University of St. Louis

Graduate Programs Newsletter
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Graduate Advisory Board

The Parks Graduate Office is pleased to announce the creation of a Graduate Advisory Board. The purpose of the Parks Graduate Advisory Board (GAB) is to facilitate the exchange of ideas between board members and the leadership and students of Parks Graduate Programs. Its function is to continuously improve the quality of the graduate programs by keeping it current and relevant. The GAB will advise the Office of Parks Graduate Programs on issues such as curriculum, funding, job placement and research opportunities. The first meeting was held on December 11, 2014.

The meeting was attended by the nine board members (as listed to the right) and the following guests from SLU and Parks: Diana Carlin, Ph.D., SLU Associate Vice President for Graduate Education; Riyad Hindi, Ph.D., Parks College Graduate Programs Director; Terrence Kelly, Ph.D., Parks Graduate and Research Affairs Committee (GRAC) Committee Chair; K. Ravindra, Ph.D., Associate Dean of Parks College; Christine Hoffman, Development Assistant at Parks College; Jacki O’Donno, Parks Graduate Programs Assistant; Xiaoyu Wu, aviation doctoral student and GSA representative; and Ying Tung, civil engineering doctoral student.

Some of the items discussed at the meeting were:
- Parks College’s enhanced presence in the international community.
- The need for external/industry members on the doctoral committees as well as Parks faculty.
- The need for increasing financial support for new faculty and staff as well as the students.
- The need for government support for graduate education and research and ways to convince Congress that graduate school is a public good.

Advisory Board Members

Dr. Robert Bolla consults with technology start-up companies and the American Embassy in Warsaw, Poland and the Polish Academy of Sciences in development of academic research for commercialization.

Dr. Jim Bornholdt has 35 years of professional experience in electrical engineering and is currently employed by Boeing in their Phantom Works research division as an Associate Technical Fellow.

Ms. Shelly Crisler is a Biomedical Engineer at the VHA Center for Engineering and Occupational Safety and Health. She has nearly ten years of experience in clinical/biomedical engineering in the hospital environment.

Dr. Richard Dawe became the president of Ozarka College on July 1, 2009. He holds a Ph.D. in Public Policy and Administration from Saint Louis University.

Dr. Phillip Gould joined Washington University in 1966 after completing his B.S. and M.S at the University of Illinois, enjoying a short but rewarding career as a structural engineer and finishing doctoral studies at Northwestern University.

Dr. Mori Mani is a Boeing Senior Technical Fellow and Principal Investigator (PI) for Computational Sciences. He is engaged in computational fluid dynamics technology Development and Applications at Boeing Research and Technology.

Dr. Marcel Roy has expertise in biomechanics, biomaterials science, and bone and mineral research. He directs the ongoing laboratory research projects for the Missouri Bone and Joint Research Foundation.

Dr. Alexander Rubin is a Senior Technical Fellow in the Boeing Research and Technology organization. He has 32 years of experience in the field of composite and non-metallic materials and structures.

Dr. Daniel Tobias received his Bachelor of Science Degree in Civil Engineering from Virginia Tech, and his Masters and Ph.D. in Structural Engineering from the University of Illinois. He is a Licensed Professional Engineer and Structural Engineer in Illinois.
The Office of Parks Graduate Programs is proud to provide you with our Winter 2014-2015 newsletter. I hope you enjoy reading our news!

I am pleased to report that graduate education at Parks continues to receive a high number of applications nationally and internationally. We have processed more than 35 applications and admitted many highly qualified students for MS and PhD in aviation and engineering for spring 2015. Also, we welcomed more than 40 new MS and PhD students in the summer and fall 2014. This academic year brought a record increase in the total graduate enrollment at Parks and we welcomed the largest class ever with more than 30% increase in total enrollment over last year. Additionally, five students graduated from engineering and aviation with a master degrees in December 2014.

Our faculty and staff continue to be very busy working on several new graduate initiatives. Parks continues diligently working on establishing a new leadership master’s degree that will be the first in the region. We have been updating many Parks College graduate program catalogs, brochures and other publications. Also, we are in the process of revising the College policy on the Ph.D. qualifying exam and candidacy requirements.

