

SURF Student Colloquium: Tuesday - August 5, 2008
 Parallel Session: Lecture Room A, Administration Building (101)

TIME	SPEAKER	UNIVERSITY	TITLE	LAB
MODERATOR: David Newell Electronics & Electrical Engineering Laboratory SURF Director				
Graphene Session				
2:30P	Matthew Chang	Pennsylvania State University	An Atom Thick: Graphene Based Quantum Hall Resistance Standard	EEEL
2:50P	Jonathan Ligda	Cornell University	Mechanically Exfoliated Graphene	CNST
3:10P	Brian Bolz	Manhattan College	Controlled Electrostatic Deposition of Graphene	CNST
3:30P	Paul Fuentes-Martinez	Inter American University of Puerto Rico, Bayamon	Characterization of Graphene Ribbons from Liquid Exfoliation of Graphite	MSEL
3:50P	Tessa Johnson	Tulane University	Probing the Underlying Physics of Graphene with Raman Spectroscopy	PL
4:10P	END OF DAY			

SURF Student Colloquium: Tuesday - August 5, 2008
 Parallel Session: Lecture Room B, Administration Building (101)

TIME	SPEAKER	UNIVERSITY	TITLE	LAB
MODERATOR: Marc Desrosiers Physics Laboratory SURF Director				
2:30P	Scott Robertson	University of Maryland, College Park	Examining the Reliability of the BANG3-PRO Gel as a Three Dimensional Dosimeter	PL
2:50P	Long Tong	Worcester Polytechnic Institute	New Measurement Technique for Characterizing the Anisotropy of Brachytherapy	PL
3:10P	Anne Forney	Gettysburg College	Examination of the B3 Dosimeter Temperature-Dose Response Dependence	PL
3:30P	Griffin Rowell	University of California, Santa Barbara	The Normalization of Alanine Dosimeter Films	PL
3:50P	END OF DAY			

SURF Student Colloquium: Tuesday - August 5, 2008
 Parallel Session: Lecture Room C, Administration Building (101)

TIME	SPEAKER	UNIVERSITY	TITLE	LAB
MODERATOR: Larry Reeker Information Technology Laboratory SURF Director				
2:30P	Kevin Workman	Millersville University	Using Video Games to Improve Visual Analytical Software for Digital Natives	ITL
2:50P	Grady Payson	University of Iowa	Metric Evaluation and Report Generation for the NIST 2008 Metrics for Machine Translation Challenge (Metrics MATR)	ITL
3:10P	Amy Hudson	University of Maryland, College Park	Why Has an Answer to the LBA Problem Been Such a Mathematical Problem?	ITL
3:30P	Brittany Devine	Centre College	Measuring User Experience in Large Simulated Networks	ITL
3:50P	Martin Mooney	Saint Mary's College of Maryland	The Effect of the Floor on Thermoplastic Melt Spread Rate in a Fire	ITL
4:10P	END OF DAY			

SURF Student Colloquium: Wednesday - August 6, 2008
 Parallel Session: Lecture Room A, Administration Building (101)

TIME	SPEAKER	UNIVERSITY	TITLE	LAB
MODERATOR: Paul Angiolillo Saint Joseph's University				
9:00A	Courtney Taylor	North Carolina State University	Design of a Detection Calibration System for Use in the Neutron Lifetime Project	PL
9:20A	Philip Naudus	George Mason University	Gamma-gamma Coincidence Detection	PL
9:40A	Nicholas Minutillo	Saint Joseph's University	The Silk Purse from the Pig's Ear – Optimization of a Prototype Detector for Large Area Radionuclide Contaminated Urban Material Characterization	PL
10:00A	Derek Fertig	University of Maryland, Baltimore County	Water Calorimetry and Heat Transport	PL
10:20A	Dustin Biser	University of Maryland, College Park	Development of an Optical Waveform Generator Using Digital Micromirror Devices	PL
10:40A	BREAK			
MODERATOR: Paul Lett Physics Laboratory SURF Director				
10:50A	Yanan Henry Wen	Cornell University	Single Molecule Studies on Membrane Protein Using Hydrosomes and Optical Trapping	PL
11:10A	Eric Huang	Cornell University	Microwave and Radio-Frequency Addressing of Bose-Einstein Condensate	PL
11:30A	Justin T. Schultz	Juniata College	Development of an Axicon MOT for Rubidium Atoms	PL
11:50A	Joseph Gibney	Rensselaer Polytechnic Institute	Modeling Holey Fibers	PL
12:10P	LUNCH			

