Gordon Research Conference

Multiferroic and Magnetoelectric Materials

August 7-12, 2016

Bates College, Lewiston, ME

Chair: Bernd Lorenz Vice Chair: Thomas Palstra

http://www.grc.org/programs.aspx?id=16774

Meeting Description

The 2016 Gordon Research Conference on Multiferroic and Magnetoelectric Materials is the second GRC Meeting presenting the latest developments and advances in the investigation, design, and applications of multifunctional materials with a strong coupling of magnetic and dielectric orders. The conference topics include the synthesis of new multiferroic materials, studies of the fundamental physical mechanisms leading to the coexistence and mutual interaction of magnetism and electrical polarization, the control of multiferroic properties by external electric and magnetic fields as well as pressure, novel magnetoelectric effects in nontrivial topological systems (such as skyrmions), new functionalities of multiferroic domains and domain boundaries, multiferroic effects in thin films and heterostructures, spin-orbit interaction in 5d compounds, utilization of multiferroics and magnetoelectrics for devices and applications, and the theory and modeling of multiferroic properties. The program is designed to cover the broad range of multiferroic and magnetoelectric materials and phenomena with focus on new developments and emerging topics. The meeting will bring together scholars from different scientific disciplines (including physics, chemistry, materials science, engineering, etc.) representing all aspects of multiferroic and magnetoelectric materials, from fundamentals to applications. Invited speakers and poster presenters are encouraged to discuss their unpublished results representing the recent progress and advances as well as defining the next challenges for the future development of the field. The format of the Gordon Research Conference will allow for plenty of opportunities to discuss the latest achievements with the focus on extended discussion sessions after each talk, the presentation of results from all participants in the afternoon poster sessions, and with additional time for informal meetings during the afternoon and evening hours. All participants are encouraged to discuss their most recent (including unpublished) results to kick-start new efforts and establish worldwide collaborations.

Preliminary Program

The topics and speakers for the conference sessions are displayed below (italics denote discussion leaders). The Conference Chair is currently developing their detailed program, which will include the complete meeting schedule, as well as the talk titles for all speakers. The detailed program will be available by **April 7, 2016**. Please check back for updates.

- **Theory and Models**
  (*Silvia Picozzi* / Nicola Spaldin / Daniel Khomskii / Philippe Ghosez)
- **New Multiferroic and Magnetoelectric Materials**
  (*Kee-Hoon Kim* / Yoshinori Tokura / Craig Fennie / Konstantin Zvezdin / Martha Greenblatt)
- **Thin Films and Heterostructures**
  (*John Prater* / Ramamoorthy Ramesh / Sebastiaan Van Dijken / Yayoi Takamura)
- **Multiferroic Domains, Domain Walls, and Interfaces**
  (*Weida Wu* / Manfred Fiebig / Sang-Wook Cheong / Ingrid Mertig / Manuel Bibes)
- **Novel Control of Multiferroics by Pressure and Strain**
  (*Vivien Zapf* / Tsuyoshi Kimura / Taka-Hisa Arima / Feng Ye)
- **Magnetoelectricity and Topological Orders**
  (*Masahita Mochizuki* / Maxim Mostovoy / Avadh Saxena / Shinichiro Seki / Alois Loidl)
- **Near Room Temperature Multiferroics and Novel Interactions**
  (*Tanusri Saha-Dasgupta* / Je-Geun Park / Marisa Medarde / Paul C. Chu)
- **Spectroscopy and Scattering, Symmetry**
  (*Randy Fishman* / Janice Musfeldt / Jens Kreisel / Laurent Chapon / Jeffrey Lynn)
- **Devices and Applications**
  (*Peter Finkel* / Ram Katiyar / Nian Sun)