

## MAX-PLANCK-UBC CENTRE FOR QUANTUM MATERIALS

International Summer School on Surfaces and Interfaces in Correlated Oxides 301 Hugh Dempster Pavilion, 6245 Agronomy Road, Vancouver, BC V6T 1Z4



|               | Monday  | Tuesday  | Wednesday   | Thursday   |
|---------------|---|--|---|--|
|               | August 29, 2011   | August 30, 2011  | August 31, 2011   | September 1, 2011  |
|               | Thin Film Synthesis   |  | Electronic Properties   | Electronic Properties  |
| 8:30 - 10:00  | Darrell Schlom Oxide Molecular-Beam Epitaxy - an introduction with examples   | Peter Abbamonte Applying XAS and RXD to the investigation of transition-metal-oxide heterostructures   | Daniel Khomskii Theory of correlated oxides   | Mona Berciu Polarons in bulk and near surfaces   |
| 10:00 - 10:30 | Coffee break & discussions  | Coffee break & discussions   | Coffee break & discussions  | Coffee break & discussions   |
| 10:30 - 12:00 | Ionela Vrejoiu Pulsed laser deposition of superlattices and nanostructures  | Giacomo Ghiringhelli Polarization dependent XAS and RIXS for the study of the electronic and magnetic structure of oxide thin films and interfaces | Thilo Kopp Aspects of the theory of oxides interfaces   | Alexander Boris Spectroscopic ellipsometry: application to electrodynamics of correlated electron materials and oxide superlattices      |
| 12:00 - 13:00 | Lunch break   | Lunch break  | Lunch break   | Lunch break  |
|               | Resonant X-Ray Methods  |  |   | Microscopy   |
| 13:00 - 14:30 | Maurits Haverkort Pedagogical introduction to the theory of x-ray absorption (XAS), resonant x-ray diffraction (RXD) and resonant inelastic x-ray scattering (RIXS) | Jochen Mannhart Oxide electronics – an opportunity for electronics   | Rob Kiefl Beta detected NMR and low energy muSR   | Yan Pennec Introduction to Scanning Tunneling Microscopy: An atomic perspective on condensed matter physics.                             |
| 14:30 - 15:00 | Coffee break & discussions  | Coffee break & discussions   | Coffee break & discussions  | Coffee break & discussions   |
| 15:00 - 16:30 | Ralph Claessen Photoelectron spectroscopy of functional oxides: Heterostructures and buried inter- faces  | Joshua Folk Thermopower as a probe of interacting condensed matter systems   | Bernhard Keimer Neutron reflectometry: tutorial introduction and application to electronic properties of interfaces | Gianluigi Botton Introduction to Scanning Transmission Electron Microscopy and Electron Energy Loss Spectroscopy for the study of oxides |
| 16:30 - 18:30 | Postdoc / PhD talks<br>16:30 - S. G. Altendorf;<br>17:00 - F. Trousselet; 17:30 - S. Hossain  | Poster Session   | Postdoc / PhD talks   |  |
| 18:30 - 21:30 |   |  | Reception<br>St. John's College<br>Social Lounge, 2111 Lower Mall   |  |