In order to promote our Parks graduate programs internationally and recruit students, I had the opportunity to visit China in July and Middle East in November (United Arab Emirates, Qatar, Saudi Arabia, and Northern Iraq). While on this trip, I was able to explore collaboration opportunities in graduate education and research. I visited 12 universities in nine cities and five countries. More details about my trips can be found on page three of this newsletter.

As you read on the cover, I am very honored to announce the creation of the Parks Graduate Advisory Board (GAB). We had a very successful first meeting and look forward to much insight from our newly formed advisory board.

Please take a moment to browse through our webpage at parks.slu.edu/grad to learn more about our outstanding graduate programs. Feel free to reach out to us to let us know how we can continue to improve. We have started mandating an annual review for all graduate students. These reviews will provide students and their advisor the opportunity to stay on track and achieve their educational and research goals. The 500-level graduate seminar that is now commonly offered in all Parks departments was well attended this semester by our graduate students. The seminar’s main goal is to promote research that is conducted here at Parks College and elsewhere by our graduate students, faculty and guest researchers. We hope to see you in our next 500-level graduate seminar presentations!

On behalf of Parks Graduate Programs, I wish you a happy and enjoyable winter!

Riyadh Hindi, Ph.D., P. Eng., Director of Graduate Programs

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MESSAGE FROM THE DIRECTOR

Promoting International Collaboration

Riyadh Hindi, Ph.D., P. Eng., Director of Graduate Programs, visited many international universities in order to promote the Parks College graduate programs abroad and recruit new students. He visited China in July with Dr. Ravindra, the Associate Dean of Parks, and the Middle East in November (United Arab Emirates, Qatar, Saudi Arabia, and Northern Iraq).

While on his travels, Hindi also explored collaboration opportunities in graduate education and research. The visits included 12 universities in nine cities and five countries. The universities Hindi visited are very interested in pursuing graduate studies, research collaboration and faculty and graduate student exchanges in both engineering and aviation. Some universities are also interested in undergraduate study abroad and exchange. Parks has already started communicating with these institutions to initiate collaboration on multiple levels.

The universities Hindi visited were: Beijing Institute of Technology (Beijing, China), Harbin University (Harbin, China), American University of Dubai (Dubai, UAE), American University of Sharja (Sharja, UAE), University of Sharja (Sharja, UAE), Abu Dhabi University (Abu Dhabi, UAE), Ahsen University (Abu Dhabi, UAE), Qatar University (Doha, Qatar), King Fahed University for Petroleum and Minerals (Dammam, Saudi Arabia), Salahadeen University (Erbil, Iraq), Ishk University (Erbil, Iraq), and Chan University (Erbil, Iraq).
SCHOLARLY ACTIVITIES AND ACHIEVEMENTS

Daniel Sommer, will be working appropriate ECBs and document ECB failures. A new graduate student, rant prohibiting their future use on MoDOT projects, and to develop a short training course to determine protocols to evaluate the performance of ECB installations for the purpose of determining failures that war-economically evaluated at independent labs to ensure successful performance, develop a matrix tool to recommend specifications for ECB properties, given Missouri job site characteristics, that can be


Peter Hasser (AEME) completed his Master Thesis Defense on September 24, 2014. The title of his thesis was, “An Efficient Reliability-Based Simulation Framework for Optimum Laser Peening Treatment”.

Emily Grownwy Kalaf (BME) presented her research titled, “Incorporation of Intervertebral disc cells into Candidate Materials for Nucleus Pulposus Regeneration” at the BMES meeting. Her overall aim for her research is to create a cell seeded platelet-rich plasma eluting injectable scaffold for the replacement of degenerated nucleus pulposus in the intervertebral disc.

Jeff Kraus (Aviation) and Paul Pillar (Aviation) completed a technical paper that they presented at the International Society of Air Safety Investigators (ISASI) annual seminar on October 14, 2014 in Adelaide, Australia. The title of the paper was, “Unmanned Aerial Systems for Aircraft Accident Investigations: Enhancing Capabilities, Regulatory Concerns, and Implications for Safety Management Systems (SMS)”. The overall goal of his research is to calculate the aerodynamic coefficients (moment, lift, and drag coefficients) of a palted hummee over a range of pitch angles of attack.

