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### Industrial & Manufacturing Systems Engineering
- Heier Stamm, Jessica 12

### Mechanical & Nuclear Engineering
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Annual biographical sketches can be found on the ERGP website:
http://www.engg.ksu.edu/ergp/development/bios.html
Jonathan P. Aguilar

**Department:** Biological and Agricultural Engineering / Southwest Research and Extension Center  
**Website:** http://www.southwest.ksu.edu/About-Meetthestaff-Aguilar  
**Office:** Southwest Research and Extension Center, 4500 E. Mary St., Garden City, Kansas 67846  
**Email:** jagular@ksu.edu  
**Phone:** 620-275-9164

**Education**
Ph.D. 2009 Biological and Agricultural Engineering  
M.S. 2005 Agricultural Engineering

**Academic/Industrial Experience**
- Assistant Professor, Biological and Agricultural Engineering / Southwest Research and Extension Center, Kansas State University, Garden City, KS, 2012-present
- Postdoctoral Agricultural Scientist, Northern Great Plains Research Laboratory (NGPRL), USDA-ARS, Mandan, ND, 2011-2012
- Postdoctoral Agricultural Engineer, Northern Plains Agricultural Research Laboratory (NPARL), USDA-ARS, Sidney, MT, 2009-2011
- University Researcher II, Land and Water Resources Division, University of the Philippines Los Baños, Los Baños, PHL, 2002-2007

**Key Words Related to Your Activities**
Extension specialist, irrigation research, water resource allocation, groundwater development, GIS, remote sensing

**Short Description of Educational Interests**
Provide educational opportunities for county agents and producers regarding water-related topics and issues

**Short Description of Research Interests**
Applying GIS tools and techniques and new technologies to provide solutions and options for producers to manage water-related concerns

**Three Recent Publications**

**Recent Research/Outreach/Extension Projects**
- “Water Conservation Technologies and Management Practices in the Ogallala Aquifer Region,” funded by USDA-ARS.
- “Conversion of Crop Water Allocator (CWA) and Crop Yield Predictor (CYP) for Web-Based Delivery in Kansas and Texas,” funded by USDA-ARS Ogallala Aquifer Program.
- “In-field demonstration and evaluation of soil water sensors in conjunction with ET-based irrigation scheduling,” funded by USDA-ARS Ogallala Aquifer Program.

**Hardware/Equipment Capabilities within Your Research Activities**
Multi-parameter water quality test kit, overhead sprinkler uniformity test assembly, mobile irrigation lab

**Software/Simulation Capabilities within Your Research Activities**
ArcGIS, Manifold, JMP, Minitab, MS Access, Crop Water Allocator, KanSched, Crop Yield Predictor
Chris Ahern

**Department:** Architectural Engineering and Construction Science  
**Email:** cahern@ksu.edu  
**Website:** http://www.are-cns.ksu.edu/node/127  
**Phone:** 785-532-3559

**Education**
M.S. 2005 Architectural Engineering Kansas State University, Manhattan, KS  
B.S. 2005 Architectural Engineering Kansas State University, Manhattan, KS

**Academic/Industrial Experience**
- Assistant Professor, Architectural Engineering and Construction Science, Kansas State University, Manhattan, KS, December 2012-present  
- Principal/Project Manager, PKMR Engineers, Overland Park, KS, June 2005-December 2012

**Key Words Related to Your Activities**
Mechanical, electrical, plumbing building systems, construction administration

**Short Description of Educational Interests**
Teaching undergraduate courses in MEP systems in buildings

**Short Description of Research Interests**
MEP building systems

**Software/Simulation Capabilities within Your Research Activities**
Trace 700, AutoCad
Placidus B. Amama

Department: Chemical Engineering  
Website: http://www.che.ksu.edu/node/160

Email: pamama@ksu.edu  
Phone: 785-532-4318

Education
Postdoctoral Scholar   2004   Chemical Engineering   Yale University
Ph.D. 2002  Environmental Engineering  Yokohama National University (Japan)
B.Sc. 1992  Chemistry  University of Calabar (Nigeria)

Academic/Industrial Experience
• Assistant Professor, Chemical Engineering, Kansas State University, Manhattan, KS, December 2013-present
• Research Scientist, Wright-Patterson Air Force Research Laboratory, December 2007-August 2013
• NASA-INaC Postdoctoral Fellow / Associate Research Scientist, BNC, Purdue University, August 2004-November 2007

Key Words Related to Your Activities
Heterogeneous catalysis, nanomaterials, reaction engineering, carbon nanotubes, rational catalyst design, energy storage, environmental remediation

Short Description of Educational Interests
• Teaching Advanced Chemical Reaction Engineering (CHE 822) to graduate students
• Planning to teach Transport Phenomena Lab (CHE 535) to undergraduate students

Short Description of Research Interests
• Developing a rational basis for catalyst design and fabrication for controlled growth of nanocarbon materials
• Understanding the nucleation, growth, and termination mechanisms of carbon nanotubes
• Nano-engineering of nanomaterials for energy and environmental applications

Three Recent Publications
Web of Knowledge h-index: 15

Hardware/Equipment Capabilities within Your Research Activities
• Chemical vapor deposition system for the growth of nanostructures (carbon nanotubes, graphene, and boron nitride nanotubes)
• Ion beam sputter deposition and etching system for materials processing solutions
Amy Rachel Betz

**Department:** Mechanical and Nuclear Engineering  
**Email:** arbetz@ksu.edu  
**Website:** http://www.mne.ksu.edu/people/faculty/betz  
**Phone:** 785-523-2647

**Education**
- **Ph.D.** 2011  
  Mechanical Engineering  
  Columbia University School of Engineering and Applied Science, New York, New York
- **M.S.** 2008  
  Mechanical Engineering  
  Columbia University, New York, New York
- **B.S.** 2006  
  Mechanical Engineering  
  The George Washington University, Washington, DC

**Academic/Industrial Experience**
- Assistant Professor, Mechanical and Nuclear Engineering, Kansas State University, Manhattan, KS, 2011-present

**Key Words Related to Your Activities**
Heat transfer, microfluidics, multiphase transport

**Short Description of Educational Interests**
- Developing people through classroom instruction
- Research opportunities, and mentoring
- Provide research opportunities for undergraduate and high school students
- Participate with outreach activities with the Multicultural Engineering Program, BNSF, and the Kansas Children’s Discovery Center

**Short Description of Research Interests**
Multiphase microfluidic transport—both water and energy are recognized worldwide as limited and interconnected resources. Enhancing and controlling multiphase processes such as boiling and condensation can increase energy efficiency and lower water consumption in many processes such as power generation. Due to the multi-scale nature of multiphase systems, patterning and structuring surface at the micro and nano level can be used as an effective tool to control, enhance, or mitigate multiphase transport.

