

# **2013 IEEE International Symposium on Technology and Society**

**(ISTAS 2013)**

**Toronto, Ontario, Canada  
27-29 June 2013**



**IEEE Catalog Number: CFP13SIT-POD  
ISBN: 978-1-4799-0930-8**

## Day 1 — June 27, 2013 (Thursday)

Session	Engineering — Infrastructure
Date/Time	June 27, 2013 (Thursday) / 09:35 – 11:00 hrs
Venue	Hart House, historic center of culture at The University of Toronto
Chair(s)	Katina Michael

097 Cyborg Anthropology and the Future of the Interface  
*Amber Case*

011 Veillance and Reciprocal Transparency: Surveillance Versus Sousveillance, AR Glass, Lifelogging, and Wearable Computing  
*Steve Mann*

079 Early in the 21st Century, Intelligence Will Underlie Everything of Value  
*Ray Kurzweil*

Session	Engineering — Infrastructure
Date/Time	June 27, 2013 (Thursday) / 11:35 – 12:30 hrs
Venue	Hart House, historic center of culture at The University of Toronto
Chair(s)	Jeremy Pitt

081 The Society of Mind  
*Marvin Minski*

099 The Society of Intelligent Veillance  
*Marvin Minsky, Ray Kurzweil and Steve Mann*

Session	Engineering — Infrastructure
Date/Time	June 27, 2013 (Thursday) / 13:30 – 15:00 hrs
Venue	Hart House, historic center of culture at The University of Toronto
Chair(s)	Simon Randall

003 Lifelog Semantics from Wearable Computing  
*Cathal Gurrin*

068 The Design of a Lifelogging Camera  
*Martin Kallstrom*

004 Wearable Computing and Security Implications  
*Monique Morrow*

## Technical Program

Session	Engineering — Infrastructure
Date/Time	June 27, 2013 (Thursday) / 15:35 – 17:05 hrs
Venue	Hart House, historic center of culture at The University of Toronto
Chair(s)	Linda Theron

**Thad** Mobile Music Touch: Passive Haptic Learning and Rehabilitation  
*Thad Starner*

**061** Bio-Inspired Solutions for Intelligent Android Perception and Control  
*Emil M. Petriu*

**059** Connecting Memory Extensions to Internal Memory  
*Jean-Gabriel Ganascia*

## Day 2 — June 28, 2013 (Friday)

Session	Assistive/Usability
Date/Time	June 28, 2013 (Friday) / 09:00 – 10:30 hrs
Venue	Room One
Chair(s)	Douglas Baldwin

074 The Need for User Centered Wearable Devices for the Blind  
*Daniel Kish*

065 Privacy by Design and Wearable Computing  
*Ann Cavoukain*

085 Police Operations Management Systems: from In-Car Video to Body Worn Video Recorders  
*Blair Falkinson*

Session	AR	Parallel
Date/Time	June 28, 2013 (Friday) / 11:00 – 12:30 hrs	
Venue	Room One	
Chair(s)	Stephen Lake	

Epson  
*Anna Jen*

Apx  
*Brian Ballard*

Meta  
*Blair Falkinson*

Session	Lifelogging	Parallel
Date/Time	June 28, 2013 (Friday) / 11:00 – 12:30 hrs	
Venue	Room Two	
Chair(s)	Gary Beirne	

015 Investigating Older and Younger Peoples' Motivations for Lifelogging with Wearable Cameras  
*Niamh Caprani, Noel O'Conner and Cathal Gurrin*

095 Using Adaptive Architecture to Probe Attitudes Towards Ubiquitous Monitoring  
*Stuart Moran, Nils Jaeger, Holger Schmadelbach and Kevin Glover*

044 Measuring the Effect of Sousveillance in Increasing Socially Desirable Behaviour  
*Mir Adnan Ali, Jonathan Polak Nachumow, Jocelyn A. Srigley, Steve Mann, Colin D. Furness and Michael Gardam*

## Technical Program

<b>Session</b>	<b>Design</b>	<b>Parallel</b>
<b>Date/Time</b>	<b>June 28, 2013 (Friday) / 11:00 – 12:30 hrs</b>	
<b>Venue</b>	<b>Room Three</b>	
<b>Chair(s)</b>	<b>Peter Bugaj</b>	