Phillip Reyes (AEME) will be presenting his master’s research at a conference in Daytona, Florida in April/May 2015 for the American Institute of Aeronautics and Astronautics (AIAA). The title of his thesis is, “Computational Fluid Dynamics (CFD) Simulation of a HUMMEE strapped to a standard US Army airdrop platform”. The overall goal of his research is to calculate the aerodynamic coefficients (moment, lift, and drag coefficients) of a palted hummee over a range of pitch angles of attack.

Cory Seidel (AEME) worked as a research intern for the Air Force Research Lab (AFRL) at Wright-Patterson Air Force Base in Dayton, Ohio in the summer of 2014. The research team he was involved with studied the effects of laser peening on improvement of fatigue life of aircraft components. Cory says this experience has further prepared him for attending graduate school in the fall.

Prasanth T. Somasundaram (BME) presented his research titled “Engineering of Artificial Ligament Scaffold Using Electrospinning Techniques” at the BMES meeting. His overall aim for his research is to design an artificailly engineered ligament scaffold which will mimic the mechanical and biological properties of native ligament tissue.

Amanda Cox, Ph.D. and Ronaldo Luna, Ph.D. (CML) received a MoDOT grant for $100,000 on “Evaluation of Erosion Control Blanket Properties and Test Criteria”. The objectives of this project are to develop recommendations for specifications for ECB properties, given Missouri job site characteristics, that can be economically evaluated at independent labs to ensure successful performance, develop a matrix tool to guide in the selection of appropriate ECB options for MoDOT projects, develop monitoring guidelines and protocols to evaluate the performance of ECB installations for the purpose of determining failures that warrant prohibiting their future use on MoDOT projects, and to develop a short training course to determine appropriate ECBs and document ECB failures. A new graduate student, Daniel Sommer, will be working on this project.

Nicolas Summer, will be working appropriate ECBs and document ECB failures. A new graduate student, rant prohibiting their future use on MoDOT projects, and to develop a short training course to determine protocols to evaluate the performance of ECB installations for the purpose of determining failures that war-economically evaluated at independent labs to ensure successful performance, develop a matrix tool to recommend specifications for ECB properties, given Missouri job site characteristics, that can be

Michelle Sabick, Ph.D., Chair of Biomedical Engineering
Michelle Sabick, Ph.D. assumed the role of Professor and Chair of the Department of Biomedical Engineering at Saint Louis University in July, 2014. Prior to joining the faculty at SLU, Sabick served as Chair of the Department of Mechanical and Biomedical Engineering at Boise State University in Boise, Idaho. She also co-founded the Center for Orthopaedic and Biomechanics Research at Boise State, and has served on the Executive Board of the American Society of Biomechanics since 2006. Sabick earned her Ph.D. in Biomedical Engineering from the University of Iowa and a BS in Biomedical Engineering from Case Western Reserve University.

Ronaldo Luna, Ph.D., P.E., FASCE, Chair of Civil Engineering
Ronaldo Luna joined Saint Louis University in 2014 as Professor and Chair of Civil Engineering. He teaches courses at the graduate and undergraduate level in the field of geotechnical engineering. His research interests lie in the dynamic response of soils and liquefaction, geographic information systems in civil engineering, and advances in foundation and earthquake engineering. He obtained his BSCE 1983, from the University of Maryland, College Park, MD, and MSCE 1985 from Purdue University, West Lafayette, IN, and his Ph.D. in 1995 from the Georgia Institute of Technology, Atlanta, GA. He was Post-Doctoral Fellow in 1995 at the Georgia Tech.

Natasha Case, Ph.D., became an assistant professor in the Biomedical Engineering Department at Parks College in August 2014. Dr. Case earned a B.S. in Biomedical Engineering from Duke University and a Ph.D. in Bioengineering from the Georgia Institute of Technology.

Andrew Hall, D.Sc., joined the Biomedical Engineering Department in August 2014. Prior to joining SLU, Dr. Hall spent 17 years in industry, working in research and development and R&D management roles. He completed his doctoral work in the Cardiovascular Biophysics Laboratory at Washington University.

Srikanth Gururajan, Ph.D., joined Parks College in August 2014 as an assistant professor for the Aerospace and Mechanical Engineering Department. He received his Ph.D. in Aerospace Engineering and Master of Science in Mechanical Engineering from West Virginia University.
**Recent Graduates**

**SUMMER 2014**

**Nick H. Duong**- M.S. in Engineering (Mechanical)- Thesis Title: “Numerical Investigation of Performance of Micro-Textured Cutting Tool in Manufacturing Processes” -Advisor: Jeff Ma, Ph.D.