**Three Recent Publications**

**Hardware/Equipment Capabilities within Your Research Activities**
- **Minitech Micromilling Machine** - Produces features down to 5 µm with 1 µm precision with spindle speeds up to 60,000 rpm
- **First Ten Angstroms Goniometer** - Measures contact angle, surface energy, roll-off angle, and visualize drop impact
Hitesh Bindra

**Department:** Mechanical and Nuclear Engineering  
**Website:** http://www.mne.ksu.edu

**Email:** hbindra@ksu.edu  
**Phone:** 785-532-5610

**Education**

- **Ph.D.** 2010 Nuclear Engineering University of Illinois, Urbana, IL (US)
- **M.S.** 2007 Nuclear Engineering University of Illinois, Urbana, IL (US)
- **B.E.** 2000 Chemical Engineering Panjab University, Chandigarh (India)

**Academic/Industrial Experience**

- Assistant Professor, Mechanical and Nuclear Engineering, Kansas State University, Manhattan, KS, January 2014-present
- Assistant Professor, Department of Chemical Engineering (Nuclear). University of Utah, Salt Lake City, UT, August 2013-December 2013
- Research Associate, CUNY Energy Institute, City University of New York, NY, February 2010-July 2013

**Key Words Related to Your Activities**

Nuclear reactor safety, nuclear thermal-hydraulics, thermal energy storage, transport theory

**Short Description of Educational Interests**

- Teaching and developing courses on nuclear thermal-hydraulics, reactor safety and nuclear reactor engineering
- Training new generation of nuclear engineers to research and design advanced passively safe nuclear reactors

**Short Description of Research Interests**

- Design of nuclear reactors which are passively safe even in externally initiated scenarios
- Making nuclear energy economically viable by integrating thermal storage
- Development of inherently coupled multi-physics solvers for uncertainty quantification and safety analysis

**Three Recent Publications**


**Recent Research/Outreach/Extension Projects**

- Technology commercialization of thermal energy storage for solar and other applications to Aluminasolar LLC, Lead Inventor: **Hitesh Bindra** (Co-Inventors: Reuel Shinnar, Pablo Bueno).

**Hardware/Equipment Capabilities within Your Research Activities**

High-speed two phase boiling visualization, Surface scanning profilometers, Dynamic light scattering and Scanning Electron Microscopes

**Software/Simulation Capabilities within Your Research Activities**

Commercial CFD and Structural analysis software: CFX, Fluent, ANSYS, ABAQUS, and COMSOL
Ray Buyle

Department: Architectural Engineering and Construction Science Email: rbuyle@ksu.edu
Website: http://www.are-cns.ksu.edu/people/faculty/raybuyle Phone: 785-532-3577

Education:
M.S. 2010 Curriculum and Instruction Kansas State University
B.S. 1984 Construction Science Kansas State University

Academic/Industrial Experience
• Assistant Professor, Architectural Engineering and Construction Science, Kansas State University, Manhattan, KS, 2010-present
• Instructor, Architectural Engineering and Construction Science, Kansas State University, Manhattan, KS, 2007-2010
• Project Manager, commercial construction, 1989-2007

Key Words Related to Your Activities
Undergraduate education, construction, design-build, curriculum and instruction

Short Description of Educational Interests
Construction management, design-build project delivery, scheduling and cost control

Short Description of Research Interests
Project delivery methods

Recent Research/Outreach/Extension Projects
• Disaster relief in New Orleans, LA and Joplin, MO the past four spring breaks through role as faculty advisor to the KSU AGC Student Chapter
• Professional certification designation through Design-Build Institute of America
• Numerous local community service projects through role as faculty advisor to KSU Habitat for Humanity Student Chapter and KSU AGC Student Chapter
Patrice Chalin

Department: Computing and Information Sciences  
Website: https://www.cis.ksu.edu/user/319

Email: chalin@ksu.edu  
Phone: 785-532-7906

Education

Eng. Permit 2007 Order of Engineers of Quebec (OIQ), Canada
Ph.D. 1995 Computer Science Concordia University, Montreal, Canada
M.Comp.Sci. 1989 Computer Science Concordia University, Montreal, Canada
B.Comp.Sci. 1988 Computer Science Concordia University, Montreal, Canada

Academic/Industrial Experience

• Associate Professor, Computing and Information Sciences, Kansas State University, Manhattan, KS, August 2011 – present
• Associate Professor, CSE Dept., Concordia University, Montreal, Canada, June 2007-August 2011
• Assistant Professor, CSE Dept., Concordia University, Montreal, Canada, April 2002-May 2007
• Software Developer, Nortel Networks, Canada, January 1996-March 2002
• Lecturer, CS Dept., Concordia University, Montreal, Canada, September 1989-May 1992
• Software Developer, Bell-Northern Research, Montreal, Canada, May 1989-August 1989

Key Words Related to Your Activities

Software engineering, formal methods

Short Description of Educational Interests

Active learning and problem-based learning techniques in a number of subjects related to Computer Science and Software Engineering.

Short Description of Research Interests

• Formal Methods & Software Engineering; Programming and Specification Language Design & Semantics
• Software Requirements Specification
• Software Design & Model Driven Architecture
• Medical Device Integration, Coordination, and Interoperability

Three Recent Publications


Recent Research/Outreach/Extension Projects

• NSF FDA Scholar-In-Residence (SIR): “Risk Assessment Techniques for Apps & Devices within Interoperable Medical Frameworks (Co-PI).” 2013-2014, $104,000.
• NSF FDA Scholar-In-Residence (SIR): “Tools, Processes, and Artifacts for Certifiable Clinical Applications in Interoperable Medical Device Frameworks (PI).” 2012-2013, $80,000.

Hardware/Equipment Capabilities within Your Research Activities

Basic CIS computing resources

Software/Simulation Capabilities within Your Research Activities

Eclipse, Apache Tomcat
Yu Deng

Department: Biological and Agricultural Engineering  
Email: dengy@ksu.edu  
Website: http://olathe.k-state.edu/people/faculty/deng.html  
Office: K-State Olathe, 22201 W. Innovation Dr., Olathe, KS 66061-1304

Education
Ph.D. 2011 Chemical and Life Science Engineering  
Virginia Commonwealth University, VA
M.S. 2007 Fermentation Engineering  
Jiangnan University, China
B.S. 2005 Biotechnology  
Jiangnan University, China

Academic/Industrial Experience
• Assistant Professor, Biological and Agricultural Engineering, Kansas State University, 2013-present
• Postdoctoral Researcher, Dartmouth College, 2011-2013

Key Words Related to Your Activities
Fermentation engineering, metabolic engineering, biochemical engineering, genetic engineering, synthetic biology

Short Description of Educational Interests
Teaching graduate courses in Fermentation, strain development, and microbiology

Short Description of Research Interests
• Use state-of-the-art technologies to engineer microbes for producing value-added chemicals
• Develop fermentation process for microbes and animal cells to produce chemicals and pharmaceuticals

