

# DEGREE CANDIDATES

## COLLEGE OF AGRICULTURE AND NATURAL RESOURCES

*Dean Robin W. Morgan*

### Doctor of Philosophy

- Christopher Maurice Heckscher *Entomology & Wildlife Ecology*  
B.S., Colorado State University  
M.S., University of Delaware  
*Dissertation:* Use of the Veery (*Catharus Fuscescens*) Call Repertoire in Vocal Communication  
*Professor in charge of dissertation:* Roland R. Roth, Ph.D.
- Jason Adam Mills *Animal Science*  
B.S., University of Delaware  
M.S., University of Nebraska, Lincoln  
*Dissertation:* Cytokine and Growth Factor Networks Associated with Epidermal-Mesenchymal Cell Interactions During Keratinocyte-Stem Cell Growth in the Bovine Claw  
*Professor in charge of dissertation:* Robert M. Dyer, V.M.D., Ph.D.
- Kristian William Paul *Plant & Soil Sciences*  
B.S., Montana State University, Bozeman  
*Dissertation:* Molecular Modeling Study of Sulfate and Phosphate Adsorption at the Mineral-Water Interface  
*Professor in charge of dissertation:* Donald L. Sparks, Ph.D.
- Luisa Ines Santamaria *Plant & Soil Sciences*  
B.S., Pontificia Universidad Católica del Ecuador  
M.S., University of Delaware  
*Dissertation:* Evaluation of Lima Bean (*Phaseolus lunatus*) Germplasm for Resistance to Downy Mildew, Epidemiological and Biological Studies of its Causal Agent, *Phytophthora phaseoli*  
*Professor in charge of dissertation:* Thomas A. Evans, Ph.D.
- Andrew Zachary Skibo *Plant & Soil Sciences*  
B.S., University of Delaware  
*Dissertation:* The Evaluation of Selected 'Post'-Applied Herbicides for Control of Japanese Knotweed (*Polygonum Cuspidatum* Syn. *Fallopia Japonica* Syn. *Reynourtria Japonica*) and a Survey and Characterization of this Invasive Species in Delaware  
*Professor in charge of dissertation:* Mark Isaacs, Ph.D.

## COLLEGE OF ARTS AND SCIENCES

*Dean Thomas M. Apple*

### Doctor of Physical Therapy

*This degree is a professional degree and does not require the writing of a dissertation.*

- Erin Elizabeth Balmford  
B.S.H., Frostburg State University
- Elizabeth Diane Bauske  
B.S.H.S., University of Illinois, Urbana-Champaign
- Jennifer Lee Binkley  
B.A., University of Delaware
- Janelle Kristen Cannon  
B.A., University of Delaware
- Jessalyn Ann Ciampa  
B.S., State University of New York, Geneseo
- Kathryn Gray Curtis  
B.S., Evangel University
- Catalina Dee Suriben David  
B.A., University of California, Irvine
- Tyesha Monique Dwight  
B.A., University of Delaware
- Kyle T. Fennemore  
B.A., University of Delaware  
B.S., University of Delaware
- Lakisha Freeman Fulton  
B.S., Pennsylvania State University
- Lauren Elizabeth Grieder  
B.A., University of Delaware
- Thomas Andrew Handling  
B.A., University of Delaware  
B.S., University of Delaware
- Krista Ann Horne  
B.S., University of Delaware
- Christine Lynn Keighley  
B.S., University of Delaware
- Samantha Joy Lefkowitz  
B.S., Ohio State University
- Karrie Lowry  
B.S., University of Delaware
- Valerie Jean Martineau  
B.S., College of William and Mary
- Faith Virginia Morton  
B.S., Grove City College
- Krystal Lynn Perrone  
B.A., Arcadia University
- Melissa Jean Ronan  
B.S., Boston University
- Lisa Rochelle Saltzman  
B.A., University of Virginia
- Jennifer Ann Schmidt  
B.S., University of Delaware
- Matthew Gerard Scott  
B.A., University of Delaware
- Julienne Rose Sinkosky  
B.S., University of Delaware
- Tiffany Sue Strawn  
B.S., Texas Christian University
- Kelsey Lee Vagnoni  
B.S., University of Delaware
- Rachel L. Whitlock  
B.S., University of Delaware
- Jennifer Marie Zambito  
B.S., University of Delaware
- Teresa L. Zoltak  
B.S., University of Delaware

## Doctor of Philosophy

- Shalini Balakrishnan *Chemistry & Biochemistry*  
B.Sc., University of Madras, India  
M.Sc., University of Madras, India  
*Dissertation:* Development of Novel Switchable Motifs and New Strategies to Build Functionally Privileged Structures  
*Professor in charge of dissertation:* Neil J. Zondlo, Ph.D.
- Jon Regan Beckham *Applied Mathematics*  
B.S., University of Central Arkansas  
M.S., University of Delaware  
M.A., University of Central Arkansas  
*Dissertation:* Analysis of Mathematical Models of Electrostatically Deformed Elastic Bodies  
*Professor in charge of dissertation:* John A. Pelesko, Ph.D.
- Amy Irene Cass *Sociology*  
B.S., Florida State University  
M.A., University of Delaware  
*Dissertation:* Individual Perceptions of Stalking: An Examination of the Influence of Gender and the Victim/Offender Relationship  
*Professor in charge of dissertation:* Ronet Bachman, Ph.D.
- Abdullah Ceylan *Physics*  
B.S., Hacettepe University, Turkey  
*Dissertation:* Core/Shell Structured Magnetic Nanoparticles Synthesized by Inert Gas Condensation  
*Professor in charge of dissertation:* S. Ismat Shah, Ph.D.
- Xiaoren Chen *Biological Sciences*  
B.Md., Chongqing University of Medical Science, China  
M.Md., Chongqing University of Medical Science, China  
*Dissertation:* Biochemistry of Prox1 Function  
*Professor in charge of dissertation:* Melinda K. Duncan, Ph.D.
- Vesselina G. Cooke *Biological Sciences*  
B.S., Southwest Missouri State University  
*Dissertation:* Role of Junctional Adhesion Molecule-A in Vascular Biology  
*Professor in charge of dissertation:* Ulhas Naik, Ph.D.
- Tim V. Decker *English*  
B.A., Towson University  
M.A., University of Delaware  
*Dissertation:* Strategic Standards: Authorial Self-Presentation in Restoration Literature  
*Professor in charge of dissertation:* Lois Potter, Ph.D.

