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October 28, 2016  
UAB West Pavilion  
Conference Room E

# speed dating

featuring the departments of surgery  
and biomedical engineering

**UAB** SCHOOL OF  
MEDICINE

Knowledge that will change your world

# biomedical engineers



**Joel Berry, Ph.D.**  
jlberry@uab.edu

**Research Interests:** Tissue engineering for drug development

**Bio:** Dr. Berry graduated from Wake Forest University in 2000 with a Ph.D. in biomedical engineering. He has authored papers on vascular stent hemodynamics, bioreactors for tissue engineered heart valve development and, most recently, development of an endothelialized microcirculation in tissue engineered breast cancer systems. Other interests include medical device development and undergraduate biomedical engineering education.



**Allan Dobbins, Ph.D.**  
adobbins@uab.edu

**Research Interests:** Vision, computational neuroscience, cognition, fMRI, MEG

**About Me:** With my collaborators, I pioneered the application of differential geometry to understanding the representation of curves and surfaces in the primate visual cortex. With collaborators at Auburn and Mississippi State, we are developing a mechanical model of the skull-meninges-vascular-brain to understand the nature of the tissue deformation in response to impulsive impacts. I am most known for my work modeling and doing experiments in primate visual cortex, although I have done significant work in psychophysics as well. I am currently working on a collaborative effort to understand mild traumatic brain injury and on networks underlying attention-dependent object perception using fMRI and MEG.



**Alan Eberhardt, Ph.D.**  
aeberhar@uab.edu

**Research Interests:** Orthopaedics, medical device design, education

**Bio:** Dr. Eberhardt has a Ph.D. in theoretical and applied mechanics from Northwestern and 25 years of experience at UAB in the School of Engineering.

# biomedical engineers



**Massimo Fazio, Ph.D.**  
massimofazio@uabmc.edu

**Research Interests:** Mechanical characterization of soft tissue  
**Bio:** Dr. Fazio has experience with experimental full-field optical techniques for displacement field characterization, medical image enhancement and elastography by means of medical image processing.



**Dale Feldman, Ph.D.**  
dfeldman@uab.edu

**Research Interests:** Degradable regenerative systems for skin, mostly focusing on angiogenesis (tissue adhesives with stem cells and growth factor delivery either over-produced by stem cell or drug delivery); electrical stimulation for wound healing  
**Bio:** Dr. Feldman has a Ph.D. in bioengineering from Clemson on failure modes of percutaneous devices. He went to Texas A&M for bioengineering and worked on reducing these failure modes. After more than four years at Texas A&M, Dr. Feldman came to UAB for BME in 1986. With an NIH grant, he studied the effect of porosity on skin wounds.



**Bob Hergenrother, Ph.D.**  
hergenro@uab.edu

**Research Interests:** Medical devices, biomaterials and coatings, drug delivery  
**About Me:** I lead the medical device development collaboration between Southern Research and UAB to develop and commercialize medical technologies. Prior to joining Southern Research, I led the creation of more than 15 new medical devices and technologies in the neurovascular, cardiology, diagnostic, wound care and orthopaedic medical markets.

# biomedical engineers



**Ho-Wook Jun, Ph.D.**

hwjun@uab.edu

**Research Interests:** Cardiovascular devices, pancreatic islet transplantation, bone tissue engineering

**Bio:** Dr. Jun is a professor and a director of the graduate program in the Department of Biomedical Engineering. He received a Ph.D. in bioengineering and did his post-doc training in bionanotechnology at Rice University.



**Ramaswamy Kannappan, Ph.D**

ramkn@uab.edu

**Research Interests:** Cardiac regeneration

**Bio:** Dr. Kannappan is a young investigator in the Department of Biomedical Engineering who studies myocardial regeneration employing cardiac cell loaded tissue patches.



**Jack Lemons, Ph.D.**

jlemons@uab.edu

**Research Interests:** Biomaterials and biomechanics

**Bio:** Dr. Lemons has 45 years of experience as co-faculty in the UAB School of Engineering, Medical School and Dental School.