Three Recent Publications

Recent Research/Outreach/Extension Projects
• “Systematically engineering of Thermobifida fusca to produce value added four-carbon 1,4-dicarboxylic acids from lignocellulosic biomass,” PI: Yu Deng, Co-Pls, Donghai Wang, and Stephen Fong, NSF-CBET-SusCheM.
Melanie Derby

Department: Mechanical and Nuclear Engineering
Website: http://www.mne.ksu.edu/people/faculty/derby
Email: derbym@ksu.edu
Phone: 785-532-2606

Education
Ph.D. 2013 Mechanical Engineering Rensselaer Polytechnic Institute
M.S. 2010 Mechanical Engineering Rensselaer Polytechnic Institute
B.S. 2008 Mechanical Engineering Rensselaer Polytechnic Institute

Academic/Industrial Experience
- Assistant Professor, Mechanical and Nuclear Engineering, Kansas State University, Manhattan, KS, August 2013-present

Key Words Related to Your Activities
Heat transfer, energy, condensation heat transfer, two-phase flow, mini- and micro-scale convective heat transfer, building energy, thermal management

Short Description of Educational Interests
- Teach undergraduate and graduate classes in heat transfer, fluid dynamics, and engineering design
- Create outreach activities to engage K-12 students and spark an interest in science and engineering

Short Description of Research Interests
- Increase fundamental understanding of condensation heat transfer
- Enhance condensation heat transfer on hydrophobic surfaces for applications such as power plant condensers
- Model and improve building energy efficiency

Three Recent Publications

Hardware/Equipment Capabilities within Your Research Activities
Heat transfer measurements
Daniel Flippo

**Department:** Biological and Agricultural Engineering
**Website:** http://www.bae.ksu.edu/home

**Email:** dkflippo@ksu.edu
**Phone:** 785-532-2745

**Education**
- **Ph.D.** 2009  Mechanical Engineering  University of Oklahoma
- **M.S.** 2005  Mechanical Engineering  Wichita State University
- **B.S.** 1994  Mechanical Engineering  Kansas State University

**Academic/Industrial Experience**
- Assistant Professor, Biological and Agricultural Engineering, Kansas State University, Manhattan, KS, 2013-present
- Senior Engineer, John Deere Product Engineering Center, Waterloo, IA, 2011-2013
- Adjunct Instructor, University of Oklahoma, Norman, OK, 2009-2011
- Design Engineer, Cessna Aircraft Co, Wichita, KS, 1997-2005

**Key Words Related to Your Activities**
Agriculture, automation, mechatronics, precision machines, robotics, wheel to soil interaction

**Short Description of Educational Interests**
Educating undergraduates and graduates in the design and role of agricultural machines

**Short Description of Research Interests**
Blending of automation and agriculture, including the transfer of power, automation, mechatronics, and wheel to soil interaction

**Three Recent Publications**

**Hardware/Equipment Capabilities within Your Research Activities**
Strain Gauges and Force Torque Sensors, HAAS CNC Milling

**Software/Simulation Capabilities within Your Research Activities**
Matlab, Atmel and Propellor embedded systems, Alibre CAD, ProE Manufacturing, Labview, C, Diptrace, and LÄTeX
Mei He

**Department**: Biological and Agricultural Engineering  
**Email**: meih@ksu.edu  
**Website**: http://olathe.k-state.edu/people/faculty/he.html  
**Phone**: 913-307-7383  
**Office**: K-State Olathe, 22201 W. Innovation Dr., Olathe, KS 66061-1304

**Education**

- **Postdoctoral** 2011: Bioengineering, University of California-Berkeley
- **Ph.D.** 2008: Chemistry, University of Alberta, Canada
- **M.S.** 2003: Pharmaceutical Chemistry, Chongqing University, China
- **B.S.** 2000: Chemical Engineering, Chongqing University, China

**Academic/Industrial Experience**

- Assistant Professor, Biological and Agricultural Engineering, Kansas State University-Olathe, 2014-present
- Senior Scientist, Department of Pathology and Laboratory Medicine, University of Kansas Medical Center, 2012-2013

**Key Words Related to Your Activities**

Nanobiotechnology and bioengineering, biomedical engineering, translational research, biomedical devices

**Short Description of Educational Interests**

Perpetuating knowledge and inspiring learning is the core of my teaching philosophy. I am strongly committed to motivating student to learn the skills of critical thinking and problem solving, with interests in teaching of Biomolecular techniques, Biomedical Engineering, and Nano/Biotechnology.

**Short Description of Research Interests**

My research aims to integrate and design nano/biotechnology and bioengineering approaches to tackle questions in biological systems and life science, encompassing a range of specific disciplines from macro to nano-scales with particular applications in disease diagnostics, medical treatment, and biologically-inspired devices.

**Three Recent Publications**


**Recent Research/Outreach/Extension Projects**

- University of Kansas Medical Center Auxiliary Funds, Disposable Point-of-Care Diagnostic Device for Lung Cancer Patients, (PI: Mei He, funded from Nov 2012-Nov 2013).
- US Invention patent: **M. He**, A.E. Herr, Protein renaturation microfluidic devices and methods of making and using the same, U.S. Serial No. 61/560,167, 09/12/2010. License has been used by Bio-Rad Laboratories.

**Hardware/Equipment Capabilities within Your Research Activities**

SEM, TEM, Lithography, NanoFabrication, Photo-spectrometer, FL Microscopic Imaging, Bioseparation Apparatus, Western Blotting/ELISA, Biomicrofluidic Devices

**Software/Simulation Capabilities within Your Research Activities**

COMSOL Multiphysics, AutoCAD, Metamorph Image Analysis
Jessica L. Heier Stamm

**Department:** Industrial and Manufacturing Systems Engineering  
**Website:** [http://www.imse.ksu.edu/people-faculty-heierstamm](http://www.imse.ksu.edu/people-faculty-heierstamm)  
**Email:** jlhs@ksu.edu  
**Phone:** 785-532-3726

**Education**
- **Ph.D. 2010** Industrial and Systems Engineering  
  Georgia Institute of Technology, Atlanta, GA
- **B.S. 2004** Industrial Engineering, Music Minor  
  Kansas State University, Manhattan, KS

**Academic/Industrial Experience**
- Assistant Professor, Industrial and Manufacturing Systems Engineering, Kansas State University, Manhattan, KS, December 2010-present

**Key Words Related to Your Activities**
Supply chain and logistics engineering, operations research, game theory, humanitarian operations, public health

**Short Description of Educational Interests**
- Teaching undergraduate and graduate courses in operations research, game theory, decision analysis, and logistics
- Developing teaching materials to introduce students to applications of industrial engineering tools in humanitarian and public health settings

**Short Description of Research Interests**
- Using operations research and game theory to design and analyze systems in which decisions are decentralized
- Applying quantitative methods to the design and improvement of humanitarian relief and public health systems

**Three Recent Publications**

**Recent Research/Outreach/Extension Projects**

**Hardware/Equipment Capabilities within Your Research Activities**
Some analyses benefit from access to computing cluster (e.g. K-State’s Beocat)

