

Graduate Dean's Report

November 1, 2013

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Associate Vice President and Dean of the Graduate School

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Graduate Student Showcase

This month's Graduate Student Showcase features three graduate students who are making a difference to K12 education in North-Central Mississippi. The graduate students are research fellows in the NSF-funded GK12 program called INSPIRE (Initiating New Science Partnerships in Rural Education). The INSPIRE project, a partnership between Mississippi State University and three rural school districts, focuses on technology-supported, inquiry-based learning in the Earth and Space sciences for 7th-12th grade classrooms. The interdisciplinary project includes 50 graduate student research fellows from three STEM disciplines (Geosciences, Physics, and Engineering). Graduate students are paired with K12 teachers to bring educational aspects of their research to the K12 classroom.



Charles Vaughan



Dr. Donna Pierce

Charles Vaughan, a doctoral student in Applied Physics, conducts research on developing a geometrical model of the comae of comets using ground-based observations of detected radical molecules. Charles's K12 teacher partners are John Dufour at Columbus High School and Brenda Jackson at Starkville High School.

Charles's PhD advisor is Dr. Donna Pierce in the Department of Physics and Astronomy.



Hannah Box



Dr. Gerald Rowland

Hannah Box, a doctoral student in Chemistry, conducts research in the area of organometallics with a focus on the synthesis and isolation of α lactams. Hannah's K12 teacher partner is Kelli Dawkins at Starkville High School.

Hannah's PhD advisor is Dr. Gerald Rowland in the Department of Chemistry.



Sean Owens



Dr. Tommy Morris

Sean Owens, a doctoral student in Computer Science and recent Masters graduate in Electrical and Computer Engineering, conducts research on the power, size and weight benefits of dynamic partially reconfigurable hardware for use in extreme environments. Sean's K12 teacher partner was John Dufour at Columbus High School

Sean's Masers advisor was Dr. Tommy Morris in the Department of Electrical and Computer Engineering.

Graduate Faculty Showcase



Dr. Hossein Toghiani (Dr. H as he is lovingly known to his students) is the Thomas B. Nusz Professor of Chemical Engineering. Dr. Toghiani excels in his capacity as major professor to graduate students. He is widely known for selflessly pending countless hours with his students in chemical engineering and in related fields across campus. Dr. Toghiani has supervised to completion 8 PhD and 15 MS degrees at Mississippi State University, as well as serving on numerous graduate student committees. He has been selected as Chemical Engineering Professor of the Year 5 times, as well as being inducted into the Engineering Academy of Distinguished Teachers. Dr. Toghiani's graduate students are active in dissemination of their research results. Dr. Toghiani has authored or co-authored with his students more than 90 peer-reviewed journal publications. Dr. Toghiani is currently conducting research in the areas of Organic/Inorganic Composites for EMI

Shielding, Ecofriendly Nanoreinforcement for Automotive, Aerospace and Wind Turbine Applications. Dr. Toghiani holds expertise in the areas of multifunctional composites, hydrogen, methanol, and molten carbonate fuel cells, graphene production and anchoring nanoparticles on graphene for lithium ion battery applications, carbon-based nano-materials for catalysis, gasification, pyrolysis and concentrated acid hydrolysis of Mississippi biomass, Mono-, Bi- and Multifunctional catalysts production for synthesis gas to methanol, higher alcohols and gasoline.

Graduate School Updates

Application and Admission Trends

	Type	Applied		Admitted	
Applications for Spring 2013 Through October 25	International	223		38	
	Domestic	356		92	
	Total	579		130	

	Type	Applied	Diff	Admitted	Diff
Applications for Spring 2014 Through October 25	International	159	-28.7%	21	-44.7%
	Domestic	208	-41.6%	68	-26.1%
	Total	367	-36.6%	89	-31.5%

Graduate Student Assistantships

The University provides a health insurance subsidy for graduate assistants who purchase the University-sponsored health insurance plan through the MSU Longest Student Health Center. The total health insurance subsidy is \$400 per academic year for each graduate assistant; \$200 for the fall semester and \$200 for the spring/summer semester. For Fall 2013, 1071 graduate students were funded via assistantships. A portion of those opted for the University-sponsored health insurance, and MSU has provided \$79,200 health insurance supplement to the graduate assistants.

	Fall 2013	
Assistantship Type	# Graduate Students	% of Full-Time Graduate Students
Research	509	32%
Teaching	405	26%
Service	147	9%
Total	1071	67%

Graduate Academic Programs

During the September 27, 2013 Graduate Council Meeting, the following Academic Program/Policy Changes were approved: modifications to the Master of Professional Accountancy program and modifications to the Doctor of Philosophy in Environmental Toxicology program.

Graduate Enhancement Programs

Three Minute Thesis (3MT) (NEW!)

