

### BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors in the order listed on Form Page 2.  
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME <b>Gregory Abowd</b>	POSITION TITLE <b>Regent's and Distinguished Professor</b>		
eRA COMMONS USER NAME (credential, e.g., agency login) <b>GREGORYABOWD</b>			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	MM/YY	FIELD OF STUDY
University of Notre Dame	B.S.	1986	Honors Mathematics
University of Oxford, UK	M.Sc.	1987	Computation
University of Oxford, UK	D.Phil.	1991	Computation

Please refer to the application instructions in order to complete sections A, B, C, and D of the Biographical Sketch.

#### A. Personal Statement

My expertise is in using novel mobile and embedded technologies to develop human-centered applications in real environments such as homes, schools, and healthcare settings. Since 1998, I have been interested in applications of information technologies to a variety of health related challenges including those linked to aging, chronic diseases, and autism. I teach courses on interactive system development and mobile/ubiquitous computing applications development. I also created a unique experimental lab at Georgia Tech, the Aware Home, which is ideal for developing and prototyping different kinds of applications prior to deployment in real homes. I have commercialized several of my research efforts relating to autism and home sensing. I also helped in establishing the Child Study Lab and helped to found the Center for Behavior Imaging at Georgia Tech that is funded by the National Science Foundation.

#### B. Positions and Honors

##### Positions and Employment

1989-1992	Research Associate, University of York, UK
1992-1994	Postdoctoral Research Associate, School of Computer Science and Software Engineering Institute, Carnegie Mellon University
1994-present	Assistant Professor; College of Computing, Georgia Institute of Technology. Associate Prof with tenure in 2000. Full Professor and named Distinguished Professor, 2007. Promoted to Regents' Professor in 2012.
2000-2003, 2005-2008	Director, Aware Home Research Initiative, Georgia Institute of Technology
2004-present	Chief Research Officer, Behavior Imaging Solutions, Inc. Unsalaries equity position.
2008-2010	Director, Health Systems Institute, Georgia Tech/Emory University. Named W. George Professor of Health Systems.
2008-2010	Technical co-founder, Zensi. Acquired by Belkin in Jan. 2010
2013-present	Co-founder LSQ, LLC

##### Other Experience and Professional Memberships

Founding Editor in Chief, *Foundations and Trends in HCI*, 2005-2007  
 Associate Editor in Chief, *IEEE Pervasive Computing*, 2001-2005

Associate Editor, *Human-Computer Interaction* journal, 2001-2012.  
Associate Editor, *ACM Transactions on Computer-Human Interaction* journal, 2010-2011  
Conference Chair, International Conference on Ubiquitous Computing (UbiComp) 2001.  
Program co-Chair, ACM Symposium on User Interface Software and Technology, 2003  
Program co-Chair, UbiComp 2007  
Expert Testimony on Technology for an Aging Population to U.S. Senate Special Committee on Aging, May, 2003.

### **Honors**

Rhodes Scholar, Marshall Scholar (declined), NSF Graduate Fellowship (declined), 1986  
GT College of Computing William A. "Gus" Baird Outstanding Faculty Teaching Award. 1997  
Best paper nominations and awards: 1993 SIGSOFT Foundations of Software Engineering; 1998 International Conference on Intelligent User Interfaces; 2005 Symposium On Usable Privacy and Security (SOUPS); 2006 ACM SIGCHI Conference on Human Factors and Computing (CHI 2006); 2006 ACM SICH Conference on Computer Supported Cooperative Work (nomination); 2006 Pervasive Computing Conference (nomination); 2007 UbiComp conference; 2008 Pervasive Computing conference; 2010 UbiComp conference (nomination)  
Sigma Xi, Georgia Tech Chapter Young Faculty Research Award, 1997  
Georgia Tech, Outstanding Use of Innovative Educational Technology Award, 1998.  
Georgia Tech, College of Computing, Outstanding Junior Faculty Research Award, 1999  
Schlumberger, Foundation Technical Fellow, 2000  
IBM Research Faculty Fellowship, 2000  
Top Technology Idea of the year from *New York Times Magazine*. Awarded to Capture Resistant Environment, December 2005.  
Georgia Tech, College of Computing, Outstanding Senior Faculty Research Award, 2005  
ACM SIGCHI 2007 Social Impact Award for applications of technology for autism.  
Georgia Tech 2007 Don Bratcher Human Relations Award.  
Georgia Tech Outstanding Doctoral Thesis Advisor, 2008  
Association for Computing Machinery SIGCHI CHI Academy election, 2008  
Association for Computing Machinery Fellow, 2008  
Association for Computing Machinery Eugene Lawler Humanitarian Award, 2009

