# **Committee on Energy and Commerce** U.S. House of Representatives Witness Disclosure Requirement - "Truth in Testimony"

Required by House Rule XI, Clause 2(g)(5)

_					
1.	Your Name: Mark Bachman, Ph.D.				
2.	Your Title: CTO, Integra Devices, LLC				
3.	The Entity(ies) You are Representing:				
	University of California, Irvine; Integra Devices, L	LC			
	Are you testifying on behalf of the Federal, or a State or local	Yes	No		
	government entity? University of California	X			
5.	Please list any Federal grants or contracts, or contracts or payments originating with a foreign government, that you or the entity(ies) you represent have received on or after January 1, 2015. Only grants, contracts, or payments related to the subject matter of the hearing must be listed.				
	June 2017, SBIR, National Science Foundation, \$225, "Dynamic Energy Harvesting Technology Embedded in P Circuits" (awarded to Integra Devices LLC)				
6.	Please attach your curriculum vitae to your completed disclosure form.				

Date: June 7, 2017

Signature:\_\_



Mark Bachman, Ph.D
Chief Technical Officer

Integra Devices LLC

Chief IoT Evangelist
California Institute for Telecommunications and
Information Technology, UC Irvine

LinkedIn: www.linkedin.com/in/markbachmo

Prof. Bachman is co-founder and currently serves as Chief Technical Officer of an IoT startup (Integra Devices, LLC). He is also serves as IoT Evangelist and Technologist for the California Institute for Telecommunications and Information Technology (Calit2) at UC Irvine (non-salary position). He is also part-time faculty in the department of Electrical Engineering and Computer Science, where he teaches a popular course in micro-engineering and microsensors each year. Dr. Bachman is expert in smart microsensor network systems for IoT applications, and has been working in this area for 20 years. He created the first course in microsensors at UC Irvine which he has taught for over 12 years. He has been the Principal Investigator, co-PI and project leader for many high value projects at UC Irvine, including major projects for NSF, DARPA, Veterans Administration, and National Institutes for Health. Dr. Bachman has published over 85 peer reviewed articles, has 12 patents issued, and has given scores of invited presentations around the world. Dr. Bachman earned a B.S. in Physics and a Ph.D. in Experimental Physics from University of Texas, Austin.

## **Education and Professional Training**

Institution	Major / Concentration	Degree	Year
University of Texas, Austin	Physics	B.S.	1985
University of Texas, Austin	Experimental Subatomic Physics	Ph.D.	1994
University of California, Irvine	Experimental Particle Physics	Postdoc	1998
University of California, Irvine	Electrical Engineering MEMS	Postdoc	1999

### **Professional history**

Years	Description
2014-present	Chief Technical Officer, Integra Devices
2013-present	Director of eHealth, IoT Evangelist, Calit2-Irvine
2009-2014	Assistant Professor, Tenure track, Department of Electrical Engineering, UC Irvine
2009-2014	Affiliate Professor, Department of Biomedical Engineering, UC Irvine
2005-2009	Associate Professor, Adjunct, Department of Electrical Engineering, UC Irvine
1999-2005	Assistant Professor, Adjunct, Department of Electrical Engineering, UC Irvine

#### **Publications**

Dr. Bachman has published over published over 85 peer reviewed papers in science and technology journals, been issued over 12 patents, and give scores invited talks each year, domestic and international.

# Listing of publications (10 out of 85)

Bachman M, Li GP. 2013 "Methods of manufacturing microdevices in laminates, lead frames, packages, and printed circuit boards." US Patent 8,877,074.

Bachman M, Li GP. 2012 "Integrated MEMS in package." Circuit World.

Saedinia S, Nastiuk KL, Krolewski JJ, Li GP, Bachman M. 2014 "Laminated microfluidic system for small sample protein analysis." Biomicrofluidics 8 (1), 014107.

Wang M, Zhang Y, Li GP, Bachman M. 2013. "Frequency Multiplexed MEMS Actuators and Switches." IEEE Electron Device Letters 34 (1), 132-134.

Xu T, Bachman M, Zeng FG, Li GP. 2004 "Polymeric micro-cantilever array for auditory front-end processing." Sensors and Actuators A: Physical 114 (2), 176-182.

Merlo M, Snyder RL, Middlebrows JC and Bachman M. 2011 "Microelectrode arrays fabricated using a novel hybrid microfabrication method", Biomedical Microdevices.

Chua TE, Merlo M, and Bachman M. 2011 "System of Systems for Sensor and Actuator Networks." HCI (Human Computer Interface) International Conference, Communications in Computer and Information Science, 2011, Volume 174, Part I, 13-17, DOI: 10.1007/978-3-642-22095-1\_3.

Bachman M, Li GP. 2005 "Environmentally sensitive reconfigurable antenna" US 7570169 B2.

Bachman M, Zhang Y, McLaughlin S. 2013 "MEMS sensor enabled RFID system and method for operating the same" US 8618914 B2.

Klopfer M, Banyard D, Li GP, Widgerow A, Bachman M. 2015 "A fluid collection system for dermal wounds in clinical investigations." Biomicrofluidics 10 (2), 024113.