

4th UK-China Symposium on Lubrication and Chemical Aspects of Wear

Chilworth Manor Hotel, Southampton, SO16 7PT

Day 1 – 29th March 2012

- 10.00-13.00 REGISTRATION DESK OPEN (Herb Garden Court)
- 13.00-13.10 Opening Address
Prof. Robert Wood (University of Southampton)
- KEYNOTE I
- 13.10-14.00 Prof. Weimen Liu (LICP)
Synthetic lubricants for high-tech industries
- SESSION I TRIBO-CORROSION
- 14.00-14.30 Prof. Margaret Stack (University of Strathclyde)
Tribo-corrosion maps and mechanisms
- 14.30-14.50 Prof. Chengqing Yuan (Wuhan University of Technology)
*Study on coupling wear mechanisms between wear and corrosion
on rubbing pairs in H₂O₂ solutions*
- Afternoon Coffee (14.50-15.10)
- SESSION II LUBRICATION I
- 15.10-15.40 Prof Xinping Yan (Wuhan University of Technology)
*On-line condition monitoring and remote fault diagnosis for
tribological systems of marine power equipment*
- 15.40-16.00 Mr Martin Evans (nCATS)
*Formation mechanisms of butterflies and white etching cracks
(WEC) in 100Cr6 bearing steel under rolling contact fatigue for
wind turbine gearbox bearing applications*

- 16.00-16.20 Dr John Walker (nCATS)
Surface texture and tribo-film formation on hyper-eutectic Al-Si cylinder liner surface subject to start-stop transient velocities
- 16.20-16.40 Dr Yong Chen (University of Hertfordshire)
The tribological properties of zinc borate ultra-fine powder as a lubricant additive in sunflower oil
- 16.40-17.40 Closing Remarks and Drinks Reception
- 18.00-20.30 Conference Meal - Water Margin Restaurant, North Baddesley.
Taxis will be arranged to transport to the restaurant and back.

Day 2 – 30th March 2012

- 9.30-10.00 Dr Hongyuan Zhao (University of Leeds)
Lubricating DLC for optimum fuel economy and durability
- SESSION III: (9.15-11.00) BIO-TRIBOLOGY
- 10.00-10.30 Prof Zhendong Dai (Nanjing University of Aeronautics and Astronautics)
Frictional safety margin of gecko moving on inclined substrates
- 10.30-10.50 Prof Feng Zhou (LICP)
Soft interfaces for marine anti-biofouling and drag reduction
- 10.50-11.10 Prof Xiuqin Bai (Wuhan University of Technology)
Study on bionic preparation of shell surface microstructure for ship anti-fouling

Morning Coffee (11.10-11.40)

SESSION IV: (11.40-12.30) MODELLING

- 11.40-12.10 Prof Dongfeng Diao (Xi'an Jiaotong University)
New potential of graphene layer for controlling nano-wear

12.10-12.30 Prof Xinlei. Gao (Wuhan Polytechnic University)
Quantitative structure tribo-ability relationship model to estimate anti-wear properties of lubricant additives with back propagation neural network

12.30-12.50 Dr Lin Dong (Xihua/Sheffield University)
Finite element assessment of the temperature field couple under contact resistance heat and friction heat between an aluminium/stainless steel composite and metal impregnated carbon.

LUNCH + posters & equipment exhibition (12.50-14.00)

KEYNOTE II

14.00-14.50 Mr Barry Burdett (Rolls-Royce Plc)
Unlubricated tribology in light water nuclear reactors

SESSION V: LUBRICATION II

14.50-15.15 Dr Monica Ratoi (nCATS)
The mechanism of IF-WS2 nano-additives

15.15-15.40 Prof Peter Dearnley (nCATS)
The response of hard coated materials to chemical based wear

Afternoon Coffee (15.40-16.10)

SESSION VI: TRIBOLOGY

16.10-16.30 Mr Adil Saeed (Bournemouth University)
An experimental study of tribo-corrosion in historical military vehicles

16.30-16.50 Prof Yongzhen Zhang (Henan University of Science and Technology)
Slip potential for persons of different ages

16.50-17.00 Closing Remarks and Farewell

17.00 End of Conference