

Yogesh B. Gianchandani, Senior Member, IEEE,
Professor, EECS and ME Departments
Department of Electrical Engineering and Computer Science
UNIVERSITY OF MICHIGAN
Role in the Center: Sensors Team Leader, Co-Investigator
Areas of Research: Micromachined Sensors, Microfabrication and Micropackaging Technologies

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A. PROFESSIONAL PREPARATION

University of Michigan,	Electrical Engineering, Ph.D., 1994
University of California, Los Angeles,	Electrical Engineering, M.S., 1986
University of California, Irvine,	Electrical Engineering, B.S., 1984

B. APPOINTMENTS

Director, Master of Engineering Professional Deg. Program in Integrated Microsystems, College of Engineering, University of Michigan	2002 - present
Professor, EECS Department, University of Michigan	2006-present
Associate Professor, EECS Department, University of Michigan	2002-2006
Assistant Professor, EECS Department, University of Michigan	1997-2001
Co-founder and interim CEO, PicoCal, Inc.	2003-2005

C. SYNERGISTIC ACTIVITIES

Prof. Gianchandani's research interests include all aspects of design, fabrication, and packaging of micromachined sensors and actuators and their interface circuits. In recent years he has concentrated more wireless sensors for homeland security and biomedical applications. At the University of Michigan, he serves as the leader of the Advanced Materials, Processing, and Packaging research thrust in the NSF Engineering Research Center for Wireless Integrated Microsystems. He is a recipient of the NSF Career Award and the University of Michigan EECS Department Outstanding Achievement Award. Prof. Gianchandani serves on the editorial boards of IOP Journal of Micromechanics and Microengineering and Journal of Semiconductor Technology and Science, and served as a section editor for Sensors and Actuators for 5 years. He also served on the steering and technical program committees for the IEEE/ASME International Conference on Micro Electro Mechanical Systems (MEMS), and served as a General Co-Chair for this meeting in 2002.

D. RELATED PUBLICATIONS

1. C. Eun, T.-C. Fung, B. Mitra, Y.B. Gianchandani, "A Magnetically Enhanced 3-Electrode Wireless Micro-Geiger Counter," IEEE/ASME International Conference on Micro Electro Mechanical Systems (MEMS 07), Kobe, Japan, Jan. '07, accepted for publication
2. C.E. Eun, R. Gharpurey, Y.B. Gianchandani, "Controlling Ultra Wide Band Transmissions from a Wireless Micromachined Geiger Counter," IEEE/ASME International Conference on Micro Electro Mechanical Systems (MEMS 06), Istanbul, Turkey, Jan. '06, pp. 570-3
3. C.G. Wilson, C.K. Eun, and Y.B. Gianchandani, "D-MicroGeiger: A Microfabricated Beta-Particle Detector with Dual Cavities for Energy Spectroscopy," IEEE/ASME International Conference on Micro Electro Mechanical Systems (MEMS 05), Miami, FL, Jan. '05, pp. 622-5
4. B. Mitra, B. Levey, T.-C. Fung, Y.B. Gianchandani, "A Handheld Microdischarge Spectroscopy System for High-Speed Chemical Analysis of Gaseous and Liquid Samples," IEEE/ASME International Conference on Micro Electro Mechanical Systems (MEMS 06), Istanbul, Turkey, Jan. '06
5. S.A. Wright, Y.B. Gianchandani, "A Harsh Environment, Multi-Plasma Microsystem With Pressure Sensor, Gas Purifier, and Chemical Detector," IEEE/ASME International Conference on Micro Electro Mechanical Systems (MEMS 07), Kobe, Japan, Jan. '07, accepted for publication

6. K. Udeshi, M.T. Richardson, J.-J. Hung, L. Que, G. Rebeiz, Y.B. Gianchandani, "A Dual-EDM Reverse Damascene Process for RF Switches and Other Bulk Metal Devices," ASME Annual International Mechanical Engineering Congress and Exposition, Orlando, FL, Nov. 5-11, 2005
7. K. Udeshi and Y.B. Gianchandani, "A Transistorless Micromechanical High Voltage Generator Using a DC-Powered Self-Oscillating Relay," Solid-State Sensors and Actuators Workshop (Hilton Head '04), Hilton Head Island, South Carolina, June '04, pp. 262-265
8. T. Li and Y.B. Gianchandani, "A Micromachining Process for Die-Scale Pattern Transfer in Ceramics and its Application to Bulk Piezoelectric Actuators," IEEE/ASME Journal of Microelectromechanical Systems, 15(3), pp. 605-612, June 2006
9. K. Takahata and Y.B. Gianchandani, "Batch Mode Micro-Electro-Discharge Machining," IEEE/ASME Journal of Microelectromechanical Systems, 11(2), pp. 102-110, April 2002
10. K. Takahata and Y.B. Gianchandani, K.D. Wise, "Micromachined Antenna Stents and Cuffs for Monitoring Intraluminal Pressure and Flow," IEEE/ASME J. Microelectromechanical Systems, accepted for publication

E. RELATED PATENTS

1. Y. Gianchandani, C. Wilson, "Micromachined Geiger Counter," patent pending
2. Y. Gianchandani, R. Gharpurey, C. Eun, "Wireless Sensing and Communication Utilizing RF Transmission from Microdischarges," patent pending
3. Y. Gianchandani, K. Takahata, "Micro-Electro Discharge Machining Method and Apparatus" Disclosure 2001, Pat. No. US 6,624,377 B2 issued September 23, 2003
4. Y. Gianchandani, C. Wilson, L. Que, B. Mitra, P. Selvaganapathy, "A Battery-Operated, Wavelength-Tunable, Optical Source for Fluorescent Detection of Biochemicals," patent pending
5. Y. Gianchandani, K. Takahata, K.D. Wise, A. DeHennis, "Antenna Stent," patent pending