**Software/Simulation Capabilities within Your Research Activities**
IBM ILOG CPLEX Optimization Studio, Esri ArcGIS
Isaya Kisekka

Department: Biological and Agricultural Engineering/Southwest Research and Extension Center
Website: http://www.wkarc.org/p.aspx?tabid=85
Office: Southwest Research and Extension Center, 4500 E. Mary St., Garden City, Kansas 67846

Email: ikisekka@ksu.edu
Phone: 620-275-9164

Education
Ph.D. 2013 Agricultural and Biological Engineering University of Florida
M.S. 2007 Agricultural and Biological Engineering University of Florida
B.S. 2002 Agricultural Engineering Makerere University Uganda

Academic/Industrial Experience
- Assistant Professor, Biological and Agricultural Engineering / Southwest Research and Extension Center, Kansas State University, 2013-Present
- Research Assistant, University of Florida, 2007-2013
- Research Engineer, National Agricultural Research Organization (NARO), Uganda, 2004-2007
- Water Resources Engineer, Balton (U) Ltd Kampala, Uganda, 2002-2004

Key Words Related to Your Activities
Irrigation engineering, water resources, hydrology, crop modeling, sensors-based water management, water quality

Short Description of Educational Interests
Mentoring of undergraduate and graduate students through research in irrigation engineering, hydrology, and agricultural water management

Short Description of Research Interests
Limited irrigation research, vadose zone hydrology, groundwater hydrology, cropping systems modeling, sensor-based water management, evapotranspiration measurement, and modeling

Three Recent Publications

Recent Research Projects
- Canola as an alternative crop in limited and full-irrigation environments (funded by Ogallala Aquifer Program)
- Maximizing yield and water-saving potential of drought-tolerant corn (funded by Kansas Corn Commission)

Hardware/Equipment Capabilities within Your Research Activities
Neutron probes (Model 503DR) for soil water monitoring, Lateral move irrigation system (model 8000, Valmont Corp., Valley, NE) for implementing variable rate irrigation experiments, Bowen ratio system for ET measurement

Software/Simulation Capabilities within Your Research Activities
WAVE for vadose simulation, DSSAT for cropping systems simulation, and Sigmaplot for statistics and graphing
Bin Liu

Department: Chemical Engineering
Website: http://www.che.ksu.edu/node/161

Email: binliu@ksu.edu
Phone: 785-532-4331

Education
Ph.D. 2008 Chemical Engineering Colorado School of Mines
B.S. 2003 Chemical Engineering Dalian University of Technology

Academic/Industrial Experience
• Assistant Professor, Chemical Engineering, Kansas State University, 2013-present
• Postdoctoral, Carnegie Mellon University, January 2013-July 2013
• Postdoctoral, Argonne National Laboratory, 2010-2012
• Postdoctoral, Colorado School of Mines, January 2009-December 2009

Key Words Related to Your Activities
Chemical transformations of biomassic compounds, phase stability and O solubility in Fe-Ni-Al alloys, SOFC

Short Description of Educational Interests
Chemical Engineering Analysis I. Emphasis on concept and generalized approach to solving relevant chemical engineering and applied mathematics problems. Incorporate modern mathematics softwares and frontier information into lectures.

Short Description of Research Interests
Density functional theory (DFT) methodology, heterogeneous catalysis, surface chemistry, novel materials, and renewable energy generation

Three Recent Publications

Recent Research/Outreach/Extension Projects
• Phase VII: “Sustainable Energy and Education in Kansas (SEEK)” (formerly entitled Nano-Engineered Boron-Carbon-Nitrogen Materials for Energy,” Chris Sorensen (KSU lead PI), Information, and Sensing, $3,000,000 (direct costs), Kansas University Center for Research (National Science Foundation EPSCoR Program, Collaborator.
• “Engineering the Electrical and Optical Properties of Atomically-Thick Boron-Nitride-Sheets via Functionalization,” Vikas Berry (KSU lead PI), $251,019 (direct costs), National Science Foundation, co-PI.
• K-State Faculty mentoring program (pending).

Hardware/Equipment Capabilities within Your Research Activities
Beocat supercomputing cluster (KSU)

Software/Simulation Capabilities within Your Research Activities
VASP, Quantum Espresso, DACAPO, Materials Studio Visualizer, CP2K
Zifei Liu

Department: Biological and Agricultural Engineering

Website: https://bae.engg.ksu.edu/~zifeiliu/

Email: Zifeiliu@ksu.edu

Phone: 785-532-3587

Education
Ph.D. 2009 Biological & Agricultural Engineering North Carolina State University
M.S. 2005 Environmental Engineering University of Cincinnati
B.S. 1992 Atmospheric Science Nanjing University (China)

Academic/Industrial Experience
• Assistant Professor, Biological and Agricultural Engineering, Kansas State University, Manhattan, 2012-present
• Postdoctoral Research Associate, Departments of Animal Science and Biosystems & Agricultural Engineering, Michigan State University, 2010-2012
• Research Assistant, North Carolina State University, 2005-2009
• Research Assistant, University of Cincinnati, 2002-2005
• Environmental Engineer, Environmental Monitoring Center of Anhui Province, China, 1992-2002

Key Words Related to Your Activities
Air quality, measurement, modeling, mitigation, extension, farm, animal operation, smoke, pasture burning

Short Description of Educational Interests
Effective dissemination of research-based information to industries, regulators, and the public

Short Description of Research Interests
Air quality monitoring and modeling, fate and transport of air emissions from agricultural sources, and cost effective mitigation strategies

Three Recent Publications

Recent Research/Outreach/Extension Projects
• Meta-analysis of H2S, NH3, VOC, PM10, and PM2.5 emissions from swine productions in North America
• Effectiveness of vegetative environmental buffers to reduce swine facility emissions
• Mitigation of Air Emissions from Swine Buildings through the Photocatalytic Technology using UV/TiO2

Hardware/Equipment Capabilities within Your Research Activities
TEI 450i H2S analyzer, INNOVA 1412i multi gas analyzer
Behrooz Mirafzal

**Department:** Electrical and Computer Engineering  
**Website:** [http://ecepower.ece.ksu.edu/html/](http://ecepower.ece.ksu.edu/html/)

**Email:** mirafzal@ksu.edu  
**Phone:** 785-532-4641

**Education**
- **Ph.D.** 2005  Electrical Engineering  Marquette University, Milwaukee
- **B.S.** 1994  Electrical Engineering  Isfahan University of Technology, Iran

**Academic/Industrial Experience**
- Assistant Professor, Electrical and Computer Engineering, Kansas State University, 2011-present
- Assistant Professor, Florida International University, 2008-2011
- Adjunct Assistant Professor, Marquette University, 2005-2008
- Senior Development/Project Designer, Rockwell Automation/Allen Bradley, 2005-2008

**Key Words Related to Your Activities**
Power electronics, motor-drives, sustainable energy conversion systems

**Short Description of Educational Interests**
Develop a modern power electronics/Energy Laboratory-Based Curriculum

**Short Description of Research Interests**
Power Electronics for Modern Energy Conversion Systems

**Three Recent Publications**

**Recent Research/Outreach/Extension Projects**
- NSF CAREER Award, “CAREER: Toward Grid-Interactive Converters with Diagnostic, Remedial, and Lifetime Prognostic Features for the Next Generation of Power Grids,” $400,000, 02/15/14 – 07/31/19.

