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| **Telluride 2013- Workshop on Competing Interactions and Colossal Responses in Transition Metal Oxides****July 15-19, 2013. Telluride Intermediate School** |
|  |  | **Sunday July 14: Registration-Welcome Reception**  |  |  |
|  | **6:00-9:00PM** | **Sunday Night TSRC Welcome Reception for all scientists, New Sheridan Bar, 231 W Colorado Ave, in Telluride. Cash Bar, Discounted Drinks, Free Pool (no food)** |  |  |
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| **Monday July 15: 4d and 5d Systems** |
| Talk # | Time |  |  |  |
|  | 8:15-8:40 | Breakfast at TSRC |  |  |
| 0 | 8:40-8:45 | Welcome and announcements | Organizers |  |
| 1 | 8:45-9:15 | Spin-orbit coupling induced novel phases in Mott insulating oxides | George Jackeli ( MPG STUTTGART) |  |
| 2 | 9:15-9:45 | RIXS study of the magnetic and charge excitations from doped single-layer and bilayer iridates" | Xuerong Liu (BNL) |  |
| 3 | 9:45-10:15 | Magnetic and crystal structures of the honeycomb-lattice Na2IrO3 and square-lattice Sr2IrO4 | Feng Ye (ORNL) |  |
| 4 | 10:15-10:45 | Exploring the evolution of the electronic ground state across the metal-insulator phase transition within Sr3(Ir1-xRux)2O7  | Stephen Wilson (Boston College) |  |
|  | 10:45-11:15 | **Break** |  |  |
| 5 | 11:15-11:45 | Investigations of the Slater insulator NaOsO3 and the Jeff=1/2 Mott insulating Iridates | Stuart Calder (ORNL) |  |
| 6 | 11:45-12:15 | Strong covalency and ligand holes, or how to make magnetic gold?  | Daniel Khomskii (Köln) |  |
| 7 | 12:15-12:45 | An overview of some recent iridate work from UT/ORNL | D. Mandrus (UT/ORNL) |  |
|  | **6:00-9:00** | **TSRC picnic at Ah Haa, 300 S. Townsend** |  |  |
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| **Tuesday July 16: 3d Systems, Multiferroics** |  |  |
|  | 8:15-8:45 | Breakfast at TSRC |  |  |
| 8 | 8:45-9:15 | Coupling magnetism to electricity in multiferroic heterostructures | Ramamoorthy Ramesh (ORNL) |   |
| 9 | 9:15-9:45 | Studies of insulating spinel oxides: Magnetocapacitance and magnetostructural coupling  | Ram Seshadri (UC-Santa Barbara) |  |
| 10 | 9:45-10:15 | Search for new magneto(di)electrics: the case of some oxides with magnetic frustration | Antoine Maignan (CNRS Caen) |  |
| 11 | 10:15-10:45 | X-Ray Imaging of cycloidal Magnetic Domains in Ferroelectric Monodomain BiFeO3 | Laurent Chapon (ILL) |  |
|  | 10.45-11:15 | **Break** |  |  |
| 12 | 11:15-11:45 | Magneto-orbital helicies, multiferroicity, and structural skyrmions in CaCuxMn7-xO12 | Roger Johnson (Oxford) |  |
| 13 | 11:45-12:15 | Field Effect on the magnetic structure of the multiferroic Ba2CoGe2O7 | Clarina dela Cruz (ORNL)  |  |
| 14 | 12:15-12:45 | Field dependence of the Spin State and Spectroscopic Modes of Multiferroic BiFeO3 | Randy Fishman (ORNL) |  |
|  | **6:00-7:15** | **TSRC Town meeting at the Sheridan Opera House 110 N. Oak St** |  |  |
|  | 7:30 - 9:00 | Joint Discussion Session - 5d systems-Telluride Middle school | Jackeli + Cheong |  |
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| **Wednesday July 17: Oxides for Energy, 3d Systems (I)** |
| Talk # | Time |  |  |  |
|  | 8:15-8:45 | Breakfast at TSRC |  |  |
| 15 | 8:45-9:15 | Molecular Scale Understanding and Design of Perovskite Oxides for Solid Oxide Fuel Cell Cathodes | Dane Morgan (Wiscosin) |  |
| 16 | 9:15-9:45 | Theoretical proposals using oxide heterostructures | Satoshi Okamoto (ORNL) |  |
| 17 | 9:45-10:15 | Screening of charge and structural motifs in oxides  | Peter Littlewood (ANL) |  |
| 18 | 10:15-10:45 | Lattice dynamical response to FM – PM phase transition in CMR manganites | Frank Weber (Karlsruhe)  |  |
|  | 10:45-11:15 | **Break** |  |  |
| 19 | 11:15-11:45 | Competition, disorder and nanoscale fluctuations in strongly correlated and frustrated systems | Simon Billinge (Columbia) |  |
| 20 | 11:45-12:15 | Nanoscale imaging of electronic texture: The example of antiferromagnetism in La2-2xSr1+2xMn2O7 | Mirian Garcia- Fernandez (BNL) |  |
| 21 | 12:15-12:45 | Dynamic Charge Stripes in La2-xSrxNiO4 Detected by Inelastic Neutron Scattering | Dmitry Reznik (Colorado) |  |
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| **Thursday July 18: 3d Systems (II) and Thin Films and Heterostructures** |
|  | 8:15-8:45 | Breakfast at TSRC |  |  |
| 22 | 8:45-9:15 | Revisiting the magnetism of LaCoO3 | Jaime Fernandez-Baca |  |
| 23 | 9:15-9:45 | Controlling Interface Magnetism and Transport via Oxygen Vacancy Ordering in Perovskite Cobaltites | Chris Leighton (Minnesota) |  |
| 24 | 9:45-10:15 | Spin configurations and spin dynamics in the extended kagome systems YBaCo4O7 and YBaCo4O7.1 | Mike Hoch (Magnet Lab) |  |
| 25 | 10:15-10:45 | Anion-based approaches to tunable functionality in oxide heterostructures | Steve May (Drexel) |  |
|  | 10:45-11:15 | **Break** |  |  |
| 26 | 11:15-11:45 | Manipulating electronic and magnetic degrees of freedom in complex oxide heterostructures | John Freeland (ANL) |  |
| 27 | 11:45-12:15 | Tailoring properties of nickelates, one atomic layer at a time | Anand Bhattacharya (ANL) |  |
| 28 | 12:15-12:45 | Oxygen vacancy ordering: a degree of freedom that can control the structural, electronic, and magnetic properties of oxide films | Maria Varela (ORNL) |  |
|  | 7:30 - 9:00 | Discussion session topic TBD -Telluride Middle School |  |  |
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| **Friday July 19: Chirality, Iridates** |
|  | 8:15-8:45 | Breakfast at TSRC |  |  |
| 29 | 8:45-9:15 | Spontaneous quantum-Hall effect in itinerant chiral magnets | Ivar Martin (ANL)   |  |
| 30 | 9:15-9:45 | What X-ray Dichroism tells us about Chirality and Orbital Currents | Mike Norman (ANL) |  |
| 31 | 9:45-10:15 | Suppression of CDW order and the connection between pseudogap and phase coherence in NbSe2 | Stephan Rosenkranz (ANL) |  |
| 32 | 10:15-10:45 | Quo Vadis, Iridates? | John Mitchell (ANL) |  |
|  | 10:45-11:15 | **Break** |  |  |
|  | 11:15-11:45 | Wrap-up discussion | Mitchell/Fernandez-Baca |  |