

2011

SURF STUDENTS

BY UNIVERSITY

UNIVERSITY	STUDENT	TITLE OF TALK	OU
Agnes Scott College	Franzel, Christine	The Effect of Tethering on the Glass Transition Temperature in Thin Polymer Films	MML/NCNR Matls Science
Appalachian State University	Villanova, John	Surface Topography Analyses for Images of Firing Pin Impressions Acquired via Confocal Microscopy	PML
Arizona State University	Alena Matusевич	Organic Photovoltaic Devices: Band Gap Engineering	PML (ARRA)
Arizona State University	Bowman, William	Ionic Conductivity in Gadolinium and Praseodymium Doped and Co-Doped Cerias for Solid Oxide Fuel Cell Electrolytes	CNST (ARRA)
Arizona State University	Patel, Varun	Oxidatively Induced DNA Damage Analysis of Shrimp Exposed to Conditions Resembling Those of the Deepwater Horizon Oil Spill	MML/NCNR Chemistry (ARRA)
Brigham Young University	Gurney, Lisa	Mitigation of Set Time Delays in High-Volume Fly Ash Cement Pastes Through Fine Limestone Additions	EL (ARRA)
Carnegie Mellon University	Baldwin, Christopher	Tight-Binding Analysis of Twisted Graphene Bilayers	CNST
Carnegie Mellon University	Swisher, Matthew	Interferometer for the Measurement of a MEMS Device in a SEM	CNST
Carnegie Mellon University	Zakrzewski, Brian	Photoinduced Magnetization in Prussian Blue Analogue Tri-Layer Films	MML/NCNR Matls Science (ARRA)
City College of New York	Afzal, Annas	Characterization of the Effect of Thermal Cycling on the Signal Integrity of Interconnect Structures Used in 3D Integrated Circuits	PML (ARRA)
City College of New York	Fon, Kaly	Massive Parallel Long-Term Reliability	PML
City College of New York	Markland, Errol	Web Application Development on Computer Security Metadata	ITL
College of William and Mary	Lowery, Ethan	Constructing a Cryogenic Dipper for Tunneling Magnetoresistance Measurements of Cross-Wired Devices	PML
College of William and Mary	Zora, Kyle	Probing the Validity of Theoretical Models for Predicting Vibrational Spectra of Alanine and Its Polypeptides	PML
Colorado School of Mines	Johnson, Joshua	Reactor Software Upgrades and Analysis of Test Stand Behavior	MML/NCNR Matls Science
Colorado School of Mines	Robbins, Bryce	Persistent Currents in a Rotating Toroidal BEC	PML
Colorado School of Mines	Stortz, Tristan	Optical Femtocalorimeter	MML/NCNR Matls Science (ARRA)
Colorado School of Mines	Thurston, Bryce	Frequency Conversion through Four-Wave Mixing Bragg Scattering	CNST (ARRA)
Colorado School of Mines	Villars, Brenden	Spatial Uniformity of a Three-Element Optical Trap Detector	PML
Columbia University	Orthwein, Jonathan	Chipped-Pule Terahertz Spectroscopy for Broadband Trace Gas Sensing	PML
Converse College	Casil, Julianne	pH Dependent Kinetics of Ion Channel	PML

