

2001 SURF Students, Advisors, and Projects

SCHOOL	STUDENT	ADVISOR	PROJECT TITLE
Alfred University	Anne Gutmann	Robert D. Shull	Magnetic Properties of Nanoparticle Ferrofluids
Alfred University	Todd Zeitler	Brian H Toby	Parallel Processing for Rietveld Refinement
Appalachian State University	Jennifer Arsenault	David Vanderah	Synthesis of a Series of Methyl 1-Thiaoligo(ethylene oxides) and Characterization of their Self-Assembled Monolayers (SAMs) on Gold
Appalachian State University	Amanda R. Davis	Mary McKnight	Feasibility of Using Meso-tetra(4-NNN-trimethylanilinium) Porphyrin Chloride as a Colorimetric Indicator for Lead Ion
Appalachian State University	Emily E. Edwards	Michael G Mitch	Characterization of Prostate Brachytherapy Seeds by X-Ray Spectrometry and Imaging Methods
Appalachian State University	Jenny L. Price	Mark VanLandingham	Computer System Interoperability for Nanoscale Materials Testing
Appalachian State University	Rebecca J. Stamilio	Ping-Shine Shaw	Developing a National Standard for Source-based Radiometry Using Synchrotron Radiation
Appalachian State University	Sarah E. Thompson	Dan Madrzykowski	Fire Simulation and Burn Pattern Project
Brigham Young University	Yenny Martinez	Jabez McClelland and Shannon Hill	Frequency Stabilization of a Dye Laser Using an Atomic Transition
Brigham Young University	Eva Wilcox	Rob Vest	Saturation Limits of Detectors for EUV Lithography
Brigham Young Univrsity	Rosanne Wilcox	Emil Simiu	Wind Speeds in the ASCE 7 Standard Peak-Gust Map: An Assessment
Bucknell University	Stuart Taylor	Yong-Gu Lee	Virtual Nano Assembly
Carnegie Mellon University	Jonathan Daniel Anderson	Paul Black	Quantum Simulation
Carnegie Mellon University	Susan Pevovar	T. Narayana Bhat	Data Standards for Bioinformatics
Dartmouth College	Jennifer Carlson	Isabel Beichl	Estimating the Number of Independent Sets in a Graph Using Monte Carlo Methods and Applications
Frostburg State University	Raymond Rogers	Rob Vest	Programming in the Far UV Detector Calibration Lab
Grinnell College	Sarah Campbell	Larry Hudson	Digital X-Ray Imaging
Grinnell College	Thomas Parr	David Vanderah	Synthesis of $\text{YCH}_2\text{CH}_2\text{CH}_2(\text{CH}_2\text{CH}_2\text{O})_6\text{CH}_3$ and Characterization of their Self-Assembled Monolayers on Gold and Silicon
Gustavus Adolphus College	Margaret Broz	Newell Washburn	Physical Properties of Miscible Polyester Blends
Hamilton College	Daniel Heyman	Fred Wietfeld, Scott Dewey, and Jeffrey Nico	Tracking Protons Through an Electromagnetic Field
Harvey Mudd College	Braden Pellett	Charles Clark	Towards Practical Quantum Cryptography – An Implementation of a Quantum Key Distribution Architecture
Louisiana State University	Roger A. Wendell	Todd Smith and Alan Thompson	Spin Exchange, NMR and Data Acquisition for Polarized ^3He
Mass. Institute of Technology	Alexandra C. Ford	Thomas Moffat	Structure and Properties of Electrodeposited Co/GaAs Films
Miami (Ohio) University	Matthew Beeler	Eric Benck	Diagnostics for Dual Frequency Plasmas

