

Chang-Soo Kim

Electrical and Computer Engineering Department, Number of Years on this Faculty: 12

Education

Ph.D. in Sensors Engineering, Kyungpook National University, South Korea, February 1997
M.S. in Semiconductor Engineering, Kyungpook National University, South Korea, February 1991
B.S in Electronic & Electrical Engineering, Kyungpook National University, South Korea, February 1989

Academic Experience

Missouri S&T (S&T), formerly University of Missouri-Rolla (UMR), Associate Professor, Department of Electrical & Computer Engineering (ECE), September 2008 - Present
UMR, Assistant Professor, Department of Electrical & Computer Engineering, July 2002 - August 2008
University of North Carolina at Chapel Hill, NC, Adjunct Postdoctoral Fellow in Division of Cardiology, October 2000 - June 2002
North Carolina State University, NC, Postdoctoral Research Associate in Biomedical Microsensors Laboratory, July 1998 - June 2002

Non-Academic Experience

Sensor Technology Research Center, South Korea, Research Associate in Chemical Sensor Division, March 1992 - Apr 1998, Full time
Industrial Research Ltd., New Zealand, Visiting Scholar, May 1997, Part time

Certifications or Professional Registrations

None

Current Membership in Professional Organizations

Institute of Electrical and Electronics Engineers (IEEE), Senior Member
The Society of Photo-Optical Instrumentation Engineers (SPIE), Member
American Society for Engineering Education (ASEE), Member
Biomedical Engineering Society (BMES), Member
Other: Sigma Xi, Eta Kappa Nu

Honors and Awards

NSF CAREER (young investigator) award, February 2007
School of Engineering Innovative Teaching Award, November 2006
Claypool Medical Award, University of Missouri – Rolla, May 2006

Service Activities

Editorial board member (Associate Editor): IEEE Sensors Journal (2012 - present), Journal of Sensor Science and Technology (2011- present)
Journal reviewer (2002 – present): Journal of Sensor Science and Technology, IEEE Sensors Journal, Lab on a Chip, IEEE Transactions on Mechatronics, Sensor Letters, Biosensors & Bioelectronics, IEEE Transactions on Biomedical Engineering, Diabetes Technology

and Therapeutics, Journal of Micromechanics and Microengineering, Sensors & Actuators B – Chemical

Principal Publications from the Last Five Years

- Zhefei Li, Frank Blum, Massimo Bertino, Chang-Soo Kim, Understanding the response of nanostructured polyaniline gas sensors, Sensors and Actuators, 183, 419-417, 2013.
- Zhan Gao, David B. Henthorn, Chang-Soo Kim, Sensor application of poly(ethylene glycol) diacrylate hydrogels chemically anchored on polymer surface, IEEE Sensors Journal, 13, 1690-1698, 2013.
- Heeho Lee, Jinhyeon Choi, Jungil Ahn, Chang-Soo Kim, Jang-Kyoo Shin, A simple capacitive sensor array based on a metal-insulator-metal structure, Journal of Sensor Science and Technology, 21, 83-39, 2012.
- Nitin Radhakrishnan, Jongwon Park, Chang-Soo Kim, An oxidase-based electrochemical fluidic sensor with high-sensitivity and low-interference by on-chip oxygen manipulation, **Sensors, 12(7), 8955-8965, 2012.**
- Sanghan Park, Satya Achanta, Chang-Soo Kim, Intensity-based oxygen imaging with a display screen and a color camera, Sensors & Actuators B-Chemical, 164, 101-108, 2012.
- Zhefei Li, Frank Blum, Massimo Bertino, Chang-Soo Kim, Amplified response and enhanced selectivity of metal-PANI fiber composite sensors, Sensors & Actuators B-Chemical, 161, 390-395, 2012.
- Jongwon Park, Chang-Soo Kim, A simple oxygen sensor imaging method with white light-emitting diode and color charge-coupled device camera, Sensor Letters, 9, 118-123, 2011.
- Jongwon Park, Wonhak Hong, Chang-Soo Kim, Color intensity method for hydrogel optical sensor array, IEEE Sensors Journal, 10(12), 1855-1861, 2010.
- Raghu Ambekar, Jongwon Park, David B. Henthorn, Chang-Soo Kim, Photopatternable optical membranes for integrated optical oxygen sensors, IEEE Sensors Journal, 9, 169-175, 2009.
- Zhefei Li, Frank Blum, Massimo Bertino, Chang-Soo Kim, Sunil Pillalamarri, One-step fabrication of a polyaniline nanofiber vapor sensor, Sensors & Actuators B-Chemical, 134(1), 31-35, 2008.
- Zhan Gao, David B. Henthorn, Chang-Soo Kim, Enhanced wettability of SU-8 photoresist through a photografting procedure for bioanalytical device applications, Journal of Micromechanics and Microengineering, 18(4), article no. 045013, 2008.

Professional Development Activities

- Conference organization committee member (2004 – present): IEEE Sensors Conference (Jan 2004 – Dec 2009), SPIE International Symposium on Defense, Security and Sensing: Smart Biomedical Physiological Sensor Technologies, SPIE Optics East: Smart Biomedical Physiological Sensor Technologies (Jan 2007 - Oct 2007), IEEE International Symposium on Industrial Electronics (Oct 2004 – May 2005)
- Federal grant review panelist (2002 – present): NSF IDR (Interdisciplinary Research), NSF ECCS (Electrical, Communications, and Cyber Systems division), NSF NER (Nanoscale Exploratory Research), NSF CCLI (Course, Curriculum & Lab Improvement) program, NSF SBIR (Small Business Incubation Research) program, EPA Exploratory nanotechnology for environmental applications