

ICMR Summer Workshop on Frontiers of Complex Oxides
 University of California, Santa Barbara
 July 6 – July 11, 2008

Sunday July 6, 2008 – Lagoon Plaza, UCEN	
6:00 pm to 8:00 pm	Reception and Registration
Monday, July 7, 2008 – Engineering Sciences Building, Room 1001	
Note: Breakfast each day will be in the dining commons for dorm dwellers or at the Best Western South Coast Inn for hotel dwellers	
9:00 am to 9:15 am	Nicola Spaldin, ICMR Director – Introduction
	SESSION I GROWTH.
9:15 am to 9:45 am	DISCUSSION LEADER Art Ramirez
9:45 am to 10:30 am	Maarit Karppinen, Helsinki University of Technology – New Material Synthesis and Surface Engineering by Atomic Layer Deposition
10:30 am to 11:00 am	Coffee Break
11:00 am to 11:45 am	Darrell Schlom, Penn State University – A Thin Film Approach to Engineering Functionality into Oxides
11:45 am to 12:30 pm	Masaki Azuma, Kyoto University – Charge and Orbital Orderings in Some New Oxides
12:30 pm to 1:30 pm	Lunch at ESB
AFTERNOON SESSION WILL TAKE PLACE AT THE MSI BUILDING RM 1302	
1:30 pm to 2:00 pm	Jam Session: What new growth capabilities would be useful?
	SESSION II. PHENOMENA. Discussion Leader: Hide Takagi
2:00 pm to 2:45 pm	Arunava Gupta, University of Alabama - Double Perovskite Thin Films and Heterostructures
2.45 pm to 3.30 pm	Yoshi Tokura, University of Tokyo - Dynamical Magnetoelectric Effect in Oxide Multiferroics
3.30 pm to 3.50 pm	Seung-Hun Lee, University of Virginia - Quantum Spin Dimer System Ba ₃ Cr ₂ O ₈
4:00 pm to 6:00 pm	Poster Session / Discussion time (MRL Ground Floor Patio)
6:15 pm	Dinner (Goleta Beach BBQ)

ICMR Summer Workshop on Frontiers of Complex Oxides
 University of California, Santa Barbara
 July 6 – July 11, 2008

Tuesday, July 8, 2008 – Engineering Sciences Building, Room 1001	
	SESSION III DEFECTS
9:00 am to 9:30 am	DISCUSSION LEADER Susanne Stemmer
9:30 am to 10:15 am	Matt McCluskey, Washington State University – Hydrogen in Bulk and Nanoscale Zinc Oxides
10:15 am to 10:45 am	Break
10:45 am to 11:30 am	David Keeble, University of Dundee – Point Defect Characterisation in Perovskite Oxides
11:30 am to 12:15 pm	Larry Halliburton, West Virginia University – Use of Photoinduced Electron Paramagnetic Resonance to Investigate Donors and Acceptors in ZnO
12:15 pm to 1:45 pm	Lunch at ESB
1:45 pm to 2:00 pm	Regina Dittmann, Julich – Resistive Switching in Complex Oxides
2:00 pm to 2:45 pm	David Look, Wright State University– Conduction in ZnO and Other Oxides; Defects and Impurities
3:00 pm to 3:30 pm	Break
3:30 pm to 4:15 pm	Masaki Kawasaki, Tohoku University– ZnO-based Heterostructures
4:15 pm to 6:00 pm	Poster Session / Discussion time (ESB)
6:00pm	Dinner at ESB
Wednesday, July 9, 2008 – Engineering Sciences Building, Room 1001	
	SESSION IV: OXIDE-OXIDE INTERFACES
9:00 am to 9:30 am	DISCUSSION LEADER: Harold Hwang
9:30 am to 10:30 am	PLENARY LECTURE Herb Kroemer, UCSB– A Look Across the Fence: Interface Issues in Conventional Semiconductors
10:30 am to 11:00 pm	Break
11:00 am to 11:45 am	Jochen Mannhart, University of Augsburg – 2-DEGs in Oxide Heterostructures
11:45 am to 12:30 pm	Jacques Tchakalian, University of Arkansas – Orbital Reconstruction, Covalent Bonding and Magnetism at an Oxide Interface
12:30 pm to 1:45 pm	Lunch at ESB
1:45 pm to 2:30 pm	Josep Fontcuberta, Barcelona – Phase Separation in (001) and La _{2/3} Ca _{1/3} MnO ₃ Epitaxial Thin Films

ICMR Summer Workshop on Frontiers of Complex Oxides
 University of California, Santa Barbara
 July 6 – July 11, 2008

2.30 pm to 2.50 pm	Anand Bhattacharya, Argonne National Lab - Digital superlattices of $\text{LaMnO}_3/\text{SrMnO}_3$: Ordered Analogs and Interfacial Reconstruction
2.50 to 3.15 pm	Break
3.15 pm to 4:00 pm	Despina Louca, University of Virginia - $\text{Tb}_3(\text{Ga/Fe})_5\text{O}_{12}$ garnet which is both dielectric and frustrated
4:00 pm to 6.00 pm	Poster Session / Discussion time (ESB)
6:00 pm	Dinner (Banquet at Faculty Club)
Thursday, July 10, 2008 – Engineering Sciences Building, Room 1001	
	SESSION V. THEORY
9:00 am to 9:30 am	DISCUSSION LEADER: Nicola Spaldin
9:30 am to 10:10 am	Elbio Dagotto, University of Tennessee and Oakridge National Lab – Recent Computational Results for Models of Strongly Correlated Electrons
10:10 am to 10:40 am	Break
10:40 am to 11:20 am	Claude Ederer, Trinity College Dublin – Towards a Many-Body Theory for Real Materials
11:20 am to 12:00 pm	Tanusri Saha-Dasgupta, Bose Center – Fascinating World of Double Perovskites
12:00 pm to 1:30 pm	Lunch at ESB
AFTERNOON SESSION WILL TAKE PLACE AT THE MSI BUILDING RM 1302	
1:30 pm to 2:10 pm	Silvia Picozzi, INFN – First Principals Approach to Magnetically – Induced Ferroelectricity in Manganites
2:10 pm to 2:50 pm	David Vanderbilt, Rutgers University – First Principals Study of Improper Ferroelectricity in TbMnO_3
2:50 pm to 3:20 pm	Break
3:20 pm to 4:00 pm	Daniel Khomskii, University of Koln – Spontaneous Currents and Polarization in Mott Insulators: Are Electrons Really localized?
4:00 pm to 4:40 pm	Maxim Mostovoy, University of Groningen – Magnetoelectric Behavior of Frustrated Magnets
4.40 pm to 5.00 pm	Jeroen van den Brink, Leiden University – Dispersing Bimagnons in Cuprates Observed by Resonant Inelastic X-ray Scattering
5:15 pm	Free Evening

ICMR Summer Workshop on Frontiers of Complex Oxides
University of California, Santa Barbara
July 6 – July 11, 2008

Friday, July 11, 2008 – Engineering Sciences Building, Room 1001	
9:00 am to 9:30 am	DISCUSSION LEADER R. Ramesh
9:30 am to 10:15 am	Agnes Barthelemy, Thales University – Oxide Heterostructures for Spintronics
10:15 am to 10:45 am	Break
10:45 am to 11:30 am	Stuart Parkin, IBM - Ferromagnetism in nitrogen doped magnesium oxide
11:30 am to 12:00 pm	Jam Session
12:00 pm	Lunch at ESB
4pm	Materials Department Colloquium, Joerg Heber, How to get published in Nature Materials