**Hardware/Equipment Capabilities within Your Research Activities**
Programmable DC Power Supplies as PV Emulators, dSpace Controllers, Wind-Generator Emulator, DC-AC Converters, Oscilloscopes with High Voltage and High Current Probes

**Software/Simulation Capabilities within Your Research Activities**
MATLAB PowerSim Toolbox, Q3D FE Software
Natalie Mladenov

Department: Civil Engineering
Website: http://www.ce.ksu.edu/people/faculty/natalie
Email: mladenov@ksu.edu
Phone: 785-532-0885

Education
Ph.D. 2004 Civil Engineering Environmental specialization, University of Colorado
M.S. 1999 Civil Engineering Water resources specialization, University of Colorado
B.S. 1995 Civil Engineering Environmental specialization, University of South Florida
B.A. 1995 Art University of South Florida

Academic/Industrial Experience
• Assistant Professor, Civil Engineering, Kansas State University, 2011-present
• Research Scientist, Associate Director, Hydrologic Sciences Graduate Program, University of Colorado, 2009-2011
• Postdoctoral Research Associate, Departamento de Ecología, Universidad de Granada, 2007-2009
• Adjunct Professor, University of Colorado, 2006-2007
• Postdoctoral Research Associate, Department of Environmental Science, University of Virginia, 2004-2005
• Project Water Engineer, Tetra Tech, Boulder and Breckenridge, CO, 2000-2001
• Water Resources Engineer, URS Corporation, Denver, CO, 1999-2000

Key Words Related to Your Activities
Water; sanitation; biogeochemistry; natural organic matter; dissolved organic carbon; organic aerosols

Short Description of Educational Interests
Environmental engineering; biogeochemistry; water, sanitation, and sustainability

Short Description of Research Interests
Surface and ground water quality; organic matter-metal interactions; fluorescence spectroscopy; organic aerosols

Three Recent Publications

Recent Research/Outreach/Extension Projects
• NSF EAR (US$ 556,774 ) 2011 – 2014. “The Role of Dust on Snow and Other Aeolian Inputs in Soil Formation and Biogeochemical Cycling in Barren, Alpine Catchments.” The project was awarded while the PI was at the University of Colorado as follows: PI: Mladenov (now a subcontract to Mladenov at KSU); co-PIs: Williams (now new PI), Schmidt, and Blum.

Hardware/Equipment Capabilities within Your Research Activities
• Fluorescence and U-vis absorbance spectroscopy and carbon analyses
• Solar simulation
• Atmospheric deposition sampling
• Soil, surface water, and ground water quality monitoring

Software/Simulation Capabilities within Your Research Activities
Parallel factor analysis modeling of fluorescence spectra
Trisha Moore

Department: Biological and Agricultural Engineering  
Website: http://www.bae.ksu.edu/home

Email: tlcmoore@ksu.edu  
Phone: 785-532-5418

Education
Ph.D. 2011 Biological & Agricultural Engineering  
North Carolina State University, Raleigh, NC

M.S. 2008 Biological & Agricultural Engineering  
Kansas State University, Manhattan, KS

B.S. 2006 Biological & Agricultural Engineering  
Kansas State University, Manhattan, KS

Academic/Industrial Experience
- Assistant Professor, Biological and Agricultural Engineering, Kansas State University, Manhattan, KS, December 2013-present
- Postdoctoral Research Associate, St. Anthony Falls Laboratory, University of Minnesota, Minneapolis, MN, November 2011-November 2013

Key Words Related to Your Activities
Ecological engineering, ecological restoration, watershed management, life cycle analysis

Short Description of Educational Interests
Teaching and developing courses in ecological engineering and sustainable design principles and environmental hydrology and hydraulics at the graduate and undergraduate levels

Short Description of Research Interests
Ecological sustainability of biological production systems, impact of climate and land use change on hydro-ecological systems, development of sustainable ecological systems in human-dominated landscapes

Three Recent Publications

Recent Research/Outreach/Extension Projects

Hardware/Equipment Capabilities within Your Research Activities
ISCO automated water samplers, HACH colorimeter for water quality analyses

Software/Simulation Capabilities within Your Research Activities
ESRI ArcGIS, EPA-SWMM, SWAT
Russell J. Murdock

**Department:** Architectural Engineering and Construction Science  
**Email:** rmurdock@ksu.edu  
**Website:** http://www.are-cns.ksu.edu/node/108  
**Phone:** 785-532-3571

**Education**
M.S. 2000  Architectural Engineering  Kansas State University  
B.S. 2000  Architectural Engineering  Kansas State University

**Academic/Industrial Experience**
- Assistant Professor, Architectural Engineering and Construction Science, Kansas State University, August 2011-present  
- Professional Engineer/Project Manager, Smith Seckman Reid, Inc., Nashville, TN, June 2000-August 2011

**Key Words Related to Your Activities**
Undergraduate education, architectural engineering, building systems engineering, building electrical systems design, emergency and stand-by power systems design, dispatched power generation, lighting and lighting control systems design

**Short Description of Educational Interests**
- Building Electrical Systems Design  
- Emergency and Stand-by Power Systems Design and Application  
- Dispatched Generation System Design and Application  
- Lighting and Lighting Control Systems Design and Application  
- High-Performance Building Design  
- Sustainable Planning and Development

**Short Description of Research Interests**
- Sustainable Design Practices  
- Emergency and Stand-by Power Systems  
- Dispatched Generation  
- Net Zero Building Challenge

**Recent Research/Outreach/Extension Projects**
- Architectural Engineering Institute (part of ASCE) PE Exam Workshop (Electrical Committee) (July 2012)  
- Architectural Engineering Institute (part of ASCE) PE Exam Committee Vice Chairman (2012-14)  
- Architectural Engineering Institute (part of ASCE) Academic Council representative for Kansas State University (2012-13)

**Hardware/Equipment Capabilities within Your Research Activities**
Seaton 223A - Architectural Engineering Building Electrical Systems Laboratory (Non-Energized Demonstration Equipment)  

**Software/Simulation Capabilities within Your Research Activities**
SKM Powertools - Specifically Dapper and Captor Modules - for Short Circuit and Selective Coordination Studies of Building Electrical Distribution Systems
Don Phillippi

Department: Architectural Engineering and Construction Science
Website: http://www.are-cns.ksu.edu/people/faculty/donphillippi
Email: dphillip@ksu.edu
Phone: 785-532-3574