- Jodi Anne Devine *English*  
B.S., Skidmore College  
M.A., DePaul University  
*Dissertation:* Epistolary Revelations: Reading Letters in Nineteenth-Century British Novels  
*Professor in charge of dissertation:* Carl Dawson, Ph.D.
- Zhenzhen Dong *Chemistry & Biochemistry*  
B.S., Shanghai Jiaotong University, China  
*Dissertation:* Synthesis of Two-Dimensional Scaffolds and Metallofoldamers  
*Professor in charge of dissertation:* Joseph M. Fox, Ph.D.
- William Richard Donner *Sociology*  
B.A., Millersville University of Pennsylvania  
M.A., University of Delaware  
*Dissertation:* An Integrated Model of Risk Perception and Protective Action: Public Response to Tornado Warnings  
*Professor in charge of dissertation:* Havidán Rodríguez, Ph.D.
- William Gaul Dougherty *Chemistry & Biochemistry*  
B.S., Ursinus College  
*Dissertation:* Synthesis, Structure and Reactivity of Nickel-Nickel Complexes for Understanding the A Cluster in Acetyl Coenzyme A Synthase  
*Professor in charge of dissertation:* Charles G. Riordan, Ph.D.
- Paul J. Eder *Psychology*  
B.A., Loyola College  
M.A., University of Delaware  
*Dissertation:* Integrating the Componential and Interactionist Models of Employee Creativity  
*Professor in charge of dissertation:* John E. Sawyer, Ph.D.
- Darlene Farabee *English*  
B.A., Temple University  
M.A., University of Delaware  
*Dissertation:* Print Travels: Movement and Metaphor in the Early Modern Era  
*Professor in charge of dissertation:* Stephen A. Bernhardt, Ph.D.
- Genevieve Sophie Griffiths *Biological Sciences*  
B.A., University of Delaware  
*Dissertation:* Investigating the Impact and Mechanism of Vesicular and Non-Vesicular Mediated GPI-Linked Protein Transfer From Reproductive Luminal Fluids to Sperm, Using SPAM1 as a Model  
*Professor in charge of dissertation:* Patricia A. Martin-DeLeon, Ph.D.

- Mohamed Hassanein *Biological Sciences*  
 B.S., Ain Shams University, Egypt  
 M.S., Delaware State University  
*Dissertation:* Biochemical and Functional Characterization of a Novel Placental Protease, Cathepsin P, in Rat Trophoblasts  
*Professors in charge of dissertation:* Robert W. Mason, Ph.D.  
 Robert A. Sikes, Ph.D.
- Stefanie Herron *English*  
 B.A., University of Mary Washington  
 M.A., Virginia Commonwealth University  
*Dissertation:* Willa Cather's Argument with Modernism: Unearthing Faith Amid the Ruins of War  
*Professor in charge of dissertation:* Susan Goodman, Ph.D.
- Thommen Korah *Computer Science*  
 B.Tech., Cochin University of Science & Technology, India  
 M.S., University of Delaware  
*Dissertation:* Robust Spatiotemporal Analysis of Architectural Imagery  
*Professor in charge of dissertation:* Christopher Rasmussen, Ph.D.
- Kevin Allen Kreisel *Chemistry & Biochemistry*  
 B.S., Pennsylvania State University  
*Dissertation:* Organochromium Chemistry with Formally Neutral, Chelating Ancillary Ligands  
*Professor in charge of dissertation:* Klaus Theopold, Ph.D.
- Chin-Aik Lee *Physics*  
 B.S., Lebanon Valley College  
*Dissertation:* Selected Topics in Unified Field Theories  
*Professor in charge of dissertation:* Qaisar Shafi, Ph.D.
- Margaret Elizabeth Leigey *Criminology*  
 B.A., Indiana University of Pennsylvania  
 M.A., University of Delaware  
*Dissertation:* Life While Serving Life: Examining the Correctional Experiences of Older Inmates Serving a LWOP Sentence  
*Professor in charge of dissertation:* Ronet Bachman, Ph.D.
- Melissa Manni *Psychology*  
 B.S., Pennsylvania State University  
 M.A., University of Delaware  
*Dissertation:* Full-Day Patterns of Cortisol Production Among Toddlers in Child Care  
*Professor in charge of dissertation:* Mary Dozier, Ph.D.
- Elizabeth A. Mansley *Sociology*  
 B.A., Saint Joseph's University  
 M.A., University of Delaware  
*Dissertation:* "Man Up": Exploring the Relationship Between Race, Social Class, Intimate Partner Violence And the Construction of Masculinity  
*Professor in charge of dissertation:* Susan Miller, Ph.D.
- Paula Lynn McGinley *Chemistry & Biochemistry*  
 B.S., Elizabethtown College  
*Dissertation:* Molecular Complementation of Mutant Hormone Receptors  
*Professor in charge of dissertation:* John Koh, Ph.D.
- Christopher Michael Micklitsch *Chemistry & Biochemistry*  
 B.S., Lycoming College  
*Dissertation:* Designing Functional Materials Using the Hydrophobic Face of a Self-Assembling Amphiphilic  $\beta$ -Hairpin Peptide  
*Professor in charge of dissertation:* Joel P. Schneider, Ph.D.
- Michael Thomas Mock *Chemistry & Biochemistry*  
 B.S., Villanova University  
 M.S., Villanova University  
*Dissertation:* Synthesis and Reactivity of Thioether-Supported Organoiron and Low-Valent Iron Complexes and Cyanide Bridged Binuclear Complexes  
*Professor in charge of dissertation:* Charles G. Riordan, Ph.D.
- Maitreya Natu *Computer Science*  
 B.E., Rajiv Gandhi Proudhyogiki Vishwavidyalaya, India  
 M.S., University of Delaware  
*Dissertation:* Application of Adaptive Probing for Fault Diagnosis in Computer Networks  
*Professor in charge of dissertation:* Adarshpal S. Sethi, Ph.D.
- Ann Mary O'Brien *Chemistry & Biochemistry*  
 B.S., Sacred Heart University  
*Dissertation:* Environmental Proteomics and Mass Spectrometry: Characterization of Viable Microorganisms in Ambient Air  
*Professor in charge of dissertation:* Murray V. Johnston, Ph.D.
- Adebanjo Akinwummi Oriade *Physics*  
 B.Sc., University of Jos, Nigeria  
 M.Sc., University Of Ibadan, Nigeria  
*Dissertation:* Monte Carlo Study of Fluctuations and Magnetization Reversal in Nickel-Iron Ferromagnetic Ultra-Thin Films  
*Professor in charge of dissertation:* Siu-Tat Chui, Ph.D.