SURF Student Colloquium: Wednesday - August 6, 2008
 Parallel Session: Lecture Room A, Administration Building (101)

TIME	SPEAKER	UNIVERSITY	TITLE	LAB
MODERATOR: Dr. Said Shokair University of California, Irvine				
2:00P	Benjamin Madison	Appalachian State University	Characterization of a Femtosecond Laser Frequency Comb for a Micro-channel plate (MCP) Detector for High Resolution Atomic Spectroscopy	PL
2:20P	Justin Anderson	Colorado School of Mines	Theory of Quantum Corrals on Graphene	PL
2:40P	Lauren Abbott	Indiana University of Pennsylvania	Quantum Mechanics and the Mystery of Life: Quantifying DNA's Interactions	PL
3:00P	Alex Cahill	Haverford College	Refining the Fine Structure Constant: Theoretical Calculations of Fine Structure Splittings in Highly Ionized Atoms	PL
3:20P	END OF DAY			

SURF Student Colloquium: Wednesday - August 6, 2008
 Parallel Session: Lecture Room B, Administration Building (101)

TIME	SPEAKER	UNIVERSITY	TITLE	LAB
MODERATOR: Forrest Schultz University of Wisconsin, Stout Matt Becker Materials Science & Engineering Laboratory				
9:00A	Nathan Behm	American University	Using Magneto-Optical Trapped Lithium Atoms to Create a Versatile FIB	CNST
9:20A	James MacArthur	Swarthmore College	Using Interference Lithography to Create Magnetic Nano-stripes	CNST
9:40A	Suehyun Cho	University of Maryland, College Park	Cheerios Gone Micro!	CNST
10:00A	Laura Timmerman	Rice University	Toward Monodispersity of Single-Walled Carbon Nanotubes via Ultracentrifugation	MSEL
10:20A	Sibu Kuruvilla	University of Illinois, Urbana-Champaign	Modeling of Nanotube Separation in Field Flow Fractionation	MSEL
10:40A	BREAK			
MODERATOR: Scott Grayson University of California, Berkeley Matt Becker Materials Science & Engineering Laboratory				
10:50A	Timothy Lee	University of Maryland, College Park	Chemical Characterization of the Degradation of Poly-3-hexylthiophene (P3HT)	MSEL
11:10A	Nadezhda Serova	University of Maryland, Baltimore County	Non-Linear Polymer Film Thickness Gradients through Flow Coating	MSEL
11:30A	Devon Mac Neill	University of Maryland, College Park	Fabrication of NanoPatterns by Nanoimprint Lithography	MSEL
11:50A	Joseph Sabol	Lehigh University	Microwave Methods Generating CdSe/ZnS Nanostructures	MSEL
12:10P	Bethany Juhnke	Iowa State University	Assessing Cell Morphology and Adhesion on a Small Library of Tyrosine-Derived Polycarbonates	MSEL
12:30P	LUNCH			

SURF Student Colloquium: Wednesday - August 6, 2008
 Parallel Session: Lecture Room B, Administration Building (101)

TIME	SPEAKER	UNIVERSITY	TITLE	LAB
MODERATOR: Dan Neumann NIST Center for Neutron Research Julie Borchers NCNR SURF Director				
2:00P	Thomas Sarvey	University of Maryland, College Park	Development of a Graphical Interface for Monte Carlo Simulations of Magnetic Crystals	NCNR
2:20P	Matthew Glazer	Virginia Polytechnic Institute & State University	Triplet Correlations in Magnetic Flux Line Lattices within Elemental Type II Superconductors	NCNR
2:40P	Jennifer Shih	Carnegie Mellon University	SANS-USANS Investigation of Magnetic Nanoparticles Chaining in Polymer Epoxy Nanocomposites	NCNR
3:00P	Raiza Cortes Hernandez	University of Puerto Rico, Mayaguez	The Applicability of a $P(r)$ Inversion Method	NCNR
3:20P	David Winogradoff	Haverford College	Neutron Optics and the Beam-stop Problem	NCNR
3:40P	END OF DAY			