Education
Ph.D. 2010 Structural Engineering University of California, San Diego
M.S. 2004 Structural Engineering California State Polytechnic University, Pomona
BArch 1989 Architecture California State Polytechnic University, Pomona
B.S. 1984 Civil Engineering California State Polytechnic University, Pomona

Academic/Industrial Experience
- Assistant Professor, Architectural Engineering and Construction Science, Kansas State University, 2010-present
- Principal, Diamond Pacific Structural Engineering Services, 1989-present
- Project Manager, Coulson & Hoffman Structural Engineers, 1982-1988
- Licensed Structural Engineer, NCEES
- Licensed Architect, NCARB

Key Words Related to Your Activities
FRP/CFRP composites, seismic, reinforced concrete, blast research

Short Description of Educational Interests
- Development of courses to promote a better understanding of structures and structural engineering
- Mentor students to help them find their best career path

Short Description of Research Interests
Use of composites as reinforcement for concrete structures, seismic shear distribution of concrete structures, seismic rehabilitation of damaged structures, Blast resistant structures

Three Recent Publications

Hardware/Equipment Capabilities within Your Research Activities
Equipment to test large-scale structures for both quasi-static cyclic loading and blast simulation

Software/Simulation Capabilities within Your Research Activities
MATLAB, ABAQUS, LS-DYNA, SAP 2000, RISA, TRUEGRID
Punit Prakash

**Department:** Electrical and Computer Engineering  
**Website:** [http://ece.k-state.edu/people/faculty/prakash.html](http://ece.k-state.edu/people/faculty/prakash.html)  
**Email:** prakashp@ksu.edu  
**Phone:** 785-532-3358

**Education:**
- **Ph.D.** 2008  
  Biomedical Engineering  
  University of Wisconsin-Madison
- **M.S.** 2006  
  Biomedical Engineering  
  University of Wisconsin-Madison
- **B.S.** 2004  
  Electrical and Computer Engineering  
  Worcester Polytechnic Institute

**Academic/Industrial Experience**
- Assistant Professor, Electrical and Computer Engineering, Kansas State University, August 2012-present
- Research Specialist, November 2009-July 2012; Postdoctoral Scholar, October 2008-October 2009, Department of Radiation Oncology, University of California, San Francisco

**Key Words Related to Your Activities**
- Image-guided therapy; thermal ablation and hyperthermia; therapeutic medical devices; bioinstrumentation

**Short Description of Educational Interests**
- Development of graduate biomedical engineering courses - therapeutic medical devices; medical imaging systems
- Teaching undergraduate medical instrumentation and bioengineering design courses.

**Short Description of Educational Interests**
- Model-based design of novel systems, devices, and treatment delivery strategies for precise image-guided thermal therapy of biomedical targets with electromagnetic and acoustic energy
- Mathematical modeling and experimental validation of biological responses to thermal interventions

**Three Recent Publications**

**Recent Research/Outreach/Extension Projects**
- **Innovative Research Award, Terry Johnson Center for Basic Cancer Research, KSU**  
  Nanoparticle enhanced microwave hyperthermia, PI: **P. Prakash**; $7,500; 01/15/2013-12/31/2013.

**Hardware/Equipment Capabilities within Your Research Activities**
- Vector network analyzer (1-6 GHz); spectrum analyzer; RF power amplifiers (80 W, 800 – 2700 MHz); custom apparatus for broadband dielectric and magnetic measurements; computer-controlled SAR/E-field scan tank

**Software/Simulation Capabilities within Your Research Activities**
- Scientific computing workstation (16 core, 64 GB memory), SEMCAD X, COMSOL Multiphysics, Matlab, Labview
Jeremy Roberts

**Department:** Mechanical and Nuclear Engineering  
**Email:** jaroberts@ksu.edu

**Website:** http://www.mne.ksu.edu/people/faculty/roberts  
**Phone:** 785-532-7182

**Education**

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<tr>
<td>Ph.D.</td>
<td>2014</td>
<td>Nuclear Science and Engineering</td>
<td>MIT, Cambridge</td>
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<td>MA B.S/M.S.</td>
<td>2009</td>
<td>Nuclear Engineering</td>
<td>University of Wisconsin, Madison, WI</td>
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</table>

**Academic/Industrial Experience**

- Assistant Professor, Mechanical and Nuclear Engineering, Kansas State University, Manhattan, KS, August 2013-present

**Key Words Related to Your Activities**

Nuclear reactor physics, neutron transport, high performance computing

**Short Description of Educational Interests**

- Teaching undergraduates the importance of nuclear science and engineering topics, particularly related to the safe and effective use of nuclear energy
- Providing an opportunity to learn and apply computational methods in nuclear engineering

**Short Description of Research Interests**

- Applying advanced computational techniques to reactor analysis, with the ultimate goal of developing tools for predictive simulation

**Three Recent Publications**


**Recent Research/Outreach/Extension Projects**

- MIT Undergraduate Research Opportunities Program; co-advised two students working on modeling and optimization of nuclear reactors

**Hardware/Equipment Capabilities within Your Research Activities**

Group compute cluster and Intel NIC-enabled workstation; access to campus-wide Beocat cluster

**Software/Simulation Capabilities within Your Research Activities**

Significant use of free and/or open source scientific tools (e.g. PETSc, SLEPC) as core pieces of our group's research codes (Detran, Serment, and Poropy) for performing analysis and optimization of nuclear reactors
Ajay Sharda

Department: Biological and Agricultural Engineering  
Website: http://www.bae.ksu.edu/home  
Email: asharda@ksu.edu  
Phone: 785-532-2936

Education
Ph.D. 2011  Biosystems Engineering  Auburn University, Auburn, AL
M.Tech 2001  Farm Power Machinery, Computer  Punjab Agricultural University, Ludhiana, India
B.Tech 1998  Agricultural Engineering  Punjab Agricultural University, Ludhiana, India

Academic/Industrial Experience
- Assistant Professor, Biological and Agricultural Engineering, Kansas State University, Manhattan, KS, October 2013-present
- Postdoctoral Research Associate, Center for Precision and Automated Agricultural Systems, Washington State University, Prosser, WA, February 2012-September 2013
- Assistant Professor, Farm Power and Machinery, Punjab Agricultural University, Ludhiana, PB, India, March 2003-January 2012

Key Words Related to Your Activities
Precision Ag., machine systems for crop production, sensors, control systems, CAN, data management and analysis

Short Description of Educational Interests
- Teaching undergraduate and graduate courses in power and machinery, instrumentation, and data acquisition
- Developing teaching material on precision agricultural technologies, and field data management and analysis

Short Description of Research Interests
- Development and evaluation of precision agriculture technologies for crop production with particular interest in control systems, CAN, sensors, and automation
- Crop production and machine performance data management and analysis for intelligent decision-making

Three Recent Publications

Recent Research/Outreach/Extension Projects
- Precision Agriculture and Precision Forestry- Alabama. USDA-CSREES
- Evaluation of Automatic Section Control Technology for Agricultural Sprayers. *Alabama Soybean Producers.*
- Development and optimization of Solid-Set Canopy Delivery Systems for Resource-Efficient, Ecologically Sustainable Apple and Cherry Production. USDA-SCRI