**Manuel Posso Escobar**- M.S. in Engineering (Aerospace)- Thesis Title: “The Space Black-Box Approach: Decreasing CubeSat Failure Rates” -Advisors: Sridhar Condoor, Ph.D. and Michael Swartwout, Ph.D.

**Hui Jiang**– M.S. in Engineering (Mechanical)- Thesis Title: “Aerodynamic Loss Investigatinos of Symmetry Airfoil” -Advisor: Phillip Ligarni, Ph.D.

**Aditya Nath**– M.S. Engineering (Biomedical)- Thesis Title: “Analysis of Differences in Elastin Expression in a Developing Mouse Artery Using a Constrained Mixture Model” -Advisor: Gary Bledsoe, Ph.D.

**Proposed Fall 2014 Candidates**

**Peter Hasser**- M.S. in Engineering (Mechanical)- Thesis Title: “An Efficient Reliability-Based Simulation Framework for Optimum Laser Peening Treatment” -Advisor: Arif Malik, Ph.D.

**Michael Benne**- M.S. in Aviation– Non-Thesis -Advisor: Terry Kelly, Ph.D.

**Lyndel Carlson**– M.S. in Engineering (Aerospace)- Thesis Title: “Boundary Layer and Inlet Flow Characterization” -Advisor: Mark McQuilling, Ph.D.

**Maja Mijic**– M.S. in Engineering (Aerospace)- Non-Thesis-Advisor: Swami Karunamoorthy, Ph.D.

**Aaron Phu**– M.S. in Engineering (Aerospace)- Non-Thesis -Advisor: Sridhar Condoor, Ph.D.

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**Meet the New Graduate Programs Assistant**

Jacki O’Dierno relocated to St. Louis in September 2014 and, soon after, began working for the Parks College Graduate Programs department. Prior to working at Saint Louis University, O’Dierno worked in the Business Office at multiple colleges across the country. She has a B.A. in East Asian Studies from the University at Albany and a M.A. in Asian Studies from Griffith University.

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**Please welcome the following new graduate students to Parks College**

- **Hussain Alhallaf**, Ph.D. Aviation
- **Khalid Alqaqaziz**, Ph.D. Civil Engineering
- **Vamsi Krishna Yadav Degala**, M.S. Civil Engineering
- **Yue Dong**, M.S. Biomedical Engineering
- **Charif Hanid**, M.S. Aerospace and Mechanical Engineering
- **Mitchell Hays**, M.S. Aerospace and Mechanical Engineering
- **Kruthika Holla**, M.S. Electrical and Computer Engineering
- **Christophe Koliandjian**, M.S. Electrical and Computer Engineering
- **Sridhar Kota**, Ph.D. Aerospace and Mechanical Engineering
- **Tim Kroll**, Ph.D. Aviation
- **Donald Lyke**, Ph.D. Aviation
- **Laticcia Pereira**, M.S. Civil Engineering
- **Mohammad Rahman**, Ph.D. Civil Engineering
- **Daniel Sommer**, M.S. Civil Engineering
- **Abha Verma**, Ph.D. Biomedical Engineering
- **Xiaoyang Wang**, M.S. Electrical and Computer Engineering

**SLU’s Tau Beta Pi Chapter Inducts Largest Class**

The Tau Beta Pi, Missouri Epsilon Chapter at Saint Louis University’s Parks College inducted their largest initiate class in a ceremony held at Refectory Hall on December 4, 2014.

Thirty one initiates were inducted into the Missouri Epsilon Chapter representing the largest class ever inducted at SLU.

Membership into the chapter is based on academic achievement and a commitment to personal and professional integrity. Juniors inducted into the chapter are in the top eighth of their class and seniors are in the top fifth of their class. Tau Beta Pi is the national engineering honor society and the only one representing the entire engineering profession.

There are 242 collegiate chapters with approximately 554,000 in membership.

Membership into Tau Beta Pi lasts for a lifetime and provides great connections across the nation.

The following Graduate students will be initiated into the society in 2014 or 2015: Seyedborhan Alhosseinamedani, Nick Duong, Emily Kalaf, Peter Hasser, Aaron Phu and Ying Tung.

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Please send your news to parksgraduateprograms@slu.edu
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