SURF Student Colloquium: Wednesday - August 6, 2008
 Parallel Session: Lecture Room C, Administration Building (101)

TIME	SPEAKER	UNIVERSITY	TITLE	LAB
MODERATOR: Linda Coughlin St. Mary's College of Maryland				
9:00A	Brandi Jackson	University of Maryland, Baltimore County	Characterization of Local Mechanical Properties in Epoxy Nanocomposites	BFRL
9:20A	Craig J. Bouis	Purdue University	Characterization of the UV Degradation of Photocatalytic Nanoparticle-filled Polymers	BFRL
9:40A	Nhieu Ly	University of California, Irvine	Influence of Nanoparticles on Short-term and Long-term Performances of Polymeric Materials	BFRL
10:00A	Nicholas Franson	University of Maryland, College Park	Flow Table Reference Material	BFRL
10:20A	Jonathan Vega	Miami Dade College	Time-of-flight Laser Scanners and 3D Modeling	BFRL
10:40A	BREAK			
MODERATOR: Mike Epstein Mount St. Mary's University				
10:50A	Patrick Michael Bowers	St. Mary's College of Maryland	2D vs. 3D Measurements of HER2 FISH Bioimaging in a Cell	CSTL
11:10A	Christine He	University of Maryland, College Park	Facilitating Structure-based Drug Design: Updating the HIV Structural Database	CSTL
11:30A	Christine Wroge	Mount Saint Mary's University	ρ -Aminophenyl Phosphoryl Choline Purification of C-Reactive Protein for Development of a Mass Spectral Internal Standard	CSTL
11:50A	David Berry	James Madison University	Determination of Toxic metals at Trace Levels in SRM 955c Caprine Blood by Isotope Dilution Inductively Coupled Mass Spectrometry	CSTL
12:10P	Lydia Barker	James Madison University	Optimizing Standard Addition Design for Minimal Uncertainty	CSTL
12:30P	LUNCH			

SURF Student Colloquium: Wednesday - August 6, 2008
 Parallel Session: Lecture Room C, Administration Building (101)

TIME	SPEAKER	UNIVERSITY	TITLE	LAB
MODERATOR: Clarissa Ferraris Building and Fire Research Laboratory SURF Director				
2:00P	Semme Yilma	Montgomery College	Modeling of a Reinforced Concrete Portal Frame Under Fire	BFRL
2:20P	Kimberly Shurupoff	University of Maryland, Baltimore County	Large Building Evacuation	BFRL
2:40P	Timothy Lontz	Worcester Polytechnic Institute	Developing Virtual Fire Fighter Trainers	BFRL
3:00P	Kelly Opert	University of Maryland, College Park	Compartment Fire Experiments for Validation of Advanced Computer Models	BFRL
3:20P	Alexander Mont	University of Maryland, College Park	Use of a Computational Fluid Dynamics Model for Fire Protection in Nuclear Power Plants	BFRL
3:40P	END OF DAY			

SURF Student Colloquium: Wednesday - August 6, 2008
 Parallel Session: Lecture Room D, Administration Building (101)

TIME	SPEAKER	UNIVERSITY	TITLE	LAB
MODERATOR: Lisa Fronczek Manufacturing Engineering Laboratory SURF Director				
9:00A	Andrew Ward	University of Maryland, College Park	An Introduction to Optical Tweezers	MEL
9:20A	Alexander Boutin	Western New England College	Motion Behavior of a Stagger-tuned Piezoelectric Shaker	MEL
9:40A	George Luo	University of Maryland, College Park	A ZigBee Implementation of the IEEE 1451.5 Smart Sensor Network	MEL
10:00A	Aleksandr Gorbachev	University of Maryland, College Park	Robot Sensor Evaluation and Calibration	MEL
10:20A	Lisa Schneider	Loyola College in Maryland	External Calibration of a Camera and Laser Range Finder	MEL
10:40A	BREAK			
MODERATOR: Seyoum Hailemichael University of the District of Columbia				
10:50A	Marina Feric	University of Maryland, College Park	Manipulating Microstructure to Achieve High Performance Organic Thin Film Transistors	EEEL
11:10A	Amine Lambarqui	University of District of Columbia	Microfluidic Chips and Microwave-PCR for DNA Amplification	EEEL
11:30A	Izath Nizeet Aguilar	University of Maryland, Baltimore County	Molecular Electronic Devices	EEEL
11:50A	Lauren H. Miller	Clemson University	Influence of Temperature on the Molecular Conformation of Gold-Monolayer-Semiconductor Structure	EEEL
12:10P	LUNCH			