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Miami (Ohio) University	Laura Feeney	Michael Lim and Paul Lett	A Cold Plasma Experiment Using Metastable Xenon
Miami (Ohio) University	Neil Smith	Rodney Bryant	How Fast Does a Burning Room Move Air?
Montgomery College	Carl Kenneth Buch	Chris White	Does Movement During Cure Affect Overall Sealant Performance?
Montgomery College	Harsimran Singh	Clarissa Ferraris	Automation of the Alkali Silica Rxn
Pennsylvania State Univ.	Evan Pickett	John Blendell	Characterization of Ferroelectric Thin Films
Pomona College	Sara Hastings	Kris Helmerson	Atoms Confined in an Optical Lattice
Rensselaer Polytechnic Institute	Eranga Tyrrol Crossley Jayewardene	Bradley Damazo & Andras Vladar	Design and Development of a Measurement and Control System for Measuring Linewidth Samples on the AMRAY Scanning Electron Microscope
Rider University	Virginia Lea Miller	Terrell A Vanderah	Subsolidus Phase Relations and Dielectric Behavior in the MgO-La ₂ O ₃ -TiO ₂ System
Rochester Inst. of Tech.	Justin Butler	Howard Yoon	Linearity of InGaAs Photodiodes
Santa Monica College	Dung Chau	Eric Lin and Chris Soles	Thermo Deprotection and Photoresist Polymer in Photolithography
Santa Monica College	Quan Chau	Joseph Kopanski	Silicon Carbide Surface Preparation for Scanning Probe Characterization
Santa Monica College	Salima Hamirani	T. Narayana Bhat	Data Standards for Bioinformatics
Santa Monica College	Kimberly Kaleas	Zhicaho Lin	Mass Spectrometric Analysis of Plutonium Isotopes with Various Sample Loading Methods
Santa Monica College	Amarpreet Kaur	Marc Desrosiers	Temperature Correction to Industrial Radiation Processing
Santa Monica College	Thomas Buckley Mitchell	Kent Reed and Bob Lipman	Visualization of Construction Project Information
Santa Monica College	Omid M. Noorani	Gary E. Fisher	Computer Forensics Tools Verification
Southern Univ. & A&M College	Cari Bershell	Brian Zimmerman	The Preliminary Study for the Standardization of Technetium-94m
Southern Univ. & A&M	Brandan J. Darensbourg	Paul Bergstrom	Application of the Monte Carlo Code MCNP and Genetic Algorithms to Optimizing Photon Dose Distributions
Southern Univ. & A&M College	Symoane Mizell	Dale Bentz	Virtual Concrete Made for the World Wide Web
Swarthmore College	Abram Falk	Garnett Bryant	A Quantum Well in a Semiconductor Quantum Dot
Towson University	Daniel Smith	Fernando Podio	Biometric Inter-Operability
University of California – Irvine	Terry Au	Long Phan	Insulating Concrete Forms
University of California – Irvine	Melissa Davis	Kalman Migler	Droplet Structure in Sheared Polymeric Emulsions
University of California – Irvine	Jack Hudson	Larry Reeker	Comparing and Evaluating Ontologies in Intelligent Systems
University of California – Irvine	Jeff Riba	Woo Chun Choi and Johannes Soons	Measurement of Machine Tool Contouring Performance
University of California – Irvine	David Stout	Erik Hobbie	Shear Induced Tilt Order in Polymer Blends

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University of California – Irvine	Angie Teng	Angie Teng	Coordinate Measuring Machine Software Evaluation
University of Maryland – Baltimore County	Ali Deyhim	Susan Krueger	Small Angle Neutron Scattering Studies that Compare Single Stranded PNAs to Single Stranded DNAs
University of Maryland – Baltimore County	Diana Zeiger	Ming Tung	Measuring the Effects of Calcium and Phosphate on the Stability of Peroxides
University of Maryland – College Park	Sarah McKenney	Kris Helmerson	Liposomes as Micro-Reactors
University of Maryland – College Park	Paul McNally	Adam Jacoff	Virtual Urban Search and Rescue Test Course
University of Puerto Rico – Mayaguez	Emily Alicea-Muñoz	Eric L. Shirley	Diffraction Effects in SURF Beamline 3
University of Puerto Rico – Mayaguez	Yaireska M. Collado Vega	John Widmann	Fire Research: Fire and Fire Suppression Modeling
University of Puerto Rico – Inter-American	Juan José Miro Santiago	Kari Harper	Linear Motor Test-Bed, Geometric Characterization
University of Puerto Rico – Mayaguez	Angélica Pérez Andújar	Leticia Pibida	Setup and Characterization of Titanium:Sapphire Laser for Resonance Ionization Mass Spectrometry (RIMS) System
University of Puerto Rico – Mayaguez	Teddy A. Rodriguez Vélez	Theodore Vorburger and George Orji	Microscopy of Subsurface Particles in Coatings
University of Puerto Rico – Mayaguez	Carlos Santana	Keith Lykke, Steven Brown, and George Eppeldauer	Development of a LED-Based Spectrally Tunable Colorimetric Light Source
University of Rochester	Jenine Turner	Christopher Rasmussen	Color- and Texture-Based Classifiers for Road Segmentation
Wellesley College	Stella Offner	Craig Sansonetti	Data Collection and Analysis for the Determination of Lithium Energy Levels
Western New England College	Craig Beal	Thomas LeBrun	Fabricating Self-Assembling Nanostructures