**notes:**

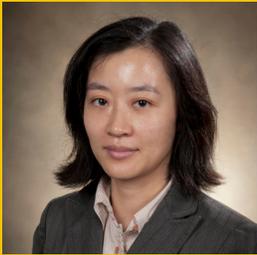
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# biomedical engineers



**Margaret Liu, Ph.D.**

mliu@uab.edu

**Research Interests:** Anti-cancer therapy and biopharmaceutical development, immunotherapy, bioengy development

**Bio:** Dr. Margaret Liu is an associate professor in the Department of Biomedical Engineering. She received her Ph.D. in chemical and biomolecular engineering at Ohio State University and has worked in the biopharmaceutuical industry for seven years.



**Andrew Pollard, Ph.D.**

apollard@uab.edu

**Research Interests:** Computational modeling and cardiac mapping strategies to improve understanding of arrhythmia development

**About Me:** I have worked with a number of different investigators to design and test microelectrical mechanical systems (MEMS) arrays containing very small and closely spaced electrodes positioned in the interstitium. The use of MEMS arrays has the potential to provide fundamentally new descriptions of arrhythmia substrate development in heart and tissue preparations at a resolution more commonly associated with single cell electrophysiologic studies.



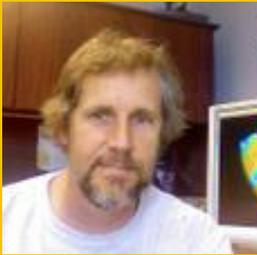
**Gangjian Qin, M.D.**

gqin@uab.edu

**Research Interests:** Stem cell biology, cardiovascular regeneration, genetics, epigenetics

**About Me:** My lab is interested in the molecular and cellular basis underlying stem cell mediated tissue repair and therapy. We currently focus on how metabolism governs cell differentiation, and the role of novel non-coding RNA species in the regulation of cardiac and vascular biology and disease.

# biomedical engineers



**Jack Rogers, Ph.D.**  
jrogers@uab.edu

**Research Interests:** Cardiac and gastrointestinal electrophysiology/ electromechanics, optical imaging, instrumentation

**Bio:** Dr. Rogers has a Ph.D. in bioengineering from the University of California in San Diego. He worked as an application scientist at the San Diego Supercomputer Center. Dr. Rogers joined UAB in 1994.



**Rose Scripa, Ph.D.**  
rscripa@uab.edu

**Research Interests:** Materials application in biomedical engineering

**Bio:** Dr. Scripa has a Ph.D. in materials science and engineering from the University of Florida. She researches semiconductor materials, glass and ceramics.



**Palaniappan Sethu, Ph.D.**  
psethu@uab.edu

**Research Interests:** In-vitro models of disease, cell and molecular separations, diagnostics platforms

**Bio:** Dr. Sethu is a biomedical engineer whose training focused on microfluidic device design for cell and molecular separations, point-of-care diagnostics and disease modeling.

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# biomedical engineers



**Yuhua Song, Ph.D.**  
yhsong@uab.edu

**Research Interests:** Integrated computational and experimental study, apoptosis, apoptotic removal, cell adhesion, regenerative medicine, breast cancer

**About Me:** I am an associate professor in the Department of Biomedical Engineering at UAB. I obtained my education in engineering and postdoctoral training in biomedical science. I joined UAB in 2006 after my postdoctoral training in Washington University in St. Louis School of Medicine. We use integrated computational and experimental approaches in our studies.



**Murat Tanik, Ph.D.**  
mtanik@uab.edu

**Research Interests:** Engineering

**Bio:** Dr. Tanik joined the UAB School of Engineering in 1998 as a professor. Prior to joining the UAB faculty, he was an associate professor and the director of Electronic Enterprise Engineering at NJIT and the director of Software Systems Engineering Institute (SSEI) at The University of Texas at Austin. He is also the director and chief scientist of Process Sciences Laboratory, a think-tank of process-centered knowledge integration, and the Wallace Bunn Chair of Engineering.



**Jay Zhang, M.D., Ph.D.**  
jayzhang@uab.edu

**Research Interests:** Myocardial bioenergetics, biomaterials, stem cells for cardiac repair, cardiovascular tissue engineering

**Bio:** Dr. Zhang is currently the principal investigator of the U01 NHLBI Progenitor Cell Translational Consortium (PCTC) and three NIH R01 grants in the fields of myocardial bioenergetics, biomaterials and stem cells for cardiac repair.

