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| Thomas M. Lucas | | | |
| 1104 Poplar Level Plaza #18, Louisville KY, 40217 | | | |
| Phone: 606-571-1081 | | | |
| Email: tmluca01@louisville.edu | | | |
| Summary | * Experienced with working in teams to accomplish objectives * Software proficiency: Matlab, LabVIEW, Silvaco (Athena, Atlus), Coventorware, L-Edit, Rockwell RSLogix 500/5000, Microsoft Office Products * Areas of focus in graduate career include:   + Microelectromechanical Systems (MEMS) Design   + Microfluidics Applications * EIT Certification   + **Passed** the Fundamentals of Engineering (FE) Exam on 04/17/2011   **Current Status**: Ph.D. Candidate at the University of Louisville in Electrical Engineering | | |
| Education | M.Eng. Degree with Specialization in Electrical Engineering  University of Louisville, Speed School of Engineering, Louisville, KY  Graduated via Technical Paper Option, G.P.A. 3.83/4.0 | | August 2010 |
|  | B.S. Degree in Electrical Engineering University of Louisville, Speed School of Engineering, Louisville, KY  Good Standing and Dean’s List, G.P.A. 3.1/4.0 | | August 2009 |
|  | High School Diploma Russell High School, Russell, KY | | May 2005 |
| Research Interest | | | |
|  | Research interests include microfluidics and MEMS design for biological and environmental sensing. Past and present work includes microfluidics, specifically MEMS interaction with microbubbles, sensor development for monitoring and analysis of environmental conditions, and out-of-plane MEMS fabrication and characterization for biomedical and environmental sensing applications. |  | |
| Publications | | | |
|  | **Lucas, T. M**., Harnett, C. K., “Control of electrolysis-generated microbubbles for sensor surface passivation”, Appl. Phys. Lett. **98** (2011) | In Press | |
|  | Goessling, B. A., **Lucas, T. M.**, Aebersold, J. W., Moiseeva E. V., Harnett, C. K., “Bistable Out-of-Plane Stress Mismatched Thermally Actuated Bilayer Devices with Large Deflection”, J. Micromech. Microeng. **21** (2011) | In Press | |
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| Conference Presentations | | |
|  | **Thomas Lucas**, Evgeniya Moiseeva, Cindy Harnett, “Thermal Properties of Infrared Absorbent Gold Nanoparticle Coatings”, The 7th Int. Conference of Microtechnologies in Medicine and Biology, Marina Del Ray CA, April 2013 | Presentation  and Poster |
|  | **Thomas Lucas**, Evgeniya Moiseeva, Guandong Zhang, Andre Gobin, Cindy Harnett, 'Design and Simulation of Optically Actuated Bistable MEMS", 8th KIEC 2012 Conference, Louisville KY, June 2012 | Poster |
|  | Evgeniya Moiseeva, **Thomas Lucas**, Guandong Zhang, Andre Gobin, Cindy Harnett, "Development of a MEMS Bistable Actuator Incorporated with Nanoparticles", 17th Annual KY EPSCoR Conference, Lexington KY, May 2012 | Poster |
|  | Evgeniya Moiseeva, **Thomas Lucas**, Guandong Zhang, Andre Gobin, Cindy Harnett, "Light-Powered Nanoparticle-MEMS Hybrid", American Physical Society March Meeting, Boston MA, March 2012 | Presentation |
|  | **Thomas Lucas**, Evgeniya Moiseeva, Cindy Harnett, 'Design and Simulation of Optically Actuated Bistable MEMS", American Physical Society March Meeting, Boston MA, March 2012 | Poster |
|  | **Lucas, T. M**., Harnett, C. K., “A Low-Cost Conductivity Sensor with Data Logging”, 16th Annual KY EPSCoR Conference, Louisville KY, May 2011 | Poster |
|  | Harnett, C. K., **Lucas, T. M.**, Aebersold, J. W, "Interaction of thin-film microcoils with the air/water interface and applications in microfluidics", Presentation at American Physical Society Meeting, Portland OR, March 17, 2010 | Presentation |