- 032 The Electronic Textile Interface Workshop: Facilitating Interdisciplinary Collaboration  
*Clint Zeagler, Scott Pobine, Scott Gilliland, Stephen Audy, Halley Profita and Thad Starner*
- 053 Sociocultural Conventions, Sensitiveness and Learning in the (So-Called) Smart World  
*Teemu Leinonen*
- 051 Praxistemology: Early Childhood Education, Engineering Education in a University, and Universal Concepts for People of All Ages and Abilities  
*Steve Mann and Marko Hrelja*

<b>Session</b>	<b>UbiComp</b>	<b>Parallel</b>
<b>Date/Time</b>	<b>June 28, 2013 (Friday) / 11:00 – 12:30 hrs</b>	
<b>Venue</b>	<b>Room Four</b>	
<b>Chair(s)</b>	<b>Alexander Hayes</b>	

- 012 Constructing Age and Technology as Augmentation, Not Degradation: Exploring What the Aged Themselves Think They Need, Not What is Decided for Them  
*Marcus Wigan*
- 075 Brain Computer Interfaces: Ethical and Policy Considerations  
*Ellen M. McGee*
- 020 SenseSeer - Mobile-Cloud-Based Lifelogging framework  
*Rami Albatal, Cathal Gurrin, Jiang Zhou, Yang Yang, Na Li and Denise Carthy*

<b>Session</b>	<b>Apps</b>	<b>Parallel</b>
<b>Date/Time</b>	<b>June 28, 2013 (Friday) / 13:30 – 15:00 hrs</b>	
<b>Venue</b>	<b>Room One</b>	
<b>Chair(s)</b>	<b>Günter Alce</b>	

- 062 The 3 Laws of Augmented Reality Design: How to Design Augmented Reality Application that Add Value and Delight Users  
*Ori Inbar*
- 092 Augmented Reality and the Emergence of 'Point-of-Eye' in Visual Culture  
*Helen Papagiannis*
- 027 Training the Next Generation of AR Developers  
*Kevin Kee and Tim Compeau*

<b>Session</b>	<b>Design</b>	<b>Parallel</b>
<b>Date/Time</b>	<b>June 28, 2013 (Friday) / 13:30 – 15:00 hrs</b>	
<b>Venue</b>	<b>Room Two</b>	
<b>Chair(s)</b>	<b>Chris Dancy</b>	

- 088 Scenarios for Peer-to-Peer Learning in Construction with Emerging Forms of Collaborative Computing  
*Teemu Leinonen, Jukka Purma, Alexander Hayes and Ngua Kiarri*

## Technical Program

064 Electronic Textile Interfaces  
*Clint Zeagler*

050 Audio-Only Augmented Reality System for Social Interaction  
*Tom Gurion and Nori Jacoby*

Session	HDR	Parallel
Date/Time	June 28, 2013 (Friday) / 13:30 – 15:00 hrs	
Venue	Room Three	
Chair(s)	Bradley Kjell	

033 High Dynamic Range Tone Mapping Based On Per-Pixel Exposure Mapping  
*Jason Huang, Valmiki Rampersad and Steve Mann*

043 Comparametric HDR (High Dynamic Range) Imaging for Digital Eye Glass, Wearable Cameras, and Sousveillance  
*Mir Adnan Ali, Tao Ai, Akshay Gill, Jose Emilio, Kalin Ovtcharov and Steve Mann*

029 Veillances: Protocols & Network Surveillance  
*Nancy Paterson*

Session	Social Networking	Parallel
Date/Time	June 28, 2013 (Friday) / 13:30 – 15:00 hrs	
Venue	Room Four	
Chair(s)	Stephanie Cork	

019 Peer-Produced Privacy Protection: A Common-Pool Approach  
*Vaibhav Garg, Sameer Patil, Apu Kapadia and Jean Camp*

018 Social Media in Conflict: A Comparison of Military and Social Movement Technocultures in Egypt, Spain and the United States  
*Chris Grey and Angel Gordo-Lopez*

084 Google Glass: By the Numbers  
*Pete Wassell*

Session	Build	Parallel
Date/Time	June 28, 2013 (Friday) / 15:30 – 17:30 hrs	
Venue	Room One	
Chair(s)	Gene Becker	

080 Moving Surveillance Techniques to Sousveillance: Towards Equiveillance Using Wearable Computing  
*Corey Manders*

046 Augmented Reality System Based on 3D Camera Selfgesture Sensing  
*Raymond Lo, Alexander Chen, Jason Huang, Valmiki Rampersad, Han Wu and Steve Mann*