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|--|--|---|-----------------------------------|
| <p>Jalynn Olsen Padilla<br/> B.A., Weber State University<br/> M.A., University of Utah<br/> <i>Dissertation:</i> An Army of “Cripples”: Northern Civil War Amputees, Disability, and Manhood in Victorian America<br/> <i>Professor in charge of dissertation:</i> Anne Boylan, Ph.D.</p>   | <p><i>History</i></p>                      | <p>Robert Joseph Ronkese<br/> B.S., Union College New York<br/> M.S., University of Delaware<br/> M.S., Northwestern University<br/> <i>Dissertation:</i> The Analysis and Numerical Simulation of a Mathematical Model of Bone Remodeling<br/> <i>Professor in charge of dissertation:</i> Robert P. Gilbert, Ph.D.</p>                  | <p><i>Applied Mathematics</i></p> |
| <p>Jerome H. Pagani<br/> B.A., University of Rochester<br/> M.A., University of Delaware<br/> <i>Dissertation:</i> The Medial Hypothalamic Defensive Circuit and Predator Odor Induced Fear: A Comparison of Electrolytic and Neurotoxic Lesions<br/> <i>Professor in charge of dissertation:</i> Jeffery B. Rosen, Ph.D.</p>  | <p><i>Psychology</i></p>                   | <p>Ronnie Molly Rubin<br/> B.A., Wesleyan University<br/> M.A., University of Delaware<br/> <i>Dissertation:</i> Children’s Beliefs About Peer Relations: Links to Peer Rejection, Depression, Aggression, and the Beliefs of Parents and Teachers<br/> <i>Professor in charge of dissertation:</i> Julie A. Hubbard, Ph.D.</p>           | <p><i>Psychology</i></p>          |
| <p>Mahesh Kumar Pallerla<br/> B.S., Sri Sathya Sai Institute of Higher Education, India<br/> M.S., Sri Sathya Sai Institute of Higher Education, India<br/> <i>Dissertation:</i> Strain as a Design Principle — Stereoselective Pauson-Khand Reactions of Cyclopropenes<br/> <i>Professor in charge of dissertation:</i> Joseph M. Fox, Ph.D.</p>                        | <p><i>Chemistry &amp; Biochemistry</i></p> | <p>Abdul K. Rumaiz<br/> B.S., University of Madras, India<br/> M.S., Indian Institute of Technology, Madras<br/> <i>Dissertation:</i> Cobalt Doped TiO<sub>2</sub>, A Possible Candidate for Dilute Magnetic Semiconductors<br/> <i>Professor in charge of dissertation:</i> S. Ismat Shah, Ph.D.</p>                                     | <p><i>Physics</i></p>             |
| <p>Luis Abel Ralat Touset<br/> B.S., Millersville University of Pennsylvania<br/> <i>Dissertation:</i> Insights Into the Multiple Functions of Glutathione S-Transferase P1-1: Characterization of Its Several Ligand Sites and Examination of Its Interactions with I-Cysteine Peroxiredoxin<br/> <i>Professor in charge of dissertation:</i> Roberta Colman, Ph.D.</p> | <p><i>Chemistry &amp; Biochemistry</i></p> | <p>Anne Elizabeth Samuel<br/> B.A., University of Richmond<br/> M.A., University North Carolina, Chapel Hill<br/> <i>Dissertation:</i> Vision Conceptualized in the American Renaissance Murals of Edwin Howland Blashfield<br/> <i>Professor in charge of dissertation:</i> Michael Leja, Ph.D.</p>                                      | <p><i>Art History</i></p>         |
| <p>Jason Edward Reiss<br/> B.A., Wittenberg University<br/> M.A., University of Delaware<br/> <i>Dissertation:</i> Object Substitution Masking: What Is the Neural Fate of the Unreportable Target?<br/> <i>Professor in charge of dissertation:</i> James E. Hoffman, Ph.D.</p>   | <p><i>Psychology</i></p>                   | <p>David Carroll Shepherd<br/> B.S., Virginia Commonwealth University<br/> M.S., University of Delaware<br/> <i>Dissertation:</i> Natural Language Program Analysis: Combining Natural Language Processing with Program Analysis to Improve Software Maintenance<br/> <i>Professor in charge of dissertation:</i> Lori Pollock, Ph.D.</p> | <p><i>Computer Science</i></p>    |
| <p>Meghan Ashlin Rich<br/> B.A., University of Maryland<br/> M.A., University of Wisconsin, Milwaukee<br/> <i>Dissertation:</i> Diversity Block by Block: Homeowners’ Perceptions of Race, Class, and Neighborhood Change in an Integrated Urban Neighborhood<br/> <i>Professor in charge of dissertation:</i> Margaret L. Andersen, Ph.D.</p>                           | <p><i>Sociology</i></p>                    | <p>Sara Elizabeth Sprenkle<br/> B.S., Gettysburg College<br/> M.S., Duke University<br/> <i>Dissertation:</i> Strategies for Automatically Exposing Faults in Web Applications<br/> <i>Professor in charge of dissertation:</i> Lori Pollock, Ph.D.</p>   | <p><i>Computer Science</i></p>    |