SURF Student Colloquium: Wednesday - August 6, 2008
 Parallel Session: Lecture Room D, Administration Building (101)

TIME	SPEAKER	UNIVERSITY	TITLE	LAB
MODERATOR: Teresa Viancour University of Maryland, Baltimore County				
2:00P	Adam Brockett	Pennsylvania State University	Ontological and User Interface Development for the Urban Search and Rescue Robotics Program	MEL
2:20P	Eric Walton	Hood College	High-Fidelity Simulation Environment for Testing Virtual Robots	MEL
2:40P	Keddy Liu	University of Maryland, College Park	Quantitative Performance Evaluation of Navigation Solutions for Mobile Robots	MEL
3:00P	Joshua Johnson	Florida Gulf Coast University	Development of Static and Dynamic Stability Test Standards for a Load Carrying Device	MEL
3:20P				
3:40P	END OF DAY			

SURF Student Colloquium: Thursday - August 7, 2008
 Parallel Session: Lecture Room A, Administration Building (101)

TIME	SPEAKER	UNIVERSITY	TITLE	LAB
MODERATOR:				
9:00A	Sara A. DeSavage	St. Mary's College of Maryland	Characterization of a Medical Imaging Camera for Improved Color Contrast of Human Tissues	PL
9:20A	Theodore White	State University of New York, Binghamton	First Order Reversal Curve Measurements of Magnetic Tunnel Junctions	PL
9:40A	Benjamin Greer	Carnegie Mellon University	Terahertz Spectroscopy and Modeling of Biological Molecules in reverse Micelles	PL
10:00A	Matthew Ebert	Pennsylvania State University	Two-Photon Microscopy	PL
10:20A	Willa Freedman	Wellesley College	Evaluation of the Effects of Cocktail Composition and Instrument dependence on the Activity Determination of ⁶³ Ni by Liquid-Scintillation-Based Efficiency Tracing with ³ H Standards	PL
10:40A	BREAK			
MODERATOR: Dianne Poster Chemical Science & Technology Laboratory SURF Director				
10:50A	Wade J. Reimonenq	Southern University and A&M College	Efficiency of 35S Promoter PCR Assays for Quantitation of Biotech Maize	CSTL
11:10A	Christopher Sims	University of Maryland, Baltimore County	Fundamental Interaction Mechanisms of Engineered Nanomaterials with DNA	CSTL
11:30A	Marc Howell	University of Maryland, College Park	Using Microfluidic devices to Amplify Small mRNA Samples	CSTL
11:50A	Johannes Kuttan	Rensselaer Polytechnic Institute	Measuring the Effect of Cytotoxic Compounds Using an Engineered Reporter Cell Line	CSTL
12:10P	Kennedy-Kiet Tuan Vu	California State University, Fresno	Fate and Behavior of TiO ₂ Nanoparticles in the Natural Environment	CSTL
12:30P	LUNCH			

SURF Student Colloquium: Thursday - August 7, 2008
 Parallel Session: Lecture Room B, Administration Building (101)