052 The Future is Un-Real  
*Rob Manson*

087 Interaxon: Taking BCI to the Masses  
*Ariel Garten*

## Technical Program

<b>Session</b>	<b>mHealth</b>	<b>Parallel</b>
<b>Date/Time</b>	<b>June 28, 2013 (Friday) / 15:30 – 17:30 hrs</b>	
<b>Venue</b>	<b>Room Two</b>	
<b>Chair(s)</b>	<b>Joseph Herkert</b>	

**070** Healthcare & Public Health: Perspectives on Wearable Computing, Augmented Reality and the Veillances  
*Luis Kum*

**071** Ambient Assisted Living Technologies and Their Social Implications: A Perspective From Europe  
*José L. Monteagudo*

**072** Wireless Platforms for the Hemodynamic Monitoring of the Elderly Patient  
*Ricardo L. Armentano*

**038** Identity Awareness of Research Data in Veillance & Social Computing  
*Alexander Hayes, Steve Mann, Amir Aryani, Susannah Sabine, Leigh Blackall, Pia Waugh and Stephan Ridgway*

<b>Session</b>	<b>Methodology</b>	<b>Parallel</b>
<b>Date/Time</b>	<b>June 28, 2013 (Friday) / 15:30 – 17:30 hrs</b>	
<b>Venue</b>	<b>Room Three</b>	
<b>Chair(s)</b>	<b>Terri Bookman</b>	

**049** DIY & Maktivism: Tinkering Towards Better Worlds  
*Megan Boler, Chris Hables Gray and Steven Mann*

**040** DIY Prosthetics Workshops: ‘Critical Making’ for Public Understanding of Human Augmentation  
*Isaac Record, Matt Ratto, Amy Ratelle, Adriana Ieraci and Nina Czegledy*

**096** Millennials’ Increasing Openness to Microchip Implants in Humans: A Confluence of Factors  
*Christine Perakslis*

**022** Visuo-Haptic Learning of the Cochlea: Using Physical Optical Glyphs with Augmented Reality  
*Andrea Zariwny*

<b>Session</b>	<b>Open Data</b>	<b>Parallel</b>
<b>Date/Time</b>	<b>June 28, 2013 (Friday) / 15:30 – 17:30 hrs</b>	
<b>Venue</b>	<b>Room Four</b>	
<b>Chair(s)</b>	<b>Alexander Hayes</b>	

**094** Ubiquitous Computing for Teenagers: A New Perspective on Child-Computer Interaction  
*Amandeep Dhir and Mohammed Al-Kahtani*

**093** A Privacy Framework for Secondary Use of Medical Data  
*Jennifer Heath*

**090** The Democratic Singularity  
*Pia Waugh*

**054** An Ethical Framework for Ubiquitous Learning  
*Leigh Blackall*

## Day 3 — June 29, 2013 (Saturday)

Session	Transparency	Parallel
Date/Time	June 29, 2013 (Saturday) / 09:00 – 10:30 hrs	
Venue	Room One	
Chair(s)	Chris Hables Gray	

098 Light: The Essence of Civilization  
*David Brin*

055 “You are Your Data”: Digital Self-Tracking and Algorithmic Subjectivity  
*Natasha Schüll*

jeff If Technology is a Dissipative Structure, Bring It on Deserves a Closer Look  
*Jeff Robbins*

Session	Social Implications	Parallel
Date/Time	June 29, 2013 (Saturday) / 11:00 – 12:30 hrs	
Venue	Room One	
Chair(s)	Janet Rochester	

057 Formal Models of Social Processes: Towards a New Science of Institutions  
*Jeremy Pitt and Andrzej Nowak*

002 Ready to Wear (or Not): Examining the Rhetorical Impact of Proposed Wearable Devices  
*Isabel Pedersen*

Session	Ambient Intelligence	Parallel
Date/Time	June 29, 2013 (Saturday) / 11:00 – 12:30 hrs	
Venue	Room Two	
Chair(s)	Jon Dougal	

105 Studying the World by Mining Photo-Sharing Websites  
*David Crandall*

102 PlaceRaider: Virtual Theft in Physical Spaces with Smartphones  
*Robert Templeman, Zahid Rahman, David Crandall and Apu Kapadia*

083 The Future of Outdoor Media Systems  
*Larry Schirmer*



## Technical Program

<b>Session</b>	<b>Sousveillance</b>	<b>Parallel</b>
<b>Date/Time</b>	<b>June 29, 2013 (Saturday) / 11:00 – 12:30 hrs</b>	
<b>Venue</b>	<b>Room Three</b>	
<b>Chair(s)</b>	<b>Niahm Caprani</b>	