# biomedical engineers

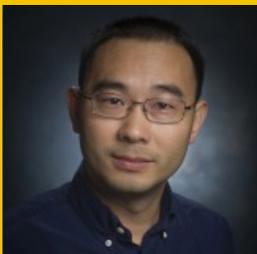


**Chunxiang "Kevin" Zhang, M.D., Ph.D.**

zcx@uab.edu

**Research Interests:** Translational studies of non-coding RNAs in cardiovascular disease, inflammation and HIV, diabetes, aging, wound healing, stroke, addiction, organ protection, stem cell/regenerative medicine and lung cancer

**About Me:** My work is mainly focused on cardiovascular research. We have published more than 100 peer-reviewed SCI research articles in peer-reviewed journals such as Science, J Exp Med, Cell Metab, Mol Cell, JACC and Circ Res, with a total impact factor of more than 500 and more than 700 citations.



**Lufang Zhou, Ph.D.**

lfzhou@uab.edu

**Research Interests:** Heart failure, optogenetics, mitochondrial omics

**Bio:** Dr. Lufang Zhou received his Ph.D. in biomedical engineering from Case Western Reserve University and completed his postdoctoral training in cardiac electrophysiology at Johns Hopkins University. His research focuses on the study and treatment of disease with mitochondrial origin.



**Wuqiang Zhu, M.D., Ph.D.**

wzhu@uab.edu

**Research Interests:** Biomedical tissue engineering

**About Me:** My research mainly focuses on myocardial repair with engineered heart tissue, cardiac stem cells and chemotherapy induced cardiotoxicity.



# surgeons



**Courtney Balentine, M.D., M.P.H.**

cbalentine@uabmc.edu

**Division:** Gastrointestinal Surgery

**Research Interests:** Endocrine disease, postoperative care, care coordination, aging

**About Me:** I'm a health services researcher working on ways to improve recovery after gastrointestinal surgery for older patients.



**Adam Beck, M.D.**

awbeck@uabmc.edu

**Division:** Vascular Surgery & Endovascular Therapy

**Research Interests:** Developing medical devices that are specific patients; researching surgical complications, specifically how spinal cord ischemia develops after aortic surgery

**About Me:** I graduated medical school at UAB in 2000 and did a general surgery residency at the University of Texas-Southwestern Medical Center in Dallas followed by a vascular surgery fellowship at Dartmouth-Hitchcock Medical Center. I also had a mini-fellowship in endovascular branched/fenestrated aortic repair in Groningen in the Netherlands and worked at the University of Florida for seven years. I am now the director of the vascular division here at UAB. I plan to continue my work with complex aortic repair in my clinical practice and to continue pursuing my research interests in device design and treatment/detection/prevention of spinal cord ischemia.



**Elizabeth Beierle, M.D.**

elizabeth.beierle@childrensal.org

**Division:** Pediatric Surgery

**Research Interests:** Nanoparticles to target cell surface receptors

**Bio:** Dr. Beierle studies cell survival signaling and novel therapeutics in pediatric solid tumors.

# surgeons



**James Bibb, Ph.D.**

james.bibb@utsouthwestern.edu

**Division:** Gastrointestinal Surgery

**Research Interests:** Neuroscience, cancer, animal models of disease, therapeutic development

**About Me:** I am the incoming vice chair of basic research in the UAB Department of Surgery. I have more than 20 years of experience studying intracellular signal transduction mechanisms and using multidisciplinary approaches to understand the causes and develop new treatments to disease. We incorporate electrical, computational and mechanical engineering into various facets of our research.



**Patrick Bosarge, M.D.**

pbosarge@uabmc.edu

**Division:** Acute Care Surgery

**Research Interests:** Trauma resuscitation, pre-hospital care, surgical critical care

**Bio:** Dr. Bosarge is an associate professor of surgery interested in developing novel devices. He has one device currently in development and several ideas for others. He holds a U.S. patent on a novel catheter design for instilling contrast into penetrating traumatic wounds.



**Herb Chen, M.D.**

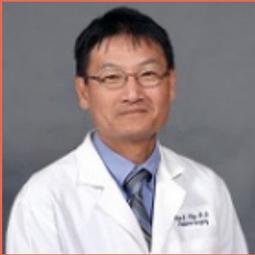
herbchen@uab.edu

**Division:** Surgical Oncology

**Research Interests:** Endocrine cancers

**About Me:** Our lab studies signaling pathways in endocrine cancers including carcinoid, thyroid and adrenal tumors. We focus on translation to the clinics using drug screening and nanotechnology. We also perform clinical research focusing on outcomes in patients with endocrine tumors.