TIME	SPEAKER	UNIVERSITY	TITLE	LAB
MODERATOR: Dan Neumann, NIST Center for Neutron Research Julie Borchers, NCNR SURF Director				
9:00A	Kathy Tang	University of Maryland, College Park	Cell Response to Surface Roughness of Dental Composites	MSEL
9:20A	Tiffany Ng	Johns Hopkins University	Preparation and Characterization of New Tethered Bilayer Lipid Membrane (TBLM) Model Membrane System	NCNR
9:40A	Singhu Raghunandan	University of Maryland, College Park	Characterizing the Assembly of HIV-1 Gag Protein on a Model Membrane Surface	NCNR
10:00A	Jacob Schalch	Oberlin College	Understanding Hydrogen Adsorption in Carbon-Templated Zeolites	NCNR
10:20A	Jackson Cahn	Whitman College	Protein Adsorption Affects Osteoblast-Glass Adhesion Strength as Measured by Colloidal Probe Atomic Force Microscopy	MSEL
10:40A	BREAK			
MODERATOR: Edwin Fuller, Materials Science & Engineering Laboratory Terrell Vanderah, Materials Science & Engineering Laboratory SURF Director				
10:50A	Andrew Durnford	California Institute of Technology	Stimulating Thermal Diffusion from Laser-Excited Gold-Coated Silica Nanoparticles	MSEL
11:10A	David Bunker	Carnegie Mellon University	Materials Informatics Tools and Crystallographic Databases	MSEL
11:30A	Akash Rakholia	Harvey Mudd College	Reverse Monte Carlo Refinements of Local Structure Using Atomic Pair-Distribution Functions and EXAFS	MSEL
11:50A	Hilary Lane	University of Maryland, College Park	Combinatorial Synthesis and Characterization of TaCN Composition Spread Metal Gate Electrodes on HfO ₂ for Advanced Gate Stacks	MSEL
12:10P	Kevin B. Tierney	University of Florida	Diagramming the Phase Relations of the CeO ₂ -Nd ₂ O ₃ -Sm ₂ O ₃ System	MSEL
12:30P	LUNCH			

SURF Student Colloquium: Thursday - August 7, 2008
 Parallel Session: Lecture Room B, Administration Building (101)

TIME	SPEAKER	UNIVERSITY	TITLE	LAB
MODERATOR: Cindi Dennis, Materials Science & Engineering Laboratory Robert Shull, Materials Science & Engineering Laboratory SURF Director				
2:00P	Hilary Stauffer	Hood College	Combinatorial Pulsed Laser Deposition of Functional Oxides	MSEL
2:20P	Brian Kelleher	American University	Rate Dependent Magnetization Reversal in Thin Co/Pt Multilayer Films	MSEL
2:40P	Shifra Katz	University of Maryland, College Park	Edge-Roughness Modeling of Magnetic Nanostructures	MSEL
3:00P	Christine Lau	University of Maryland, College Park	The Effect of Processing on the Magnetic and Structural Properties of Magnetite Nanoparticles	MSEL
3:20P	Olivia Buzek	University of Maryland, College Park	Inclusion of Parallel Vectors in FiPy	MSEL
3:40P	END OF DAY			

SURF Student Colloquium: Thursday - August 7, 2008
 Parallel Session: Lecture Room C, Administration Building (101)

TIME	SPEAKER	UNIVERSITY	TITLE	LAB
MODERATOR: Joseph Kopanski Electronics & Electrical Engineering Laboratory SURF Director				
9:00A	Jeong-O Jeong	University of Maryland, Baltimore County	Development of Software Tools for Extracting Model Parameters of SiC Power Diodes	EEEL
9:20A	Adam T. Neal	Pennsylvania State University	Process for In-House Soldering of Printed Circuit Boards	EEEL
9:40A	Nathan Shemonski	Washington University in St. Louis	Building a Scanning Kelvin Force Microscope Feedback Loop	EEEL
10:00A	Chong Jiang	University of Texas, Austin	Nanocapacitance Measurement	EEEL
10:20A	BREAK			
MODERATOR: Isabel Beichl Information Technology SURF Director				
10:50A	Amelia Tebbe	St. Mary's College of Maryland	Estimating Volumes of Simulated Lung Cancers by B-Spline Modeling	ITL
11:10A	Axel Y. Rivera Rodriguez	University of Puerto Rico, Humacao	Principal Components Analysis and Singular Value Decomposition for Automated Angle Measurements	ITL
11:30A	Cameron J. Rose	University of Maryland, College Park	Expanding e-FITS with Java	ITL
11:50A	Tammy Ngai	Massachusetts Institute of Technology	Standardizing Base Metric Scoring for the National Vulnerabilities Database Operations Team and Other Users of the Common Vulnerabilities Scoring System	ITL
12:10P	Roshan Shah	University of Maryland, College Park	Measuring Security Risk of Networks Using Attack Graphs	ITL
12:30P	LUNCH			