- 039** The Inevitability of the Transition From a Surveillance-Society to a Veillance-Society: Moral and Economic Grounding for Sousveillance  
*Mir Adnan Ali and Steve Mann*
- 104** Art and Science as Co-Conspirators in the Service and Disservice of Humanity  
*Ryan Janzen*
- 036** Three Dimensional HDR (High Dynamic Range) Veillance for 3D Cameras Such as Kinect Sensors  
*Raymond Lo, Jason Huang, Valmiki Rampersad and Steve Mann*

<b>Session</b>	<b>Health</b>	<b>Parallel</b>
<b>Date/Time</b>	<b>June 29, 2013 (Saturday) / 13:30 – 15:00 hrs</b>	
<b>Venue</b>	<b>Room One</b>	
<b>Chair(s)</b>	<b>Cara Morris</b>	

- 073** Will Wearable Computers and Augmented Reality Enable Us to Lead Healthy and Happy Lives?  
*Alex R. Jadad*
- 060** Wearable Monitors on Babies: Big Data Saving Little People  
*Carolyn McGregor*
- 013** Law and Policy in an Era of Cyborg-Assisted-Life  
*Joseph Carvalko*

<b>Session</b>	<b>Sensors</b>	<b>Parallel</b>
<b>Date/Time</b>	<b>June 29, 2013 (Saturday) / 13:30 – 15:00 hrs</b>	
<b>Venue</b>	<b>Room Two</b>	
<b>Chair(s)</b>	<b>Andrew Everitt</b>	

- 008** Ambient Intelligence & Information Interactions: Theorizing Autonomies and Awareness for 21st Century Society - A Technology-People Balance  
*Helen Patricia McKenna, Marilyn P. Arnone, Michelle L. Kaarst-Brown, Lee W. McKnight and Sarah A. Chauncey*
- 030** Putting Locative Technology In Its Sense of Place  
*Glen Farrelly*
- 024** Investigating the Factors Influencing Information Security Compliance in a Financial Services Firm  
*Rutendo Mushore and Michael Kyobe*

## Technical Program

<b>Session</b>	<b>Surveillance</b>	<b>Parallel</b>
<b>Date/Time</b>	<b>June 29, 2013 (Saturday) / 13:30 – 15:00 hrs</b>	
<b>Venue</b>	<b>Room Three</b>	
<b>Chair(s)</b>	<b>Adib Ghu</b>	

- 037** Watching Me, Watching You. (Process Surveillance and Agency in the Workplace)  
*Sally A. Applin and Michael D. Fischer*
- 034** “I’ll be Watching You”: Awareness, Consent, Compliance and Accountability in Video Surveillance  
*Brenda McPhail, Andrew Clement, Joseph Ferenbok and Arndis Johnson*
- 103** User Expectations of Privacy in Self-Generated Mobile Health Data  
*Heather Patterson*

<b>Session</b>	<b>Law</b>	<b>Parallel</b>
<b>Date/Time</b>	<b>June 29, 2013 (Saturday) / 15:30 – 17:30 hrs</b>	
<b>Venue</b>	<b>Room One</b>	
<b>Chair(s)</b>	<b>Pete Wassell</b>	

- 089** Governmental and Private Video Surveillance  
*Susan Herman*
- 086** Waiting for Public Outrage  
*Avner Levin*
- 026** IXmaps – Tracking Your Personal Data Through the NSA’s Warrantless Wiretapping Sites  
*Andrew Clement*
- 063** Autonomous Systems for Smarties  
*Nikola Serbedzija*

<b>Session</b>	<b>Drones</b>	<b>Parallel</b>
<b>Date/Time</b>	<b>June 29, 2013 (Saturday) / 15:30 – 17:30 hrs</b>	
<b>Venue</b>	<b>Room Two</b>	
<b>Chair(s)</b>	<b>Susannah Sabine</b>	

- 100** Drones, Bones and Human Meaning Zones  
*Joseph Ferenbok*
- 101** Canada’s Emerging Domestic Drone Regulations  
*Shayna Gersher*
- 066** Drones for Good  
*Matthew Schroyer*
- Additional Paper  
Beyond Sunglasses and Spray Paint: A Taxonomy of Surveillance Countermeasures  
L. Shay, G. Conti, W. Hartzog