Castle Coordination sequences and geometric properties of tilings in the hyperbolic plane
 Myf Evans Generalising helices through triply-periodic minimal surfaces
 Mohammad Saadatfar Grain separation and rock physics
 (*)Stuart Ramsden Publishing Computations - the EPINET Story.

Session 4 (Thurs am) Chair: Christoph Arns

- (*)Ira Cooke Simulating lipid bilayers at large length scales: patchy vesicles, cylindrical micelles and coated viruses
 Drew Parsons Temperature-independent Monte Carlo, or how to hit all the birds with one stone
 Dave Dunstan Balls to rubber elasticity
 Rosemary White From microtubule self-assembly to micropores in soil - a range of "complex" problems in plant biology
 (*)Enrico Scalas Uncoupled continuous-time random walks

Session 5 (Thurs pm) Chair: Chiara Neto

- (*)Mario Nicodemi Shear instabilities in granular mixtures
 Tony Roberts Breaking and bending porous materials
 Ankie Larsson Crystallography of silica-carbonate biomorphs
 Par Wedin Drying stress in paper coatings
 Shannon Notley Preparation and applications of model wood biopolymer thin films

Conference Dinner (Thurs night)

Mark Knackstedt Report from the Head of Department and annual meeting

Session 6 (Fri am) Chair: Mika Kohonen

- Casa Dalton Bubble Coalescence: the effect of electrolyte mixtures
 Xuehua Zhang Recent results of nanobubble analysis
 Stjepan Marcelja Interactions at electrolyte surfaces
 (*)Barry Ninham The Present State of Molecular Forces in Colloid Science and Biology -
 How we nearly lost the farm and how to get it back...
 Tim Senden The evolution of devonian fish

Vanessa Robins *Closing remarks*

SCHEDULE OUTLINE - Materials and Complexity III - Kioloa 2005.

Monday Dec 5

Advance party to Kioloa
AV set up and food shopping

Tuesday Dec 6

1030 Coach departs RSPHysSE
1330 Arrive Kioloa
Lunch
Move in to rooms/ unpack
1500-1730 *Session 1*
1930 BBQ Dinner

Wednesday Dec 7

0800-0900 Breakfast
Discussion time
1000-1230 *Session 2*
1300-1400 Lunch
Discussion time
1500-1730 *Session 3*
Free time
1930 Pasta dinner
2100 Rob Sok hosts ...

Thursday Dec 8

0800-0900 Breakfast
Discussion time
1000-1230 *Session 4*
1300-1400 Lunch
Discussion time
1500-1730 *Session 5*
1815 Bus departs Kioloa for
1900 Conference Dinner
2300 Bus departs Ulladulla

Friday Dec 9

0800-0900 Breakfast
Discussion time
1000-1230 *Session 6*
1300-1400 Lunch
Pack up.
1500 Coach departs Kioloa
1800 Coach arrives RSPHysSE

Saturday Dec 10

Final clean up and departure.