Corey Michael Taylor *English*  
B.A., Ursinus College  
M.A., University of Delaware  
*Dissertation:* Ambiguous Sounds: African American Music  
in Modernist American Literature  
*Professor in charge of dissertation:* Susan Goodman, Ph.D.

Paula Vasquez *Mathematics*  
Engr., Universidad Nacional de Colombia  
M.B.A., Goldey-Beacom College  
*Dissertation:* Modeling Wormlike Micellar Solutions  
*Professor in charge of dissertation:* L. Pamela Cook-Ioannidis, Ph.D.

Ni Yan *Chemistry & Biochemistry*  
B.S., Peking University, China  
*Dissertation:* Stereoselective Carbometallation  
Reactions of Cyclopropenes  
*Professor in charge of dissertation:* Joseph M. Fox, Ph.D.

Liviu P. Zarbo *Physics*  
B.S., University of Cluj, Napoca, Romania  
Cert., University of Cluj, Napoca, Romania  
*Dissertation:* Mesoscopic Spin Hall Effect in  
Semiconductor Nanostructures  
*Professor in charge of dissertation:* Branislav K. Nikolic, Ph.D.

Ningyi Zhang *Applied Mathematics*  
B.S., Qingdao University, China  
M.S., University of Delaware  
*Dissertation:* Inverse Problem For Wave  
Propagation in a Perturbed Layered  
Half-Space and Orthogonality Relations  
in Poroelastic Materials  
*Professor in charge of dissertation:* Robert Gilbert, Ph.D.

Feng Zhou *Chemistry & Biochemistry*  
B.S., Fudan University, China  
*Dissertation:* Protein Characterization by Capillary  
Isoelectric Focusing Electrophoresis, Reversed  
Phase Liquid Chromatography and  
Mass Spectrometry  
*Professor in charge of dissertation:* Murray V. Johnston, Ph.D.

**ALFRED LERNER COLLEGE OF BUSINESS AND ECONOMICS**  
*Dean Conrado M. Gempesaw II*

**Doctor of Philosophy**

Olawole Nasser Yayl *Economics*  
M.A., University of Delaware  
Mait., University of Lyons II, France  
*Dissertation:* A Random Utility Model of Trout Fishing in Delaware  
*Professor in charge of dissertation:* George R. Parsons, Ph.D.

Hong Yin *Economics*  
B.E., Dong Hua University, China  
M.S., Clemson University  
*Dissertation:* Innovative Activity and Technological  
Change in China and Its Regions: Evidence from  
Chinese Domestic Patents  
*Professor in charge of dissertation:* William R. Latham III, Ph.D.

**COLLEGE OF ENGINEERING**  
*Interim Dean Michael J. Chajes*

**Doctor of Philosophy**

Albert Yawson Ayenu-Prah *Civil & Environmental Engineering*  
B.Sc., Kwame Nkrumah University of Science & Technology, Ghana  
M.S., Texas Tech University  
*Dissertation:* Emperical Mode Decomposition and  
Civil Infrastructure Systems  
*Professor in charge of dissertation:* Nii O. Attoh-Okine, Ph.D.

Steven Edward Bane *Chemical Engineering*  
B.S.E., University of Pittsburgh  
*Dissertation:* Expression and Characterization of the  
Human Neurokinin 1 Receptor From *E. coli*  
*Professor in charge of dissertation:* Anne Skaja Robinson, Ph.D.