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		Formation of <i>Bacillus Anthracis</i> Protective Antigen 63 (PA63)	(ARRA)
Cornell University	Choi, Christopher	Layer by Layer Self Assembly on Soft Foams: Reduced Foam Flammability Using Nanoparticle Filled Coatings	EL (ARRA)
Cornell University	Lu, Daniel	FHS-LAB: A GUI for Simulating Structural Behavior Subjected to Fire	EL
Cornell University	Ma, Jun	Electron Spin Resonance	PML (ARRA)
Davidson College	Pagnonis, Demetrios	Dealloyed Pt _{100-x-y} Co _x Ni _y Catalysts for Oxygen Reduction Reaction	MML/NCNR Matls Science
DePauw University	Baker, Catherine	Circuit Synthesis for Cryptographic Applications	ITL (ARRA)
Duke University	Rohlfing, Anne	Shelf Life Study of Silver Nanoparticles	MML/NCNR Chemistry
Eastern Kentucky University	Hegwood, Jerrod	Verification and Modeling of Results from Nuclear Power Plant Control Room Fire Tests	EL
Eastern Kentucky University	Lenhof, Timothy	Modeling Smoke in Room-Scale Fires	EL
Fayetteville State University	Gunn, Reid	Microscopic Analysis of Synthesized Mixed-Phase Atmospheric Particles	MML/NCNR Chemistry (ARRA)
George Washington University	Bagchi, Shelly	Transformative Applications: Using Android-Powered Smartphones to Enhance Soldier Operations	EL
George Washington University	Cano, Michelle	Software Improvement of Visualization Tools for Video Analytic Evaluations	ITL
George Washington University	Cunningham, Hailey	Hemoglobin Saturation as Expressed by its Absorbance Curve	PML
Georgia Southern University	Benton, Brandon	Prototyping Method for Bragg-Type Atom Interferometers	PML
Hamilton College	Adelman, J. Elliott	Analysis of aCORN Data	PML
Harvard College	Boling, Robert	Determining Switching Mechanisms and Switching Field Distributions in Bit-Patterned Media	MML/NCNR Matls Science (ARRA)
Harvey Mudd College	Brent, Taylor	USARSim: A High-Fidelity Simulation of Robotics	EL
Harvey Mudd College	Sio, Hong	Band Alignment Study Using Internal Photoemission: Applications to Metal-Gate / High-k Dielectric / Semiconductor Interfaces	PML (ARRA)
Hood College	Haines, Andrea	Improving Electronic Health Record (HER) Usability, Research, and the Communication Effort	ITL
Hood College	Hill, Jennifer	Creation of an Evaluation Interface for Human Assessments of Machine Translations	ITL
Hood College	Jacobson, Nathan	Access Control Policy Tool (ACPT)	ITL (ARRA)
Jackson State University	Shelton, Melanie	Measuring the Efficacy of Ligand Displacement on Gold Nanoparticles – Applications in Nanomedicine	MML/NCNR Matls Science (ARRA)

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James Madison University	Crawshaw, Fay	Tether Lipid Molecules for High Precision Metrology of Integral Proteins	MML/NCNR Matls Science
James Madison University	Vess, Eric	Novel Methods for Remote Sensing Based on DIAL	PML
Johns Hopkins University	Joress, Howard	A Statistical Approach to EDS Peak Identification: A Proof of Concept	MML/NCNR Chemistry
Juniata College	Ginley, Theresa	Optimizing the Sputtering Parameters for Permalloy Thin Films to Minimize Surface Roughness	MML/NCNR Matls Science
Le Moyne College	Acquaviva, Andrew	Gathering Benchmark Data for the Examples of FiPy	MML/NCNR Matls Science
Lebanon Valley College	Yunker, Ian	Analysis and Model of Multi-Sensor-Fusion Data	EL
Lehigh University	Marvel, Christopher	Characterization of Carbon Nanotubes in Composite Baseball Bats	MML/NCNR Chemistry
Loyola University of Maryland	Slusarski, Kyle	Roles of Atomic Force Microscopy and Nanoidentation in Building Metrological Foundations for Nanomechanical Property Testing	MML/NCNR Matls Science
Miami University of Ohio	Denton, Alexis	Imitating Ocean Reflectance Measurements with Diffuse Reflectance Standards	PML
Miami University of Ohio	Gooley, Derek	A Charge-Based Capacitance Measurement Implementation on Printed Circuit Board	PML (ARRA)
Miami University of Ohio	Hachtel, Andrew	Fabrication and Characterization of a Nanoaperture Array by Helium Ion Microscope	PML
Miami University of Ohio	Kleykamp, Jeffrey	Simulation of Scanning Electron Microscope to Better Understand Errors in Cross-Correlation Image Correction Technique	PML
Miami University of Ohio	McNally, Douglas	Motion Characterization and Endurance Metrology Microrobots	PML (ARRA)
Middlebury College	Allen, Joseph	Nanoscale Electrochromic Patterning with a Lithium Focused Ion Beam	CNST
Montana State University	Weber, Katelyn	Software Development for Probabilistic Modeling and Uncertainty Quantification	EL (ARRA)
Montgomery College	Russell, Sarah	Creating Stable Dispersions of Titanium Dioxide Nanoparticles in Environmental Matrices	MML/NCNR Matls Science
Mount Saint Mary's University	Halter, Melissa	Calibration of NIST VaporJet and Preliminary Evaluation of Explosive Trace Detectors	MML/NCNR Chemistry
Muhlenberg College	Fitzsimons, Matthew	Characterizing the Morphology of the Bulk-Heterojunction of Organic Photovoltaics	MML/NCNR Chemistry
North Carolina State University	Hewitt, Andrew	Slow Crack Growth Resistance at the Micron Scale in High Density Polyethylene	EL
North Carolina State University	Jones, Nathan	Optimization of Cell Growth in Minimal Media	MML/NCNR Matls Science (ARRA)

