

**Colloquium of the International Graduate
Research Training Group I524 – SSNI –
Self-Assembled Soft-Matter Nanostructures
at Interfaces**



**Monday, November 07rd 2011, 09.15 h
Technische Universität Berlin
TC-Building, Room TC 014
Straße des 17. Juni 124, 10623 Berlin**

Prof. Dr. Mark Rutland

School of Chemical Science and Engineering – KTH Stockholm, Sweden

"Pulp friction: nanotribology using AFM"

Over the last 10 years or so we have studied the relationship between surface forces and friction. How do the forces measured on approach affect the frictional response of a contact? We consider mainly aqueous systems, which range from how ink particles are separated from paper during recycling, to the forces between two surfaces in the presence of saliva. The manufacture of a novel, dual responsive polymer brush is described and the corresponding changes in friction, which are observed as the conformation of the brush changes are described. How does polyelectrolyte adsorption affect frictional forces? Can the structuring of ionic liquids be used to mediate friction? Finally, can we understand the tribology of hair fibres using AFM – and see how shampoo/conditioner affects interactions?

We cordially invite everybody who is interested.

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