Lactitia Mary Bonnaillic *Chemical Engineering*  
Ing., Ecole Nationale Supérieure d'Ingénieurs en Genie  
M.Ch.E., University of Delaware  
*Dissertation:* Bio-Based Polymeric Foam from  
Soybean Oil and Carbon Dioxide  
*Professor in charge of dissertation:* Richard P. Wool, Ph.D.

Scott Edward Buzby *Materials Science & Engineering*  
B.S., University of Delaware  
*Dissertation:* The Effect of Doping Titanium  
Dioxide Nanoparticles on Phase  
Transformation, Photocatalytic  
Activity and Anti-Bacterial Properties  
*Professor in charge of dissertation:* S. Ismat Shah, Ph.D.

Abhijit Chatterjee *Chemical Engineering*  
B.Tech., Indian Institute of Technology, Delhi  
M.Tech., Indian Institute of Technology, Delhi  
*Dissertation:* Nanoscale Modeling and Control  
of Self-Assembled Nanoparticle Arrays  
Using a Hierarchy of Multiscale Models  
*Professor in charge of dissertation:* Dionisios G. Vlachos, Ph.D.

Yu-Chia Cheng *Chemical Engineering*  
B.S., National Taiwan University, Taipei  
M.S., National Taiwan University, Taipei  
*Dissertation:* Effects of Salts on the Phase  
Behavior of Proteins and Protein Mixtures  
*Professor in charge of dissertation:* Abraham M. Lenhoff, Ph.D.

Andre C. Dumetz *Chemical Engineering*  
M.Ch.E., University of Delaware  
*Dissertation:* Protein Interactions and Phase  
Behavior in Aqueous Solutions: Effects  
of Salt, Polymer, and Organic Additives  
*Professor in charge of dissertation:* Abraham M. Lenhoff, Ph.D.

Kelly Devon Hales *Materials Science & Engineering*  
B.S., Virginia Polytechnic Institute and State University  
*Dissertation:* Design and Characterization of  
Self-Assembled Nanostructures of Block  
Copolymers in Solution  
*Professor in charge of dissertation:* Darrin J. Pochan, Ph.D.

Biqin Huang *Electrical & Computer Engineering*  
B.S., Zhejiang University, China  
M.S., University of Delaware  
M.S., Zhejiang University, China  
*Dissertation:* Vertical Transport Silicon Spintronic Devices  
*Professor in charge of dissertation:* Ian Appelbaum, Ph.D.

Wei Huang *Chemical Engineering*  
B.S., Tsinghua University, China  
M.Ch.E., University of Delaware  
*Dissertation:* Selective Hydrogenation of Acetylene  
on Zeolite-Supported Bimetallic Catalysts  
*Professor in charge of dissertation:* Jingguang G. Chen, Ph.D.

Onur Yusuf Kas *Materials Science & Engineering*  
B.S., Middle East Technical University  
M.S., Middle East Technical University  
*Dissertation:* Design, Synthesis and Characterization  
of Bio/Electroactive Hybrids: Confining  
Chromophores in Dilute Solutions Using a  
Helical Peptide Template  
*Professor in charge of dissertation:* Mary E. Galvin, Ph.D.

Gary L. Katulka *Electrical & Computer Engineering*  
B.S.E.E., Wilkes University  
M.E.E., University of Delaware  
*Dissertation:* Fabrication and Characterization of  
Structures and Rectifiers Based on Silicon Carbide  
Alloyed with Germanium  
*Professor in charge of dissertation:* James Kolodzey, Ph.D.

Joshua Ian Kramer *Electrical & Computer Engineering*  
B.Cp.E., University of Delaware  
*Dissertation:* A Dynamic Power Optimization Methodology  
for Gigabit Electrical Links  
*Professor in charge of dissertation:* Fouad Kiamilev, Ph.D.

Matthew Steven Lamm *Materials Science & Engineering*  
B.S., Virginia Polytechnic Institute and State University  
*Dissertation:* Molecular Self-Assembly: Design,  
Synthesis and Characterization of  
Peptidic Materials for Bio- and  
Nano-Technologies  
*Professor in charge of dissertation:* Darrin J. Pochan, Ph.D.

Myung Han Lee *Chemical Engineering*  
B.S., Hanyang University, Korea  
M.S., Hanyang University, Korea  
*Dissertation:* Microstructure and Microrheology  
of Colloidal Gels  
*Professor in charge of dissertation:* Eric M. Furst, Ph.D.

Jian Li *Electrical & Computer Engineering*  
B.E., Tsinghua University, China  
M.E., Tsinghua University, China  
M.E.E., University of Delaware  
*Dissertation:* Theory and Application Methods of Time Domain  
Reflectometry/Time Domain Transmission Computed  
Tomography (TDR/TDT CT)  
*Professor in charge of dissertation:* Robert G. Hunsperger, Ph.D.

Shaixin Lu *Electrical & Computer Engineering*  
B.E., Jilin University, China  
M.E., Jilin University, China  
*Dissertation:* Photomechanical Actuation of Carbon Nanotubes  
and Their Applications in Micro-Opto-Mechanical Systems  
*Professor in charge of dissertation:* Balaji Panchapakesan, Ph.D.

Rovshan Mahmudov *Civil & Environmental Engineering*  
C.Sc., Azerbaijan State University  
Engr., Azerbaijan State University  
*Dissertation:* Removal and Destruction of Perchlorate  
by Activated Carbon-Based Processes  
*Professor in charge of dissertation:* Chin Pao Huang, Ph.D.