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Pennsylvania State University	Rubeo, Mark	Quest for Precision: The Performance Evaluation and Compensation of a Meso-Scale Machining Center	EL
Pennsylvania State University	Sunkara, Sai	Tissue Engineering Reference Scaffolds to Enable Inter-Lab Comparison of Cell Culture Measurements	MML/NCNR Matls Science
Princeton University	Tang, Sarah	An Evaluation of Local Shape Descriptors for 3D Shape Retrieval	ITL
Princeton University	Tracer, Andrew	Dataflow: A Web-Based Solution to Data Reduction	MML/NCNR Matls Science
Rensselaer Polytechnic Institute	Coplin, Halley	Direct Browser Integration of 3D Graphics with X3D and X3DOM	ITL
Rensselaer Polytechnic Institute	Willette, Peter	Residential Appliance Energy Research: Clothing Washers	EL
Rochester Institute of Technology	Jacob, Colin	Understanding and Optimizing the Epitaxial Growth of Graphene on Silicon Carbide	PML
Saginaw Valley State University	Lucio, Anthony	Shape Evolution of Polymer Structures with Thin Residual Layers Prepared by Nanoimprint Lithography	PML
Saint Mary's College of Maryland	Carneiro, Lucas	Effects of Film Processing Parameters on Organic Photovoltaic Device Performance	MML/NCNR Matls Science
Saint Olaf College	Barkley, Sarice	Lateral Force Calibration Methods for Atomic Force Microscope	CNST
Smith College	Aloisio, Kathryn	Atmospheric Abundances of Greenhouse Gases from Prehistoric to Current Times	ITL (ARRA)
St. Mary's College of Maryland	Herpel, Gregory	Analysis of a High Performance Flow of Suspensions	ITL
State University of New York Albany	Lovell, Magdalen	Improvements in Ultrasonic Calorimetry for Dosimetry	PML
State University of New York Binghamton	Carson, Michael	Scanning Kelvin Force Microscope Based on a Tuning Fork	PML
State University of New York Binghamton	Presser, Brian	Energy Consumption and Lifecycle Cost of Buildings in the United States	EL
State University of New York Binghamton	Zheng, Walter	Electrical Characterization of Flexible Solution-Processed Oxide Memristors	PML (ARRA)
Towson University	Siregar, Alexander	Constructing a Magnetic Field Probe for Use Regarding the NIST-4 Watt Balance	PML (ARRA)
Towson University	Tyler, Joshua	LabVIEW Integration in a Mass Calibration Process	PML
Tulane University	Ortmann, Elliott	The Metrology of Shaping and Detecting X-Rays	MML/NCNR Matls Science (ARRA)
University of California Los Angeles	Lopez, Jessica	Development of Sustainability Measurement Tools and Methods for Manufacturing Enterprises	EL
University of Colorado Boulder	Zirkelbach, Stetson	The Effects of Scaling and Scanning Order on Image Signatures Based on Space-Filling Curves	ITL
University of Delaware	Bibb, Caroline	Standard for Lead and Cadmium Content in Polyvinyl Chloride	MML/NCNR Chemistry

