



Old Dominion University
Department of Physics

Physics Undergraduate Seniors' Day
Tuesday April 28, 2015

Senior Thesis Presentations

2:15 – 2:45 pm.

Refreshments in OCNPS First floor Atrium

2:45 – 2:55 pm.

Welcome and Introduction in Scale-Up (OCNPS 142 - 144)

3:00 – 5:00 pm.

Senior Thesis Presentations

Scale-Up Room OCNPS 142-144 and ECSB 1202 Auditorium (CAVE)

**Senior Thesis Presenters
(Two Parallel Sessions)**

Presenter	CAVE	Time	SCALEUP	Presenter
Katheryne McMahan	C1	3:00 – 3:15 pm.	S1	Mathieu Ehrhart
Scintillator Testing and Repair for the Large Acceptance Detector at Jefferson Lab.			Beamline Magnet Studies for the Heavy Photon Search Experiment at Jefferson Lab.	
Cameron Nunez	C2	3:15 – 3:30 pm.	S2	Matthew Vogel
Comparing Phase Shifts of the Finite Potential Well to that of the Periodically Bound Case.			Neutrino Oscillations in Vacuum and Matter.	
Nathaniel Schirle	C3	3:30 – 3:45 pm.	S3	Cory Gruber
Signal Propagation and Attenuation in Different Cable Types.			Modeling Transverse Structure of the Pion Distribution Amplitude.	
Sean Babcock	C4	3:45 – 4:00 pm.	S4	Victoria Lagerquist
Investigation of the Effects of Recombination Processes on the Performance of Organic Bulk Heterojunction Photovoltaics.			Observation of Symbiotic Binary Systems in Cygnus.	
Jon-Michael Glick	C5	4:00 – 4:15 pm.	S5	Christopher Cotnoir
Mechanics of the Double Pendulum and An Analytic Study of the Logistic Function and Chaos.			A Hybrid Nature-Inspired Algorithm for a Multidimensional Nonlinear Optimization with Applications to Biology.	
Mark Stefani	C6	4:15 – 4:30 pm.	S6	Frank Berardi
Wavelet-Based Noise-Reduction Techniques in Tomography With Application to Plasma and Accelerator Physics.			NMR for Polarized Nuclei in an Inhomogeneous Magnetic RF Field.	
David Gary	C7	4:30 – 4:45 pm.	S7	Anthony Sciola
Elastic Scattering as a measure of Luminosity in an Electron-Ion Collider.			Charge Exchange Process for Impact Between Low-Z Ions and Atomic Hydrogen.	
Josh Frechem	C8	4:45 – 5:00 pm.	S8	Sonja Schimmers-Wood
Photometric Survey of Symbiotic Binary Systems in the Northern Hemisphere Using the Goddard Robotic Telescope.			The Testing of Scintillation Detectors for the CLAS TOF system.	

More details at www.odu.edu/physics All are Welcome!