# surgeons



**Mike Chen, M.D.**

mike.chen@childrensal.org

**Division:** Pediatric Surgery

**Research Interests:** Innovative tools for the OR, apps for clinical care

**About Me:** I have worked on apps for private messaging and for monitoring patient care. I would love to identify new tools/instruments for the OR.



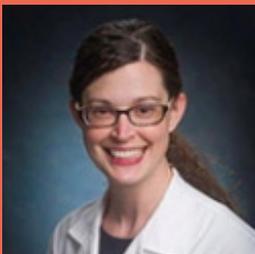
**Carlo Contreras, M.D.**

ccontreras@uabmc.edu

**Division:** Surgical Oncology

**Research Interests:** Intraoperative cancer imaging, biomarker discovery, clinical outcomes research and survivorship

**About Me:** My research interests include melanoma and pancreatic cancer. I have access to a large tissue repository. I am interested novel methods of intraoperative cancer imaging.



**Britney Corey, M.D.**

britneycorey@gmail.com

**Division:** Gastrointestinal Surgery

**Research Interests:** Surgical simulation, virtual reality, interprofessional simulation, surgical education

**About Me:** After graduating from Texas A&M College of Medicine, I moved to Birmingham to complete my residency in general surgery. I also did a fellowship in minimally invasive GI surgery, and currently practice at UAB. I specialize in anti-reflux and foregut surgery, bariatric surgery and abdominal wall hernias. I am currently enrolled in the Masters of Academic Medicine program at USC Keck School of Medicine.

# surgeons



**Candice Dubose, M.D.**

cdubose@uabmc.edu

**Division:** Orthopaedic Surgery

**Research Interests:** Biomechanical research

**About Me:** I started at UAB two years ago. I work in orthopaedic trauma. I have an interest in biomechanical research.



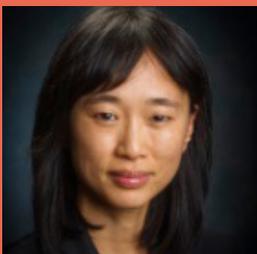
**Devin Eckhoff, M.D.**

deckhoff@uabmc.edu

**Division:** Transplantation

**Research Interests:** Xenotransplantation

**Bio:** Dr. Eckhoff joined the UAB faculty in 1994. He attended medical school at the University of Minnesota and did his general surgery and transplant fellowship at the University of Wisconsin at Madison and was awarded the Sandoz Fellowship Award from the ASTS. He is currently the director of the Division of Transplantation, co-director of the Comprehensive Transplant Institute, medical director of Transplantation, Medical Director of the AOC and holds the Arnold G. Diethelm Endowed Chair in Transplantation Surgery. His clinical interest has been in liver transplantation and hepatobiliary surgery, and most recently he was awarded a grant for almost \$20 million to do pre-clinical work in xenotransplantation.



**Jayleen Grams, M.D.**

jgrams@uab.edu

**Division:** Gastrointestinal Surgery

**Research Interests:** Adipocyte biology, obesity, dysmetabolism, bone biology

**About Me:** I am an associate professor in the Department of Surgery. My surgical interests include foregut and bariatric surgery and minimally invasive surgery. My research interests include adipocyte and bone biology.



# surgeons



**Gregory Kennedy, M.D., Ph.D.**

ammoss@uabmc.edu

**Division:** Gastrointestinal Surgery

**Research Interests:** Colorectal cancer

**Bio:** Greg Kennedy is a professor of surgery and the director of the Gastrointestinal Surgery Division. Dr. Kennedy is a board-certified colon and rectal surgeon, and his funded research program is focused on understanding how the different signaling states of the Aryl Hydrocarbon Receptor contributes to colorectal carcinogenesis.



**Timothy King, M.D., Ph.D.**

twking@uab.edu

**Division:** Plastic Surgery

**Research Interests:** Tissue engineering, wound healing, 3D printing, therapeutic skin grafts/fat grafts, nasoalveolar molding for cleft lip and palate

**About Me:** I am an M.D./Ph.D. plastic surgeon. I have a B.S. and M.S. in biomedical engineering from Texas A&M, and my Ph.D. is in biophysics. My NIH-funded lab focuses on developing a 'smart bandage' to improve wound healing. I plan on expanding my research efforts into 3D printing of wound dressings, as well as the development of either skin grafts or fat grafts that can treat systemic disease.