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University of Delaware	D'Alessio, Anna	Research Contributions to Enhance the Sustainability Standards Portal	EL
University of Illinois	Ragunathan, Gautham	Laser Diode Interferometry	EL
University of Maryland Baltimore County	Harvey, David	The Role of Metrology in X-Ray Diffraction	MML/NCNR Matls Science
University of Maryland Baltimore County	Iglehart, Christopher	Residential Appliance Energy Research	EL
University of Maryland Baltimore County	Anzaldi, Laura	Developing a Root-Based Semantic Vocabulary	MML/NCNR Chemistry (ARRA)
University of Maryland Baltimore County	Bier, Naomi	Putting a <i>Spin</i> on Solid Sampling via Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MS)	MML/NCNR Chemistry
University of Maryland Baltimore County	Johnson, Lilian	Nanofluidics of Polymer Chains Under Confinement	MML/NCNR Matls Science
University of Maryland Baltimore County	Kelly, Mary	Interdiffusion Studies of Organic Solar Cell Components	MML/NCNR Chemistry
University of Maryland Baltimore County	Kumar, Neha	Fabrication of Controlled Diameters of Nanofiber Scaffolds and Study of Stem Cell Response	MML/NCNR Matls Science
University of Maryland Baltimore County	Litwak, Daniel	An Improved Ultrasonic Measurement of Radiation Dosage	PML
University of Maryland Baltimore County	Serova, Nadezhda	Glass Shard Dynamics in Fire Visualization Simulation	ITL
University of Maryland Baltimore County	Van Order, Michael	Verification and Validation of the Fire Dynamics Simulator	EL
University of Maryland College Park	Abraham, Reuben	Testing of Automated Impactor for In-Situ Monitoring of Machine Tool Dynamics	EL
University of Maryland College Park	Ashley, Catherine	Characterizing Dispersion and Degradation of Nanoparticle-Filled Polymer Coatings	EL
University of Maryland College Park	Au, Jennifer	Enzyme Digestion and Mass Spectral Characterization of Glycoproteins	MML/NCNR Chemistry
University of Maryland College Park	Bellistri, Matteo	String Searching on Container Files	ITL
University of Maryland College Park	Bhargava, Pavan	Nafion and Platinum Degradation Studies with Thin-Film Fuel Cell Models	MML/NCNR Matls Science
University of Maryland College Park	Drozdov, Sergei	Extraction of Series Resistance from Advanced CMOS Devices	PML
University of Maryland College Park	Ettehadieh, Daniel	Sustainability Performance Analysis of a Water Bottling Facility	EL
University of Maryland College Park	Galfond, Marissa	Reducing the Area of Magnetic Tunnel Junctions Using a Focused Ion Beam	PML
University of Maryland College Park	Golden, Alexander	Fast, Versatile Quenching in a Single Photon Avalanche Diodes for Quantum Key Distribution	PML
University of Maryland College Park	Ibrahim, Musa	Develop an Analytical Reverse Blocking Model for Si and SiC Diodes and Incorporate the Model into the Diode Model Parameter Extraction Software using LabWindows/CVI	PML (ARRA)

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University of Maryland College Park	Ji, Tommy	Solutions in Perception Challenge	EL
University of Maryland College Park	Jones, Benjamin	Structural and Electrical Characterization of Metal-Molecule-Silicon Junctions Produced by Flip Chip Lamination	PML
University of Maryland College Park	Li, Kun	Planar Arrays of Core/Shell Nanowires for Light Generation and Detection	MML/NCNR Chemistry
University of Maryland College Park	Liang, Li Peng	Safety of Humans Near Powered Industrial Vehicles	EL
University of Maryland College Park	Liao, Rachel	XMPP Services for Smart Transducers	EL
University of Maryland College Park	Lin, Janice	Stability of Terpene Gas Mixtures in Aluminum Cylinders	MML/NCNR Chemistry
University of Maryland College Park	McCarthy, James	Method Development for Characterizing TiO ₂ Nanoparticle Surfaces by Mass Spectrometry	MML/NCNR Chemistry (ARRA)
University of Maryland College Park	Mifsud, Mark	Feature and Task-Based Evaluation of Robot-Generated Maps	EL
University of Maryland College Park	Myers, Taylor	Validation of the Fire Dynamics Simulator	EL
University of Maryland College Park	O'Connell, Brady	Cloud Interoperability: Migrate (Fully-Stopped) VMs from One Cloud-Provider to Another	ITL
University of Maryland College Park	Phuong, Lee	Long-Term Durability of Polymeric Materials for Photovoltaic Applications: Chemical and Physical Degradation of PMMA During UV Exposure	EL
University of Maryland College Park	Rahman, Aman	Diffusion Coefficient Calculation of Phospholipids on Membrane Bi-Layer Enclosing Protocells via Matlab	MML/NCNR Matls Science
University of Maryland College Park	Sandler, Carolyn	Human Response Processes for Emergency Communication	EL
University of Maryland College Park	Sze, Jeffrey	Integrated Factory Operation and Building Science Simulation	EL
University of Maryland College Park	Trettel, Andrew	Concrete Rheometer Automation	EL
University of Maryland College Park	Trettel, Benjamin	Firelab Development: A Sandbox for Improving the Fire Dynamics Simulator	EL
University of Maryland College Park	Villarrubia, Mark	Evaluating Searches Over Large Indices of Brief Documents	ITL
University of Maryland College Park	Weerakkody, Sean	Improving Velocity Measurement in NIST-3 Electronic Kilogram Apparatus	PML
University of Maryland College Park	Westbrook, David	Web-Based User Interface for Sustainability Modeling and Optimization	EL
University of Maryland College Park	Widstrom, Matthew	Stacked Electrode Back Contact Thin Film Heterojunction Solar Cells	MML/NCNR Matls Science
University of Maryland College Park	Wu, Jiemin	Fabrication and Characterization of Carbohydrate-Functionalized Surfactant Vesicles	MML/NCNR Chemistry (ARRA)
University of Michigan	Gill, Navneet	Automation and Control of Variables in a Cryogenic Environment	MML/NCNR Matls Science