Starting fall 2013, Mississippi State University will hold an annual graduate student competition called the Three Minute Thesis (3MT) competition. The competition will be open to all graduate students in good academic standing. The competition will be held on **Nov 5, 2-5pm (preliminary rounds)** and **Nov 7, 3-4pm (final round of competition) in Fowlkes Auditorium** in the Colvard Student Union. The idea is for graduate students communicate their dissertation or thesis in 3 minutes or less, using a single static slide. The goal is for the student to communicate their thesis/dissertation to the general public (what topic or problem did they address, why is it important, what exactly did the student do, what did they achieve, etc). There will be 8 categories:

Masters and Doctoral categories for each of the following:

- Arts and Humanities
- Life and Biomedical Sciences and Engineering
- Physical, Mathematical, Computational Sciences and Engineering
- Social and Behavioral Sciences

Winners will be provided cash prizes including

- Grand Champion: \$1,000
- Grand Champion Runner Up: \$750

- People's Choice Award: \$500
- Each of the Eight Category Winners : \$250

A special thank you to the partners of the Office of the Graduate School who are contributing financially to make this program possible: VP for the Office of Research and Economic Development and the VP for Agriculture, Forestry, and Veterinary Medicine.

Undergraduate Outreach and Promotion of Graduate School

The Dean and Associate Dean of the Graduate School are conducting outreach and promotion of graduate school to MSU undergraduates, with an emphasis on underrepresented student groups. Thus far during Fall 2013, we have spoken to 9 student groups, including TRiO students, Tau Beta Pi, MSU Collegiate Chapter of the NAACP, Men of Excellence, Beta Beta Beta, Black Student Alliance, and senior seminar courses, totaling approximately 250 undergraduate students. Our plan is to speak to at least 5 additional undergraduate student groups this fall.

Financial Literacy Program (Maroon Money Management)

The Office of the Graduate School received a grant for \$40,000 from the Council of Graduate Schools/TIAA-CREF to pilot a financial literacy education program on our campus. The program began this fall with a freshman seminar course "Taking Charge of Your Financial Future" taught by Paul McKinney, Director of Financial Aid, along with face to face workshops, career counseling and online resources. An online survey is currently being administered to graduate students to assess pre-program financial knowledge and perspectives. Additionally, students in the Preparing Future Faculty are actively engaged in this project. Other activities are being developed over the two-year project period. During October, the Dean and Associate Dean met with Ms. Lynn Fitch, State Treasurer for Mississippi, to promote the financial literacy program at the state level. Thanks to Dr. Karen Coats for her leadership in this area.

Return on Investment (ROI) Committee

The Office of the Graduate School (OGS) Return on Investment (ROI) Committee held its first meeting during October. The committee was provided with a breakdown of the OGS budget and details about major programs run by OGS, such as student travel grants, student bridge funding, TA workshops, etc. The committee was charged with reviewing the OGS programs and associated budgets and were asked to assess the "return on investment" of those portions of the budget and rank programs as high or low priority. I will utilize the committee's feedback for long-term planning, as well as short-term budget management. The ROI Committee members are the following,

- Dr. Linda Cornelious, College of Education
- Dr. Lynne Cossman, College of Arts and Sciences
- Dr. Mark Lawrence, College of Veterinary Medicine
- Dr. Rebecca Long, College of Business
- Dr. Beth Miller, College of Art, Architecture, and Design
- Dr. Ian Munn, College of Forest Resources
- Dr. Kalyan Srinivasan, Bagley College of Engineering
- Ms. Joanne To, Office of the Graduate School
- Dr. Steve Turner, College of Agriculture and Life Sciences
- Ms. Sandy Williamson, Office of Research and Economic Development (committee chair)

Academic Integrity Week – Ethic Conduct of Research Forum

Academic Integrity Week was October 8-November 1, 2013. The Office of the Graduate School sponsored a roundtable forum focusing on the ethical conduct of research. The forum was held on **Thursday, October 31, 3-4pm, Fowlkes**

Auditorium in the Colvard Student Union. We offer a special thank you to the panelists, who included four Ralph E. Powe Research Excellence Award winners (Dr. Raja Reddy, Dr. Daniel Peterson, Dr. James Newman, Dr. Lou D'Abramo) and the Department Head of Philosophy and Religion (Dr. John Bickle).

Mentorship (Faculty Mentor Training Program)

The Office of the Graduate School, in partnership with the Center for Teaching and Learning and the Office of Research and Economic Development, launched a Faculty Mentor Training Program this fall. This semester's event was entitled "Fundamentals of Quality Graduate Student Mentorship". Outstanding faculty mentors from all colleges led small faculty group discussions on the key responsibilities of graduate student mentorship. The two-part series were held Oct. 2 and Oct. 17. The workshops were well attended and included participants from all academic colleges across the university.

Prospective Student Recruitment Grants

In September 2013, the Office of the Graduate School invited proposals for the 2013-14 Graduate Recruitment Assistance Grants (GRAGs) program. Three examples of recruiting needs are (i) development of recruitment literature, (ii) travel support to host recruiting seminars, and (iii) development of a new or improved website highlighting a department's graduate programs. The deadline for proposals was **October 18, 2013**. Proposals are currently be reviewed and announcement of winners will be made during the coming weeks.