**Rachael Lancaster, M.D.**

rlancaster@uabmc.edu

**Division:** Surgical Oncology

**Research Interests:** Prevention and risk assessment of breast cancer, quality in cancer care, outcomes of breast cancer treatment

**About Me:** I am a fellowship-trained breast surgical oncologist with primary research interests in prevention and risk assessment of breast cancer, quality in cancer care and outcomes of breast cancer treatment.



# surgeons



**Marc Passman, M.D.**

mpassman@uabmc.edu

**Division:** Vascular Surgery & Endovascular Therapy

**Research Interests:** Venous disease

**Bio:** Dr. Marc A. Passman is a professor of surgery, the vice chair of clinical research, the director of the UAB vein program and the director of the UAB Vein Center. Dr. Passman is a board-certified specialist in vascular surgery, practicing the full scope of vascular and endovascular surgery.



**Benjamin Pearce, M.D.**

bjpearce@uabmc.edu

**Division:** Vascular Surgery & Endovascular Therapy

**Research Interests:** Tibial revascularization, open thoraco-abdominal reconstruction, complex endovascular reconstruction of aortic disease involving the visceral segment

**Bio:** Having completed his vascular surgery fellowship at UAB, Dr. Benjamin Pearce joined the UAB Surgery Department faculty in 2013. He is an associate professor of surgery and a former UAB fellow.



**Jason Pittman, M.D., Ph.D.**

jasonlpittman@gmail.com

**Division:** Orthopaedic Surgery

**Research Interests:** Surgical fixation of the spine, biomechanics of spine injuries due to traumatic mechanisms

**About Me:** I have a Ph.D. in analytical chemistry where I focused on instrumentation design. I recently finished a fellowship in orthopaedic spine surgery at Harborview Medical Center in Seattle.

# surgeons



**John Porterfield, M.D.**

jrpr@uab.edu

**Division:** Gastrointestinal Surgery

**Research Interests:** Surgical resident education; resident fatigue, driving skills, surgical skills after prolonged work; handheld based point of care resources; interactions with electronic health record

**About Me:** I joined the faculty in 2008 following completion of my endocrine surgical training at the Mayo Clinic. I have been fortunate to participate with great teams studying a variety of topics from side impact airbag utility in motor vehicle crashes, to implementation of smart phone technology into a modern health system, to evaluation and treatment of both benign and malignant endocrine disorders.



**Emily Spangler, M.D., M.S.**

espangler@uabmc.edu

**Division:** Vascular Surgery & Endovascular Therapy

**Research Interests:** Aortic disease outcomes, peripheral vascular disease

**About Me:** I am a new junior faculty member in vascular surgery interested in clinical research. I also have an interest in complex endovascular peripheral, aortic interventions and device development.

## notes:

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# surgeons



**Richard Stahl, M.D.**

rstahl@uabmc.edu

**Division:** Gastrointestinal Surgery

**Research Interests:** Bariatric surgery, minimally invasive/laparoscopic surgery, hernia surgery, surgical education

**About Me:** I came to UAB from 16 years in private practice doing general and bariatric surgery. Thus, my research background is not strong, but I enjoy the technical aspects of surgery and would like to be of assistance in the development of new technologies. I also have a keen interest in surgical education of students, residents and fellows.



**Joe Tector, M.D., Ph.D.**

jtector@uab.edu

**Division:** Transplantation

**Research Interests:** Liver transplant, multi-visceral and small bowel transplant

**Bio:** Dr. Tector is a liver transplant surgeon with clinical expertise in multi-visceral and small bowel transplantation. He is a funded surgeon-scientist with a nationally recognized research program in xenotransplantation. Dr. Tector is the director of the UAB Xenotransplant program.



**Benjamin Wei, M.D.**

bwei@uab.edu

**Division:** Cardiothoracic Surgery

**Research Interests:** Development of rapid intraoperative pulmonary function testing, use of exercise monitors for preoperative and postoperative care of surgical patients

**About Me:** I am a thoracic surgeon with interest in oncologic surgery and robotics. I primarily operate on the lung and esophagus. I participate in lung transplantation and procurement as well.

