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University of Michigan	Langhorst, Amy	Degradation of Polyesters Used in Blast Resistant Glasses and Protective Glazing Systems	EL
University of Michigan	Yuan, Lo-Hua	Fourier Methods to Describe the Shape of Biological Cells	ITL
University of New Hampshire	Nguyen, Khanh	Measuring Thermal Properties of Materials at High Heating Rates Using a Nanocalorimeter	MML/NCNR Matls Science
University of New Haven	Gorka, Danielle	Quantitative Measurement of Enzyme Activity Loss on Biofunctionalized Gold Nanoparticles	MML/NCNR Matls Science
University of New Haven	Reardon, Nicole	Formation and Characterization of Monolayer Nanoparticle Clusters	MML/NCNR Chemistry
University of Puerto Rico	Colon-Berrios, Aida	Precisely Measuring Currents on the Nano-Ampere to Femto-Ampere Range Using an Automated Current-to-Voltage Converter	PML
University of Puerto Rico	Ferra Otero, Eliezer	Credential Revocation Service	ITL (ARRA)
University of Puerto Rico	Marcano Estevez, Joseph	Develop an Additional Computer-Controlled Thermal Cycling Station in Order to Support Reliability Analysis for High-Power, High-Temperature, Power Semiconductor Devices and Modules	PML (ARRA)
University of Puerto Rico	Ortiz-Lozada, Alexander	Temperature Control System for Pulse-Heated Kolsky Bar	EL (ARRA)
University of Puerto Rico	Osorio, Jose	The Study of Person Matching Algorithms for Healthcare	ITL
University of Puerto Rico	Rosado Rosado, Angel	Building the Graphic User Interface for the “Model-Based Testing Project”	EL (ARRA)
University of Texas Dallas	Keeler, Courtney	Effects of Dental Monomers and Initiators on Metabolic Activity and Biomass of Oral Biofilms	MML/NCNR Matls Science (ARRA)
University of the Sciences	Huon, Amanda	Modeling of the Transparency and Conductivity of Carbon Nanotube Networks	MML/NCNR Matls Science
University of Virginia	Olson, Eric	Characterization of Magnetic Nanoparticles for Biomedical Applications	MML/NCNR Matls Science
Virginia Polytechnic Institute and State University	Michalski, Mikala	Automation of the Microscope	ITL
Virginia Polytechnic Institute and State University	Strong, Arielle	Structure and Dynamics of Peripheral Membrane Proteins	MML/NCNR Matls Science
Washington University St. Louis	Draffin III, Cyril	Standardizing Building Codes for Unpredictable Winds	EL
Weber State University	Porter, Caleb	Investigation of Turmeric by Liquid Chromatography	MML/NCNR Chemistry
Weber State University	Smith, Nicholas	Radiative Absorption and Freezing Characteristics of Black Carbon Immersed in Aqueous Aerosols	MML/NCNR Chemistry
Western Kentucky University	Johnson, Derrick	A Pallet Planner	EL

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Western New England College	Jackson, Julie	X-Ray Photoelectron Spectroscopy Used to Map Compositional Variations in Combinatorial Thin Film Libraries	MML/NCNR Matls Science
Whitman College	Abrams, Nathan	The Effects of Helium Upscattering on the Neutron Life	PML
Williams College	Kealhofer, David	Setting Up a Four-Wave Mixing Experiment in Cesium	PML
Williams College	Knapp, Christina	Optical Squeezing and Laser Locking	PML
Worcester Polytechnic Institute	Nelson, Andrew	Evaluation of the Consolidated Model of Fire Growth and Smoke Transport (CFAST)	EL (ARRA)

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