### **C. Selected Peer-reviewed Publications (Selected from >200 peer-reviewed publications)**

#### **Most relevant to the current application**

1. Tracy Westeyn, Thad Starner and Gregory D. Abowd. Monitoring children's developmental progress using augmented toys and activity recognition. *Personal and Ubiquitous Computing*, special issue on technology and autism. 2011.
2. Nazneen, Mario Romero, Yi Han, Agata Rozga, Nathan Call, Addie Finlay, Gregory D. Abowd and Rosa Arriaga. Supporting parents for in-home capture of problem behaviors of children with developmental disabilities. *Personal and Ubiquitous Computing*, special issue on technology and autism. 2011.
3. James M Rehg, Gregory D. Abowd, Agata Rozga, Mario Romero, Mark A. Clements, Stan Sclaroff, Irfan Essa, Opal Ousley, Yin Li, Chanh Kim, Hrishikesh Rao, Jonathan Kim, Liliana Lo Presti, Jianming Zhang, Denis Lantsman, Jonathan Bidwell, Zhefan Ye, "Decoding Children's Social Behavior," *Computer Vision and Pattern Recognition (CVPR), 2013 IEEE Conference on*, vol., no., pp.3414,3421, 23-28 June 2013. doi: 10.1109/CVPR.2013.438
4. Edison Thomaz, Aman Parnami, Jonathan Bidwell, Irfan Essa and Gregory D. Abowd. Technological Approaches For Addressing Privacy Concerns When Recognizing Eating Behaviors With Wearable Cameras. *2013 ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp '13)*, pp. 739-748, Sep 8-12, 2013, Zurich, Switzerland.



The goal of this project is to develop and test a mobile phone video recording solution that will support clinical evaluation of child behaviors in homes and schools.

Role: Consultant

IIS-1029679

Rehg (PI)

09/01/10 – 8/31/15

Computational Behavioral Science: Modeling, Analysis, and Visualization of Social and Communicative Behavior

The goal of this project is to investigate computational methods for sensing, modeling, analyzing, and visualizing social and communicative behaviors in children and adults using multi-modal sensor data and machine learning method and develop technology for automating the behavioral measures associated with standard protocols for the diagnosis and treatment of behavioral disorders, with a focus on autism.

Role: Co-Investigator

IIP-1331439

Abowd (PI)

05/01/13 – 10/31/13

NSF I-CORPS: the Lock Screen Query (LSQ): Using the unlock interactions on mobile devices to gather relevant information

The goal of this project is to develop a viable business model for an innovative technology involving the acquisition of answers to questions from mobile device owners.

Role: PI

Intel Science and Technology Center on Pervasive Computing Foundation

09/01/11 – 08/31/16

The goal of this project is to collaborate with researchers at Intel, the University of Washington, and Cornell to develop and deploy sensing solutions in homes and for mobile/wearable scenarios to track human activities by exploring both the automation of activity recognition as well as the protection of privacy concerns.

Role: Thrust Leader

The Center for Discovery Foundation

Visualizing sensed and recorded data in a special education setting

The goal of this project is to develop automated and manual techniques for collecting academic and behavioral data for the student population served at the Center for Discovery and to provide solutions to visualize this data.

Role: Academic Supervisor & Consultant

### **Completed Research Support (during the last three years)**