Kapil Mukati *Chemical Engineering*  
B.Tech., Indian Institute of Technology, Madras  
*Dissertation:* An Alternative Structure for Next  
Generation Regulatory Controllers and Scale-Up  
of CU(INGA) SE<sub>2</sub> Thin Film Co-Evaporative  
Physical Vapor Deposition Process  
*Professor in charge of dissertation:* Robert W. Birkmire, Ph.D.

Danielle Nicole Rockwood *Materials Science & Engineering*  
B.S., James Madison University  
*Dissertation:* Characterization of Electrospun  
Polymer Fibers for Applications in  
Cardiac Tissue Engineering and  
Regenerative Medicine  
*Professor in charge of dissertation:* John F. Rabolt, Ph.D.

Christopher A Schuetz *Electrical & Computer Engineering*  
B.S.E.E., Virginia Polytechnic Institute and State University  
M.E.E., University of Delaware  
*Dissertation:* Optical Techniques for Millimeter-Wave  
Detection and Imaging  
*Professor in charge of dissertation:* Dennis Prather, Ph.D.

Dan Su *Mechanical Engineering*  
B.S., Shanghai Jiaotong University, China  
M.S., Shanghai Jiaotong University, China  
*Dissertation:* Microcrack Damage and Its Effect  
on Stress Wave Propagation  
*Professor in charge of dissertation:* Michael H. Santare

Wenzhong Tang *Mechanical Engineering*  
B.E., Beijing University of Chemical Technology, China  
M.E., Beijing University of Chemical Technology, China  
M.S.M.E., University of Delaware  
*Dissertation:* Molecular Dynamics Simulations of  
Carbon Nanotubes in Liquid Flow  
*Professor in charge of dissertation:* Suresh G. Advani, Ph.D.

Rohit Vijay *Chemical Engineering*  
B.Tech., Indian Institute of Technology, Madras  
M.Tech., Indian Institute of Technology, Madras  
*Dissertation:* Discovery and Mechanistic Investigation  
of NO<sub>x</sub> Traps and NH<sub>3</sub> Decomposition Catalysts  
Using High-Throughput Experimentation  
*Professor in charge of dissertation:* Jochen A. Lauterbach, Ph.D.

Demin Wang *Civil & Environmental Engineering*  
B.En.Sc., East China University Science & Technology, China  
D.Eng., East China University Science & Technology, China  
M.Env.Sc., East China University Science & Technology, China  
*Dissertation:* Reduction of Perchlorate by Indirect  
Electrochemical and Catalytic Hydrogen Processes  
in Dilute Aqueous Solutions  
*Professor in charge of dissertation:* C. P. Huang, Ph.D.

Erich C. Weigert *Materials Science & Engineering*  
B.Ch.E., University of Delaware  
*Dissertation:* An Ex-Situ and In-Situ Evaluation of  
Carbides as Potential Electrocatalysts  
*Professor in charge of dissertation:* Jingguang G. Chen, Ph.D.

Raymond Augustus Wildman *Electrical & Computer Engineering*  
B.E.E., University of Delaware  
M.E.E., University of Delaware  
*Dissertation:* Geometry Optimization and Computational  
Electromagnetics: Methods and Applications  
*Professor in charge of dissertation:* Daniel S. Weile, Ph.D.

Michael John Wilson *Electrical & Computer Engineering*  
B.E.E., University of Delaware  
M.S., University of Delaware  
*Dissertation:* Projectile Navigation and the  
Application to Magnetometers  
*Professor in charge of dissertation:* Gonzalo R. Arce, Ph.D.

Guangchi Xuan *Electrical & Computer Engineering*  
B.S., Tsinghua University, China  
M.E.E., University of Delaware  
*Dissertation:* The Fabrication and Characterization of High  
Temperature Terahertz Emitters, and DNA Sensitive Transistors  
Based on Silicon-Germanium and Silicon Carbide Materials  
*Professor in charge of dissertation:* Gonzalo R. Arce, Ph.D.

Jin Yan *Mechanical Engineering*  
B.E., Beijing University of Aeronautics & Astronautics, China  
M.E., Beijing University of Aeronautics & Astronautics, China  
*Dissertation:* Aspects of Instrumented Indentation  
with Applications to Thermal Barrier Coatings  
*Professor in charge of dissertation:* Anette M. Karlsson, Ph.D.

Peng Yao *Electrical & Computer Engineering*  
B.E., Xian Jiaotong University, China  
M.S., Xian Jiaotong University, China  
*Dissertation:* Developing Three-Dimensional  
Lithography and Chemical Lithography  
for Applications on Micro/Nano  
Photonics and Electronics  
*Professor in charge of dissertation:* Dennis W. Prather, Ph.D.

Le Zhang *Materials Science & Engineering*  
B.E., Tsinghua University, China  
M.S., Tsinghua University, China  
*Dissertation:* Bioinspired Matrices Assembled  
by Polysaccharide-Protein Interactions  
*Professor in charge of dissertation:* Kristi L. Kiick, Ph.D.

Le Zhang *Mechanical Engineering*  
B.E., Liaoning Institute of Technology, China  
M.E., Liaoning Institute of Technology, China  
*Dissertation:* Neutral Solute Transport in Cartilage  
*Professor in charge of dissertation:* Andras Z. Szeri, Ph.D.