Hardware/Equipment Capabilities within Your Research Activities
Instrumentation and data acquisition, control systems, designing virtual simulation, crop sensors, GPS/GNSS, CAN

Software/Simulation Capabilities within Your Research Activities
LabVIEW, MATLAB, SAS, ArcGIS, Solid Edge, Visual Basic
Hydrologic climate

Short

WINDS

Academic/Industrial Experience

- Assistant Professor, Biological and Agricultural Engineering, Kansas State University, Russia, 2012-present
- Research Assistant Professor, Biological and Agricultural Engineering, Kansas State University, 2008-2012
- Research Associate, Bioproducts and Biosystems Engineering, Univ. of Minnesota, 2004 – 2008
- Visiting Assistant Professor, U.S. Army High Performance Computing Research Center, Univ. of Minnesota, 1999-2003
- Assistant Professor, Kazan State Power Engineering University, Kazan, Russia, 1996-1998

Key Words Related to Your Activities
Hydrology; environmental quality; erosion; ephemeral gullies; climate generation model; climate change; subsurface flows

Short Description of Educational Interests
Hydrologic modeling of small watersheds; Soil erosion; Transport in biological systems; GIS in water resources

Short Description of Research Interests
Hydrologic modeling of watersheds using computer-based tools; Monitoring and modeling of ephemeral gully erosion; Climate change impacts on hydrologic processes and water-quality

Three Recent Publications

Recent Research/Outreach/Extension Projects
- Assessment of geomorphological properties and model development of ephemeral gully erosion in agricultural watersheds
- Watershed Restoration and Protection Strategies (WRAPS) – Water-quality assessment of non-point source pollution in Kansas watersheds
- Impacts of climate change on the hydrology of Kansas watersheds using ensembles of downscaled Global Climate Model predictions

Software/Simulation Capabilities within Your Research Activities
WINDS (Weather Input for Nonpoint Data Simulation) - A stochastic weather generator and tool for prediction of daily climate variables and intra-storm characteristics using statistics of historical records
Gurpreet Singh

**Department:** Mechanical and Nuclear Engineering

**Website:** http://www.mne.ksu.edu/people/faculty/singh
http://www-personal.ksu.edu/~gurpreet/

**Email:** gurpreet@ksu.edu  
**Phone:** 785-532-7085

**Education**

- Ph.D. 2007 Mechanical Engineering  
  University of Colorado at Boulder
- M.S. 2006 Mechanical Engineering  
  University of Colorado at Boulder
- B.E. 2003 Mechanical Engineering  
  Government College of Engineering, Pune, India

**Academic/Industrial Experience**

- Assistant Professor, Mechanical and Nuclear Engineering, Kansas State University, Manhattan, KS, July 2009-present
- Guest Researcher/ Visiting Scholar, National Institute of Standards and Technology (NIST), Boulder, CO, May 2009-present
- Postdoctoral Associate, Institute for Critical Technology and Applied Science, Virginia Polytechnic Institute and State University, Blacksburg, VA, January 2008-July 2009

**Key Words Related to Your Activities**

Nanotechnology, materials science (ceramics), electrochemistry (batteries), thermal science (detectors)

**Short Description of Educational Interests**

- Introduction to Nanotechnology
- Machine Design

**Short Description of Research Interests**

- Polymer-derived ceramics (Si-C-N and Si-B-C-N) for high power laser thermal detectors, radiation sensors and other energy based applications
- Mechanical testing of small-scale structures using Focused Ion Beam, Scanning and Transmission Electron Microscopy
- Nanomaterials (carbon nanotubes, graphene, layered TMDCs etc.) for Li-ion rechargeable battery electrodes

**Three Recent Publications**


**Hardware/Equipment Capabilities within Your Research Activities**

Electrical probe station, I-V Sourcemeter, Battery test system, Graphene-Chemical Vapor Deposition
David Thompson

**Department:** Electrical and Computer Engineering  
**Website:** http://ece.k-state.edu/  
**Email:** davet@ksu.edu  
**Phone:** 785-532-5600

**Education**
- Ph.D. 2012 Biomedical Engineering - University of Michigan, Ann Arbor, MI
- M.S.E. 2011 Biomedical Engineering - University of Michigan, Ann Arbor, MI
- M.S. 2009 Electrical Engineering - University of Michigan, Ann Arbor, MI
- B.S. 2006 Electrical Engineering - Kansas State University, Manhattan, KS

**Academic/Industrial Experience**
- Assistant Professor, Electrical and Computer Engineering, Kansas State University, Manhattan, KS, 2014–present
- Postdoctoral Fellow, August 2012–2013
- Chestek Lab, Department of Biomedical Engineering, University of Michigan, Ann Arbor, MI

**Key Words Related to Your Activities**
Low-power electronics, implantable or wearable medical devices, brain-computer interface, electroencephalogram research, embedded systems, assistive technology

**Short description of Educational Interests**
- Undergraduate and graduate embedded systems courses and laboratories
- Engineering fundamental courses such as circuit theory; introductory-level courses

**Short description of Research Interests**
- Embedded systems design for medical or veterinary use, focused on implantable or wearable systems
- Assistive technology development, including brain-computer interface, for people with severe movement disorders
- Performance measurement for brain-computer interface

**Three Recent Publications**

**Recent Research/Outreach/Extension Projects**
- Volunteered for WISE (Women In Science and Engineering) program at University of Michigan, a program to encourage middle-school girls to consider STEM careers
- Invited science speaker for ConFusion 2015, a science-fiction convention

**Hardware/Equipment Capabilities within Your Research Activities**
Printed Circuit Board (PCB) prototyping, design, layout, and assembly; standard EE tools such as oscilloscopes; electroencephalogram (EEG)

**Software/Simulation Capabilities within Your Research Activities**
MATLAB, Simulink, EAGLE, Multisim/Ultiboard, C/C++ and embedded C
Stacey E. Tucker

Department: Civil Engineering
Website: http://www.ce.ksu.edu/people/stacey

Email: setucker@ksu.edu
Phone: 785-532-7717

Education
Ph.D. 2013 Civil Engineering – Geotechnical
M.E. 2009 Civil Engineering – Geotechnical
B.S. 2008 Civil Engineering

Texas A&M University
Texas A&M University
Texas A&M University

Academic/Industrial Experience
• Assistant Professor, Civil Engineering, Kansas State University, Manhattan, KS, August 2013-present

Key Words Related to Your Activities
Nondestructive testing, soil erosion potential, near surface geophysics, unknown bridge foundations, levee construction and evaluation, foundation engineering, in-situ and laboratory testing

Short Description of Educational Interests
• Teaching undergraduate soil mechanics using industry examples and laboratory experiments to supplement geotechnical theory and fundamentals
• Teaching graduate courses with emphasis on standard and advanced testing methods to measure in situ conditions for design applications and projects