SURF Student Colloquium: Thursday - August 7, 2008
 Parallel Session: Lecture Room C, Administration Building (101)

TIME	SPEAKER	UNIVERSITY	TITLE	LAB
MODERATOR: Joseph Kopanski Electronics & Electrical Engineering Laboratory SURF Director				
2:00P	Angelica M. Muniz-Mercado	University of Puerto Rico, Mayaguez	High Resistivity Measurement at High Temperatures for Solar Probes	EEEL
2:20P	Emmett Perl	University of San Diego	Through-Barrier Radar Detection and Imaging	EEEL
2:40P	Daniel Green	University of Rochester	Standardizing Voltage Characteristic Measurements of Electroshock Weapons	EEEL
3:00P	Beatrice Parker	Massachusetts Institute of Technology	Contributions to the Electronic Kilogram Experiment: Measuring the Acceleration of Gravity and Configuring a Motion Control System	EEEL
3:20P	Minghui Yang	University of Maryland, College Park	Improving Measurement and Automation Features of a Electricity Reference Standard	EEEL
3:40P	END OF DAY			

SURF Student Colloquium: Thursday - August 7, 2008
 Parallel Session: Lecture Room D, Administration Building (101)

TIME	SPEAKER	UNIVERSITY	TITLE	LAB
MODERATOR: Forrest Schultz University of Wisconsin, Stout				
9:00A	Song Li	University of Maryland, College Park	Characterization of z-axis Non-linearity in a CD-AFM Scanner	MEL
9:20A	Stephanie D. Montalvo-Delgado	University of Puerto Rico, Rio Piedras	Measurement of SRM 2461 Standard Casings Using a Nanofocus Confocal Microscope	MEL
9:40A	Jarrod Feight	University of Wisconsin, Stout	Nano-scale Milling with a Helium Ion Microscope	MEL
10:00A	Brian Mayer	Virginia Polytechnic Institute and State University	Prototype for Simulation-based Testing of Shop Floor Scheduling	MEL
10:20A	George Kojo Fosu	Colorado State University, Pueblo	Validation of the SysML Tools and Specifications	MEL
10:40A	BREAK			
MODERATOR: Steve Emmerich Building and Fire Research Laboratory				
10:50A	Julian Spiegler	University of Maryland, Baltimore County	An Energy Model of the IAQVG Test House	BFRL
11:10A	Sebastian Palacios	Miami Dade College	Interoperability of Building-related CAD Applications	BFRL
11:30A	Stephen Nowak	Franciscan University, Steubenville	Simulating CO Pollution Across the Indoor/Outdoor Interface	BFRL
11:50A	Peter Niarhos	University of Maryland, College Park	Single-Walled Carbon Nanotube Dispersions: A Study of Various Surfactants for Selectivity and Stability	BFRL
12:10P	Stephanie Martin	University of Maryland, College Park	Thermal Imaging Cameras: Testing and Validation of the Standard	BFRL
12:30P	LUNCH			

SURF Student Colloquium: Thursday - August 7, 2008
 Parallel Session: Lecture Room D, Administration Building (101)

TIME	SPEAKER	UNIVERSITY	TITLE	LAB
MODERATOR: Wyatt Vreeland Chemical Science & Technology Laboratory				
2:00P	Mark Sailey	University of Maryland, College Park	Implementation of Armstrong's Particle Correction Algorithms in the NIST DTSA-II Microanalysis Software Package	CSTL
2:20P	Ike Muniez, Jr.	University of Texas, Pan American	Surface Chemistry Parameters of Environmental Isolates of <i>Bacillus Thuringiensis</i> Spores	CSTL
2:40P	Tyler Bonnen	Miami Dade College	The Morphology of C ₆₀ /Pentacene Heterojunctions	CSTL
3:00P	Andrew Schuldenfrei	University of Maryland, Baltimore County	Observations of the Oxidation of Pentacene Thin Films in Air by Photoluminescence Spectroscopy	CSTL
3:20P	END OF DAY			