COLLEGE OF  
HUMAN SERVICES, EDUCATION AND PUBLIC POLICY

*Dean Timothy K. Barnekov*

**Doctor of Education**

Gaysha Venece Beard *Educational Leadership*  
B.F.A., Stephens College  
M.Ed., University of Delaware  
*Executive Position Paper:* The Adult Learner,  
Professional Development, and the Literacy  
Coach: An Effective Professional Development  
Model Proposal  
*Professors in charge of executive position paper:* James Rath, Ph.D.  
Carol Vukelich, Ph.D.

Donald W. Becker *Educational Leadership*  
B.S., State University of New York, Oswego  
M.F.A., University of Delaware  
*Executive Position Paper:* Freshman Seminar Narrative Research:  
Art Making and Writing in Symmetrical Relationship  
*Professor in charge of executive position paper:* James A. Whitson, Ph.D.

Leanne Doreen (Clarke) Bier *Educational Leadership*  
B.A., Concordia College, New York  
M.I., University of Delaware  
*Executive Position Paper:* Texts and Beginning Readers  
*Professor in charge of executive position paper:* Rachel A. Karchmer-Klein, Ph.D.

Tracy Tlumac Downs *Educational Leadership*  
B.A., University of Delaware  
M.A., University of Delaware  
*Executive Position Paper:* High-Risk Drinking Among  
Female Athletes at the University of Delaware:  
Reducing Risk Through Intervention  
*Professor in charge of executive position paper:* Frank Murray, Ph.D.

Deborah Monaghan Fetzer *Educational Leadership*  
B.S., West Chester University of Pennsylvania  
M.I., University of Delaware  
*Executive Position Paper:* A Job-Embedded Model of Professional  
Development: The Path to Increased Literacy Achievement  
for Middle School Students  
*Professor in charge of executive position paper:* Sharon Walpole, Ph.D.



Joyce Ann Good *Educational Leadership*  
 B.Ed., West Chester University of Pennsylvania  
 M.Ed., Millersville University of Pennsylvania  
 M.S., Johns Hopkins University  
*Executive Position Paper: A Modified Train-the-Trainer*  
 Professional Development Program Designed to Deliver  
 Spreadsheet Skills to Elementary Teachers and Students  
*Professor in charge of executive position paper: Fred T. Hofstetter, Ph.D.*

Amy Michele Fitzgerald Gordon *Educational Leadership*  
 B.S.Ed., University of Delaware  
 M.I., University of Delaware  
*Executive Position Paper: Preparing Teachers to Use an Instructional*  
 Management System to Differentiate Instruction  
*Professor in charge of executive position paper: Fred T. Hofstetter, Ph.D.*

Bonnie Gail Hall *Educational Leadership*  
 B.S., Delaware State University  
 M.B.A., Delaware State University  
*Executive Position Paper: Implementing Universal Design for*  
 Instruction (UDI) Principles to Maximize Learning for Students  
 with Disabilities at the Jack F. Owens Campus of Delaware  
 Technical & Community College  
*Professor in charge of executive position paper: Robert L. Hampel, Ph.D.*

Joseph M. Jones *Educational Leadership*  
 B.A., University of Delaware  
 M.Ed., Wilmington College, Delaware  
*Executive Position Paper: Improving the Use and Effectiveness*  
 of Data Among Teachers  
*Professor in charge of executive position paper: Douglas A. Archbald, Ph.D.*

Julie B. Keleher *Educational Leadership*  
 B.A., University of Pennsylvania  
 M.S.Ed., University of Pennsylvania  
*Executive Position Paper: Use of Data Management Systems*  
 and Data-Driven Decision Making Among School-Level  
 Administrators and School-Level Educators  
*Professor in charge of executive position paper: Douglas A. Archbald, Ph.D.*

Jeffrey Donald Menzer *Educational Leadership*  
 B.A., University of Delaware  
 M.Ed., University of Delaware  
*Dissertation: The Non-Graduation of Seniors at William Penn High School*  
*Professor in charge of executive position paper: Robert L. Hampel, Ph.D.*

Sherman Miller *Educational Leadership*  
 B.S., Delaware State University  
 M.S., University of Delaware  
*Executive Position Paper: A Plan for Increasing Student*  
 Success in Business Calculus at Delaware State University  
*Professor in charge of executive position paper: James Whitson, Ph.D.*

Lanetia Q. Noble *Educational Leadership*  
 B.S., University of North Texas  
 M.Ed., University of Delaware  
*Executive Position Paper: Evaluating a College Developmental*  
 Reading Program: Recommendations for Improvement  
*Professor in charge of executive position paper: Rachel A. Karchmer-Klein, Ph.D.*

Christina Geba Poetzl *Educational Leadership*  
 B.S.E., Millersville University of Pennsylvania  
 M.Ed., Millersville University of Pennsylvania  
*Executive Position Paper: Middle School Mathematics*  
 Teachers' Problem-Solving Beliefs and Practices  
 in the School-Based Teacher Leader Program  
*Professor in charge of executive position paper: Dawn Berk, Ph.D.*

Susan Marie Robinson Schranck *Educational Leadership*  
 B.A., University of Delaware  
 M.A., Villanova University  
*Executive Position Paper: Designing Performance Objectives to*  
 Improve English Language Proficiency: Conceptualizing a  
 Call-Integrated Listening Curriculum at Delaware Technical &  
 Community College Jack F. Owens Campus  
*Professor in charge of executive position paper: Douglas A. Archbald, Ph.D.*