Short Description of Research Interests
• Nondestructive testing and monitoring of deteriorating infrastructure
• Advanced soil testing and near surface geophysical measurements to gain insight on the in situ integrity of aging infrastructure and natural materials in order to support the global initiative of sustainability
• Engineering education

Three Recent Publications

Recent Research/Outreach/Extension Projects

Hardware/Equipment Capabilities within Your Research Activities
Electrical resistivity imaging, induced polarization imaging, erosion function apparatus (EFA) testing, ground penetrating radar (GPR), sensors

Software/Simulation Capabilities within Your Research Activities
Time domain electrical resistivity and induced polarization imaging, MATLAB, LabVIEW
Eugene Vasserman

Department: Computing and Information Sciences
Website: http://www.cis.ksu.edu/~eyv/

Email: eyv@ksu.edu
Phone: 785-532-7944

Education:
Ph.D. 2010 Computer Science University of Minnesota
M.S. 2008 Computer Science University of Minnesota
B.S. 2003 Biochemistry and Neuroscience University of Minnesota

Academic/Industrial Experience
• Assistant Professor, Computing and Information Sciences, Kansas State University, 2010–present

Key Words Related to Your Activities
Computer and information security; network security; privacy, anonymity, and censorship resistance; medical and cyber-physical systems security; security usability

Short Description of Educational Interests
• Teaching network security concepts to students of varied backgrounds
• Effective security education for non-engineers
• Effective security education for the general public (little to no computing background)

Short Description of Research Interests
• Safe and secure medical device coordination (protocols, middleware)
• Internet-scale censorship-resistant systems which can resist large (nation-state-level) adversaries
• Security in mobile device networks
• Computer security (e.g. encryption, safe web browsing) usable by non-specialists
• Security education for those with minimal background in computing

Three Recent Publications

Recent Research/Outreach/Extension Projects
• UL 2800 Working group #3 (compositional medical safety)
• GROW (anonymity on the Internet)
• Middle-school outreach (security education – anonymity on the Internet)

Hardware/Equipment Capabilities within Your Research Activities
• EEG devices (consumer-grade)
• Dual-extrusion 3D printer

Software/Simulation Capabilities within Your Research Activities
Large network simulation (~3,000,000 nodes)
Lisa Wilken

Department: Biological and Agricultural Engineering
Website: http://www.bae.ksu.edu/node/367
Email: lwilken@ksu.edu
Phone: 785-532-3327

Education:
Ph.D. 2009 Biological & Agricultural Engineering Texas A&M University
B.S. 2003 Biological & Agricultural Engineering Kansas State University

Academic/Industrial Experience
• Assistant Professor, Biological and Agricultural Engineering, Kansas State University, 2012-present
• Assistant Research Scientist & Lecturer, Texas A&M University, 2009-2012

Key Words Related to Your Activities:
Bioseparations, protein purification, extraction, downstream processing of biomolecules, recombinant protein, transgenic plants, enzymatic oil extraction

Short Description of Educational Interests
Courses in biological engineering such as Bioseparations in Biotechnology, Properties of Biological Materials, Fundamentals of Biological Engineering, and Introductory Design for Biological and Agricultural Engineers

Short Description of Research Interests
• Separation of high-value protein products from transgenic plants and other biological sources (design efficient and economical extraction and separation methods for the purification of recombinant proteins)
• Processing for value-added co-products from biofuel production (develop new processing strategies that will reduce biofuel cost by creating higher value co-products utilizing non-fermentable biomass fractions)

Three Recent Publications

Recent Research/Outreach/Extension Projects
Research:
• Evaluation of enzyme dosage required for aqueous enzymatic oil extraction
• Purification of a recombinant cellulytic protein from transgenic corn
Outreach:
• Expanding Your Horizons (6th Grade Girls’ Science Conference) Workshop Leader, Texas A&M

Hardware/Equipment Capabilities within Your Research Activities
• Grinding/Homogenization (Silverson high-shear, Waring blender)
• Microtiter plate reader (UV/VIS detection for endpoint, kinetic, and spectral scans)
• Protein analysis methods (SDS-PAGE, Western blot, activity assays)
• Fractionation and protein purification equipment (membrane filtration, chromatography)

Software/Simulation Capabilities within Your Research Activities
SuperPro Designer (Intelligen) Process Simulation
Bill Xiaofeng Zhang

Department: Architectural Engineering and Construction Science  
Email: billz@ksu.edu  
Website: http://www.are-cns.ksu.edu/people/faculty/billzhang  
Phone: 785-532-3583

Education

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<th>Field</th>
<th>Institution</th>
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<tr>
<td>2004</td>
<td>Ph.D.</td>
<td>Civil Engineering</td>
<td>Lehigh University, Bethlehem, PA</td>
</tr>
<tr>
<td>1998</td>
<td>D.Eng.</td>
<td>Structural Engineering</td>
<td>Southeast University, Nanjing, China</td>
</tr>
<tr>
<td>1994</td>
<td>M.Eng.</td>
<td>Structural Engineering</td>
<td>Southeast University, Nanjing, China</td>
</tr>
<tr>
<td>1991</td>
<td>B.Eng.</td>
<td>Industry &amp; Civil Building Engineering</td>
<td>Southeast University, Nanjing China</td>
</tr>
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</table>

Academic/Industrial Experience

- Assistant Professor, Architectural Engineering and Construction Science, Kansas State University, 2011-present
- Assistant Professor, Dept. of Civil & Environmental Engineering, Temple University, 2010-2011
- Project structural engineer, KlingStubbins, Philadelphia, 2006-2010
- Senior structural engineer, Skidmore, Owings & Merrill (SOM), San Francisco, 2005-2006
- Licensed PE and SE in multiple states, LEED accredited professional

Key Words Related to Your Activities

Structural design, steel structures, structural dynamics, and earthquake engineering, earthquake engineering, steel structures, dynamic and vibration control

Short Description of Educational Interests

- Develop and teach fundamental and advanced courses in structural engineering
- Advise undergraduate and graduate students on their projects and research
- Advise student groups related to structural engineering and architectural engineering

Short Description of Research Interests

- Innovative and resilient structural systems and components against multi-hazards
- Research in earthquake engineering, steel structures, dynamic and vibration control

Three Recent Publications


Recent Research/Outreach/Extension Projects

Manuscript reviewer for a few top journals in structural engineering and earthquake engineering, e.g., Journal of Structural Engineering, Earthquake Spectra, etc.

Hardware/Equipment Capabilities within Your Research Activities

None. If possible, would like to acquire field vibration test equipment and data acquisition systems, in order to conduct vibration control research.

Software/Simulation Capabilities within Your Research Activities

- ABAQUS, finite element simulations (including dynamic analysis)
- OpenSees, open source finite element dynamic simulation (academic platform)
- Commercial structural analysis packages, e.g., SAP2000, ETABS, RAM, RISA-3D, etc.