



2008 Research Experience for Undergraduates Program Summer Symposium
August 14-15, 2008
Maxwell Dworkin 119

THURSDAY, August 14

8:00 BREAKFAST: Maxwell Dworkin 119		
8:30	Laura Sofen	<i>Synthesis and photophysical evaluation of three novel fluorescent reporter dyes</i>
8:45	Emily Margolis	<i>Study of grain boundaries in colloidal crystals by confocal microscopy</i>
9:00	Peyton Nesmith	<i>Design and validation of a new method of engineering cell monolayers</i>
9:15	Josué Guerra	<i>An in vitro model for traumatic brain injury</i>
9:30	Jelyn Moore	<i>Time resolved spectroscopy of self-assembly of CCMV protein capsids</i>
9:45	Kamilia Kaczor	<i>Using TIRM to observe the assembly of CCMV capsids</i>
10:00	Jennifer Caldwell	<i>Dscam protein binding and microsphere interactions</i>
10:15	Adenike Adewuyi	<i>Inter-trial spacing increases retention in motor adaptation</i>
10:30 BREAK		
10:45	Garland Deshazer	<i>Blood vessels: how to quantify using biomolecular markers</i>
11:00	Tristan Hunt	<i>An investigation into the mechanism of low-level laser activation of Transforming Growth Factor β-1</i>
11:15	Theo Wilson	<i>Cell-cell inhibition of sprouts in angiogenesis</i>
11:30	Anthony Vicari	<i>Fabrication of Bragg gratings using subwavelength-diameter silica nanowires on a mesoporous silica substrate</i>
11:45	Jonathan Evans	<i>Morphology of double emulsions consisting of two immiscible oils and water</i>
12:00	Kathryn Greenberg	<i>Stabilization of emulsions using interfacial formation of gold nanoparticles</i>
12:15	Maya Sen	<i>Double emulsions generated by microcapillary devices form liposomes of unique morphology and permeability</i>
12:30 LUNCH: Maxwell Dworkin 119		
1:15	Ashley Howard	<i>Cell interactions on engineered surfaces</i>
1:30	Kenneth Lyons, Jr.	<i>Photographing floods: Imaging fluid flow</i>
1:45	Anna Shneidman	<i>Probing the mechanical response of colloidal glasses using confocal microscopy</i>
2:00	Joanna Ma	<i>Highly mobile mesoscale platform for bio-inspired swarm robotics</i>
2:15	Jonathan Gross	<i>Design optimization and body force modulation for a flying robotic insect</i>
2:30	Yah Laetitia Sangne	<i>Imbibition in customized systems of packed beads</i>
2:45	Adrian Delancy	<i>Shaping liquid: effect of surface roughness on liquid sheets</i>
3:00 BREAK		
3:15	Bryan O'Gorman	<i>Developing algorithms for the Boolean satisfiability problem</i>
3:30	Lori Sandberg	<i>Microwave heating in microfluidic devices</i>
3:45	William Martin	<i>A portable and cost-effective immunoassay based diagnostic tool with electrical sensing</i>
4:00	Paul Aliotta	<i>Superconducting-insulator transition in aluminum nanowires</i>
4:15	Monica Allen	<i>Fabrication of double-layer graphene</i>
4:30	Aaron Magil	<i>Orienting crystal growth using self-assembled monolayers</i>
4:45	Cavanaugh Welch	<i>Deconvolution of 3-D fluorescence microscopy images</i>

FRIDAY, August 15

8:00 BREAKFAST: Maxwell Dworkin 119		
8:30	Moureen Kemei	<i>Quantum confinement effects in CdSe quantum dots observed with a scanning tunneling microscope</i>
8:45	Patrick Stollenwerk	<i>Environmental effects on the local density of states of CdSe quantum dots on a Au substrate</i>
9:00	Pauline Gassman	<i>Understanding the neuronal substrates of form vision in rodents</i>
9:15	Daniel Harburg	<i>Aerogels for stabilizing and supporting fuel cells</i>
9:30	Jason Kaufman	<i>Laser cooling of atoms using ultra-fast pulses</i>
9:45	Yunlai (Jerry) Zha	<i>Tension propagation along double stranded DNA</i>
10:00	Alex Capecehatro	<i>Fabrication of simple devices using nanoskiving</i>
10:15 BREAK		
10:30	Monica Mascarenas	<i>Patterned paper as a platform for a low cost, vertical flow immunoassay</i>
10:45	Erin Derbins	<i>Design and fabrication of a microfluidic device to increase the aqueous volume fraction of water-in-oil emulsions for optimization of on-chip biological assays</i>
11:00	Yosune Casana	<i>Determination of specific activity in yeast surface displayed Horseradish Peroxidase variants</i>
11:15	Craig Gorin	<i>Cesium promotion of styrene oxidation on single silver crystals</i>
11:30	Christina Elias	<i>STM of aldehyde coupling reactions on TiO₂</i>
11:45	Abraham Alvarez	<i>Nanoenabler microfabrication studies</i>
12:00	Terence Verla	<i>Noise in genetic networks</i>
12:15 LUNCH: Maxwell Dworkin 119		
1:00	Danielle Raad	<i>Reversibly adhesive fluidic devices</i>
1:15	Victoria Reeves	<i>Probing the microscopic origins of strain stiffening in biopolymer gels</i>
1:25	Sergio González	<i>Fabricating a magnetic scanning probe microscope tip</i>
1:35	Kathleen Martinick	<i>Fabrication and characterization of nanoscale light sources in diamond</i>
1:45	Daniel Reeves	<i>Annealing silicon nanoparticles to increase T1 for use in medical resonance imaging</i>

Please contact Kathryn Hollar at hollar@seas.harvard.edu for more information or to RSVP for the symposium