

**Mon 9 Apr 2012**

■ 12:30 - 14:00 Lunch

■ 14:00 - 15:20

| TUTORIAL: Igor Lukyanchuk: Multifunctional materials for memory storage devices

■ 15:20 - 15:50 Coffee

■ 15:50 - 17:10 TUTORIAL: José Pedro Rino: Molecular Dynamics Simulation

**Tue 10 Apr 2012**

09:10 - 10:00 José Pedro Rino: CaTiO<sub>3</sub>: a molecular dynamics study

■ 10:00 - 10:30 Coffee

10:30 - 11:20 Zheng Gai: Surface of Perovskite Manganites and Beyond

11:30 - 12:20

| Adilson J A de Oliveira: Magnetostriction and anisotropy effects at low temperatures in multiferroic composites

■ 12:30 - 14:00 Lunch

■ 14:00 - 15:20

| TUTORIAL: Daniel Khomskii: Multiferroics: different ways to combine magnetism and ferroelectricity

■ 15:20 - 15:50 Coffee

■ 15:50 - 17:10

| TUTORIAL: Tsuyoshi Kimura: Magnetic symmetry and magnetoelectric effect

**Wed 11 Apr 2012**

09:10 - 10:00

| Daniel Khomskii: Coupled magnetic and electric properties of frustrated Mott insulators: currents, dipoles and monopoles

■ 10:00 - 10:30 Coffee

10:30 - 11:20

| Tsuyoshi Kimura: Recent progress on magnetoelectrics due to spiral magnetic orders

11:30 - 12:20

| Manuel Henrique Lente: Ferroelectric domain dynamics in ferroelectric ceramics at low and high electric fields regime

■ 12:30 - 14:00 Lunch

mmm@ferroix.net

14:00 - 15:20

TUTORIAL: James Scott: Introduction to Nano-domains and multiferroics.

15:20 - 15:50 Coffee

15:50 - 17:10

TUTORIAL: Ricardo Lobo: Infrared spectroscopy in crystalline materials

## Thu 12 Apr 2012

09:10 - 10:00 James Scott: Multiferroics and Nano-domains

10:00 - 10:30 Coffee

10:30 - 11:20

Ricardo Lobo: What can infrared spectroscopy tell us about the magneto-electric coupling in multiferroic materials?

11:30 - 12:20 Malik Maaza: Photonic Multifunctionality in Mott's Type Oxide: VO<sub>2</sub>

12:30 - 14:00 Lunch

14:00 - 15:20

TUTORIAL: Alexei Gruverman: Advanced Piezoresponse Force Microscopy for Nanoscale Studies of Ferroelectric Structures

15:20 - 15:50 Coffee

15:50 - 17:10 Student sessions

## Fri 13 Apr 2012

09:11 - 10:00

Alexei Gruverman: Electronic Transport Properties of Ultrathin Ferroelectric Structures

10:00 - 10:30 Coffee

10:30 - 11:20

Pavlo Zubko: Domains and Electrostatic Coupling in Ferroelectric Superlattices

11:30 - 12:20 Malik Maaza: NANOSciences AFrican NETwork

12:30 - 14:00 Lunch

14:00 - 15:20

TUTORIAL: Juras Banys: Microwave spectroscopy of materials. Application for ferroelectrics

15:20 - 15:50 Coffee

15:50 - 17:10 Student sessions

**Mon 16 Apr 2012**

09:10 - 10:00

Juras Banyas: Dielectric spectroscopy investigations of 0.4NBT-(0.6-x)ST-xPT solid solutions

■ 10:00 - 10:30 Coffee

10:30 - 11:20

Sergio Gama: Application of Magnetocaloric Materials in Thermomagnetic Devices

11:30 - 12:20

Pavlo Zubko: Tuning the electronic properties of perovskite nickelates

■ 12:30 - 14:00 Lunch

■ 14:00 - 15:20

TUTORIAL: Gustau Catalan: Strain and Strain Gradient Coupling in Ferroelectrics

■ 15:20 - 15:50 Coffee

■ 15:50 - 17:10

TUTORIAL: Alexander Golubov: Introduction to the physics of proximity effect in Superconductor/Normal Metal and Superconductor/Ferromagnet structures

**Tue 17 Apr 2012**

09:10 - 10:00

Sergio Sombra: Magneto-dielectric matrix composites for RF and Microwave applications.

■ 10:00 - 10:30 Coffee

10:30 - 11:20

Gustau Catalan: Skin layers in single crystals: impromptu thin films

11:30 - 12:20

Alexander Golubov: Coexistence of superconductivity and magnetism: theory and experiment

■ 12:30 - 14:00 Lunch

■ 14:00 - 15:20

TUTORIAL: Marty Gregg: Basic Aspects of Domains and Domain Walls in Ferroics

■ 15:20 - 15:50 Coffee

15:50 - 17:10

TUTORIAL: Orlando Auciello: Science and Technology of Multifunctional Materials: From Science in University and Government Laboratories to Start-ups to Impact Society

**Wed 18 Apr 2012**

09:10 - 10:00 Marty Gregg: Domains in Ferroelectric Nanostructures

10:00 - 10:30 Coffee

10:30 - 11:20

Ivair Santos: Structurally tuned multiferroic state in BiFeO<sub>3</sub>-based polycrystalline compounds

11:30 - 12:20

Orlando Auciello: Science and Technology of Multifunctional Oxide and Ultrananocrystalline Diamond (UNCD) Films and Applications to a New Generation of Multifunctional Devices/Systems

12:30 - 14:00 Lunch

14:00 - 15:20

TUTORIAL: Serge Brazovski & Natasha Kirova: Organic Conductors: firework of electronic phases and workshop for solitons.

15:20 - 15:50 Coffee

15:50 - 17:10 Student / Participant Sessions

**Thu 19 Apr 2012**

09:10 - 10:30

Serge Brazovski : Electronic States and Phases Induced by Electric or Optical Impacts.

10:30 - 10:50 Coffee

10:50 - 11:40 Stephen Rowley: Ferroelectric Superconductors

11:40 - 12:30

Ram Katiyar: Investigations on magnetoelectric multiferroic thin films and nanostructures

12:30 - 14:00 Lunch

14:00 - 15:20 Student / Participant Sessions

15:20 - 15:50 Coffee

15:50 - 17:10 Student / Participant Sessions

[mmm@ferroix.net](mailto:mmm@ferroix.net)

**Fri 20 Apr 2012**

**09:10 - 09:55**

Natasha Kirova: Ferroelectricity in carbon-based materials: optoelectronic multifunctionality.

**09:55 - 10:40**

George Japaridze: Magnetic-field switchable metal-insulator transition in a quasi-helical > conductor

■ **10:40 - 11:00** Coffee

**11:00 - 11:45**

Dionys Baeriswyl: Quantum phase transitions in correlated many-electron systems, a variational perspective

**11:45 - 12:30**

Igor Lukyanchuk: Domains in functional materials: from fundamentals to applications

■ **12:30 - 14:00** Lunch