

BOSTON COLLEGE DEPARTMENT OF PHYSICS
NOVEL ELECTRONIC MATERIALS CENTER
INAUGURAL WORKSHOP:
CORRELATED MATERIALS AND MESOSCALE SCIENCE
A TWO-DAY EVENT IN BOSTON COLLEGE'S NEW HIGGINS HALL
MARCH 19 AND 20, 2004
CHESTNUT HILL, MASS.

DAY 1 - Friday, March 19, 2004 Room 310, Higgins Hall	
8:00 - 8:30	coffee and pastries
8:30 - 8:45	Welcome: Mick Smyer , Assoc. V.P. for Research & Dean, Graduate School of Arts and Sciences
	<u>Correlated Materials - I</u> Chair = Jim Smith (LANL)
8:45-9:30	David Pines - Los Alamos Nat'l Lab <i>From the Kondo Lattice to Cuprate Pseudogaps: Emergent Behavior in Correlated Matter</i>
9:30-9:50	Xiao-Gang Wen - MIT <i>Artificial Photons in Frustrated Spin Systems</i>
9:50-10:05	Hong Ding - BC <i>Angle-resolved Photoemission Studies of Correlated Electronic Materials</i>
10:05-10:30	coffee and tea
	<u>Mesoscale Science - I</u> Chair = Pradip Bakshi (BC)
10:30-11:15	David Awschalom - UC Santa Barbara <i>Spintronics: Semiconductors, Molecules, and Quantum Information</i>
11:15-11:35	Don Heiman - Northeastern University <i>New Materials for Spin-Injection</i>
11:35-11:50	Zhifeng Ren - BC <i>Making Nanoscale Useful</i>
11:50-2:00	lunch
	<u>Correlated Materials - II</u> Chair = Vidya Madhavan (BC)
2:00-2:45	Paul Chaikin - Princeton University <i>Correlated Candy</i>
2:45-3:05	Kevin Smith - Boston University <i>Soft X-Ray Studies of Electronic Structure in Organic Superconductors</i>
3:05-3:20	Andre Lebed - BC & Landau Institute <i>Observing 1 and 2D Physics in 3D Solids</i>
3:20-3:35	Mike Naughton - BC <i>Triplet Superconductivity in the Organics</i>
3:35-3:55	coffee and tea
	<u>Mesoscale Science - II</u> Chair = David Broido (BC)
3:55-4:10	John Fourkas - BC <i>Making Things with Light</i>
4:10-5:00	Millie Dresselhaus - MIT <i>Millie on Micro to Nano</i>
5:00-6:00	reception - Higgins Atrium
6:00-9:00	dinner - Higgins Atrium

BOSTON COLLEGE DEPARTMENT OF PHYSICS
NOVEL ELECTRONIC MATERIALS CENTER
INAUGURAL WORKSHOP:
CORRELATED MATERIALS AND MESOSCALE SCIENCE
A TWO-DAY EVENT IN BOSTON COLLEGE'S NEW HIGGINS HALL
MARCH 19 AND 20, 2004
CHESTNUT HILL, MASS.

DAY 2 – Saturday, March 20, 2004 Room 310, Higgins Hall	
8:00 – 8:30	coffee and pastries
	<u>Mesoscale Science – III</u> Chair = Zhifeng Ren (BC)
8:30-9:15	Rod Ruoff - Northwestern University <i>Mechanics of Nanostructures</i>
9:15-9:35	Hongkun Park - Harvard University <i>Single-Molecule Transistors</i>
9:35-9:55	Mark Tuominen - UMass <i>Nanoscale Devices and Materials from Block Copolymer Templates</i>
9:55-10:15	break
	<u>Correlated Materials – III</u> Chair = Miklos Gulacsi (ANU, Canberra)
10:15-11:00	Gabriel Aeppli - Univ. College London <i>One(?), Two and Three-Dimensionality in the Cuprates</i>
11:00-11:20	Nat Fortune - Smith College <i>Field-Induced Spatially-Modulated Superconductivity</i>
11:20-11:35	Mike Graf - BC <i>Probing Weak Antiferromagnetism in UPt_3 via Impurity Substitution</i>
11:35-1:30	box lunch & Student Poster Session
	<u>Mesoscale Science – IV</u> Chair = Kris Kempa (BC)
1:30-2:15	Mark Reed - Yale University <i>Intrinsic Electron Conduction Mechanisms in Molecules</i>
2:15-2:35	Jimmy Xu - Brown University <i>Carbon Nanotube Quantum Electro-Mechanic Couplings</i>
2:35-2:50	Shana Kelley - BC <i>Electronically Interfacing Biomolecules and Nanostructures</i>
2:50-3:10	break
	<u>Correlated Materials – IV</u> Chair = Ziqiang Wang (BC)
3:10-3:55	Patrick Lee - MIT <i>Cuprates and Hydrated-Cobaltates as Strongly Correlated Superconductors</i>
3:55-4:15	Claudio Chamon - Boston University <i>Y-junctions of Quantum Wires</i>
4:15-4:35	Eugene Demler - Harvard University <i>$SO(4)$ Theory of Competition Between Triplet Superconductivity & Antiferromagnetism in Bechgaard Salts</i>
	<u>Concluding Session</u> Chair = Kevin Bedell (BC)
4:35-5:15	David M. Lee - Cornell <i>Impurity-Helium Solids - Chemistry and Physics at 1.5 K</i>