Margaret Virginia Torre Sharp *Educational Leadership*  
 B.S.Ed., University of Delaware  
 M.Ed., University of Delaware  
*Executive Position Paper: An Evaluation Study of Fast ForWord*  
 in the Christina School District  
*Professor in charge of executive position paper: James Rath, Ph.D.*

George Steinhoff *Educational Leadership*  
 B.S., Saint Joseph's University  
 M.Ed., University of Pennsylvania  
*Executive Position Paper: Examining and Addressing*  
 Resistance to Change in an Elementary School  
*Professor in charge of executive position paper: Robert L. Hampel, Ph.D.*

Loriann Megee White *Educational Leadership*  
B.A., Salisbury University  
M.Ed., Salisbury University  
*Executive Position Paper:* A Middle School Under Review:  
A Study on the Effectiveness of Two Implementation  
Models of the Read 180 Program on Special  
Education Students' Reading Performance  
*Professor in charge of executive position paper:* Primo V. Toccafondi, Ed.D.

### Doctor of Philosophy

Jane N. Case *Urban Affairs & Public Policy*  
B.A., Millersville University of Pennsylvania  
M.S., Florida State University  
*Dissertation:* An Exploratory Study of School  
Climate and Student Behavior in Thirteen  
Delaware Public Elementary Schools  
*Professor in charge of dissertation:* Kathryn G. Denhardt, Ph.D.

Nicola Domicia Edwards *Education*  
B.A., State University of New York, Binghamton  
M.S., University of Delaware  
*Dissertation:* Elementary School Children's  
Strategy Use and Strategy Preferences  
on Multidigit Addition and Subtraction  
Story Problems  
*Professor in charge of dissertation:* James Hiebert, Ph.D.

Lauren Lee Goggins *Education*  
B.C.E., University of Delaware  
M.S., University of Delaware  
*Dissertation:* Eliciting Elementary Preservice  
Teachers' Mathematical Knowledge for  
Teaching Using Instructional Tasks  
That Include Children's Mathematical Thinking  
*Professor in charge of dissertation:* Laura S. Glass, Ph.D.

Margaret M. Mack *Urban Affairs & Public Policy*  
B.S.N., University of Delaware  
M.A., New York University  
*Dissertation:* Stress and Farming — An Unsustainable Relationship  
*Professor in charge of dissertation:* Margaret J. Wilder, Ph.D.

Ekaterina Midgette *Education*  
M.A., Moscow Linguistic University, Russia  
*Dissertation:* The Effects of Comprehensive Text Structure Strategy  
Instruction On Students' Ability to Revise Persuasive Essays  
*Professor in charge of dissertation:* Nancy W. Brickhouse, Ph.D.

Ximena Uribe-Zarain *Education*  
B.S., Universidad Nacional Autonoma  
*Dissertation:* Growth Mixture Modeling with a Distal Outcome:  
An Application to Reading and High Stakes Testing  
*Professor in charge of dissertation:* James Rath, Ph.D.

## COLLEGE OF MARINE AND EARTH STUDIES

*Dean Nancy M. Targett*

### Doctor of Philosophy

Elif Demir *Oceanography*  
B.S., Ege Universitesi, Turkey  
M.S., Old Dominion University  
*Dissertation:* Application of Traditional and Molecular  
Methods to Taxonomy, Ecology, and Ecophysiology of  
Raphidophytes and a Novel Genus  
*Professor in charge of dissertation:* David A. Hutchins, Ph.D.

Andrew D. Krueger *Marine Studies*  
B.S., University of Miami  
*Dissertation:* Valuing Public Preferences for Offshore Wind Power:  
A Choice Experiment Approach  
*Professor in charge of dissertation:* Jeremy Firestone, Ph.D.

Kristen Leigh Kuhn *Marine Studies*  
B.S., Pennsylvania State University  
M.S., University of Maine, Orono  
*Dissertation:* Assessment of Genetic Structure in Three  
Southern Ocean Fishes Revealed by Mitochondrial and  
Nuclear Single Nucleotide Polymorphisms (SNPS)  
*Professor in charge of dissertation:* Patrick M. Gaffney, Ph.D.

Elizabeth Ann McCliment *Marine Studies*  
B.S., Texas A&M University, Galveston  
*Dissertation:* Phylogenetic and Metabolic Diversity of Microbial  
Communities Inhabiting Deep-Sea Hydrothermal Ecosystems  
*Professor in charge of dissertation:* S. Craig Cary, Ph.D.

Coren Audrey Milbury

*Marine Studies*

B.S., University of New Hampshire

M.S., University of Delaware

*Dissertation:* The Mitochondrial Genome of the Eastern Oyster,  
*Crassostrea Virginica*: The Complete DNA Sequence and Its  
Application in Local Restoration Efforts

*Professor in charge of dissertation:* Patrick M. Gaffney, Ph.D.

### INTERDISCIPLINARY PROGRAMS

#### **Doctor of Philosophy**

Adam Matthew Fullenkamp

*Biomechanics & Movement Science*

B.S., University of Toledo

M.S., University of Toledo

*Dissertation:* A Hybrid Gait Recognition Solution  
Using Video and Ground Contact Information

*Professor in charge of dissertation:* James G. Richards, Ph.D.

John David Willson

*Biomechanics & Movement Science*

B.S., University of Minnesota, Minneapolis

M.P.T., Wisconsin State University, LaCrosse

*Dissertation:* Hip Strength and Lower Extremity Mechanics  
in Females With and Without Patellofemoral Pain

*Professor in charge of dissertation:* Irene Davis, Ph.D., P.T.