HUMANITARIAN TECHNOLOGY:
SCIENCE, SYSTEMS AND GLOBAL IMPACT

13 – 15 May 2014 | Boston, MA USA | www.humanitariantechnology.org

HumTech
2014

CONFERENCE PROGRAM

Humanitarian Technology: Science, Systems and Global Impact 2014 was organized to bring together academics, policymakers, government, nonprofits, and the private sector to showcase recent research and field work accomplishments and to discuss how technology can help improve humanitarian efforts. Emphasis was placed on topics that have a broad global humanitarian impact and are a result of systematic and evidence-based research and field work. Given the technological advances revolutionizing humanitarian action and international development, it is an appropriate time for a conference dedicated to this topic.

HumTech2014, held in Boston/Cambridge, MA, takes advantage of a vibrant innovation district, home to high-tech firms and leading academic institutions. The program features technical sessions and technology and policy panels on all aspects of technology, from science to systems, in support of humanitarian action. These were carefully selected so that topics can be uniquely presented within an operationally-relevant context, drawing as much as possible from real-world experiences in humanitarian operations and logistics, disaster relief, emergency management, disease management and international development. We strived to achieve this through invited talks and panel sessions presented by leading researchers, field workers and government officials.

HumTech2014 is organized across six conference tracks:
- Track A: Humanitarian Assistance and Disaster Relief, focuses on technology-based solutions that help protect and provide relief to communities facing man-made and natural disasters.
- Track B: Health and Disease Management, focuses on topics of relevance to global health research.
- Track C: Public Safety and Emergency Management, focuses on technical challenges facing emergency responders and innovative technologies that enable more effective response.
- Track D: Emerging Technologies, focuses on advanced research and technology development that promises to create smart cities and resilient communities, and alleviate the difficulties faced by developing communities. Subject topics were sought to span sensors, networks and systems, optical and rf devices, ad-hoc networks, additive manufacturing, renewable energy, social media and big data analytics, unmanned platforms, autonomy and intelligent systems, and resilient systems.
- Track E: International Development, Poverty Alleviation and Food Security, focuses on ways that technology can improve living standards across the globe. Technological enhancements in infrastructure and transportation, as well as sustainable food production and distribution, can play a significant role in improving the quality of life of the impoverished and hungry.
- Track F: Open Track on Water, Energy, Agriculture, Policy, Security, Education, ... This track focuses on topics across technology, social and economic policy, public-private partnerships, and social entrepreneurship.

Our hope is that the Humanitarian Technology: Science, Systems and Global Impact international conference series will promote social value creation through collaboration and technical exchange.

We are deeply grateful to our sponsors, authors, speakers, poster and exhibit presenters, members of the organizing committee, reviewers, session chairs, and student volunteers for contributing to the success of HumTech2014.

Monday, 12 May 2014

7:00 pm – 9:00 pm   Check-In and Cocktail Hour   **Great Room, 2nd Floor**

Tuesday, 13 May 2014

7:30 am   Breakfast and Registration Opens

8:25 am   Opening Remarks

Opening Plenary Session   **Grand Ballroom**

8:30 am   *"Supporting Responsible Humanitarian Innovations"*
                 Patrick Vinck
                 Director, Program for Vulnerable Populations
                 Harvard Humanitarian Initiative

9:10 am   *"Technology Outcomes at FEMA"*
                 Ted Okada
                 Chief Technology Officer
                 Federal Emergency Management Agency (FEMA)

9:50 am   *"#ICTenables"*
                 Albert A. Gembara, Technology Integration Officer
                 John Peyrebrune, Management and Administration Team Leader
                 Office of Foreign Disaster Assistance
                 U.S. Agency for International Development (USAID/OFDA)

10:30 am   break

Morning Keynote Session: Water, Energy, …   **Grand Ballroom**

10:45 am   *"Energy Systems Integration Vision"*
                 Martha Symko-Davies
                 Director of Partnerships for Energy Systems Integration (ESI)
                 National Renewable Energy Laboratory (NREL)

11:05 am   *"The MadiDrop: A New Point-of-Use Water Treatment Technology*
                 for the Developing World"
                 James A. Smith
                 Professor, University of Virginia
                 Founder and Director, PureMadi

Morning Keynote Session: Health and Disease Management   **Grand Ballroom**
Scaling Up Supply of Global Health Technologies

11:30 am   Jarrod Goentzel
                Director
                MIT Humanitarian Response Lab

11:50 am   Jonathan Lascher
                Haiti Program Manager
                Partners In Health (PIH)

12:10 pm   *Lunch - Bisuteki Tokyo Japanese Steak House (Hotel Lobby)*

Featured Talks: Humanitarian Assistance and Disaster Relief   **Grand Ballroom**

1:30 pm   *"The Role of Technology on Socio-Technical Systems: The Post-Disaster*
               Humanitarian Relief Case"
               José Holguín-Veras
               Professor and Director
               VREF Center of Excellence for Sustainable Urban Freight Systems
               Center for Infrastructure, Transportation, and the Environment
               Rensselaer Polytechnic Institute

1:50 pm   *"Humanitarian Assistance and Disaster Relief: Lessons from the Middle East"*
               Jacob Korenblum
               President & CEO
               Souktel

2:10 pm   *break*

Contributed Talks Session
2:30 pm – 4:15 pm   Session A1. Humanitarian Assistance and Disaster Relief Track   Ballroom A
2:30 pm – 4:15 pm   Session F1. Open Track: Water, Energy, …   Ballroom B

4:15 pm   *break*

Contributed Talks Session
4:30 pm – 5:45 pm   Session E1. International Development, Poverty Alleviation
                      and Food Security Track   Ballroom A
4:30 pm – 5:45 pm   Session D1. Emerging Technologies Track   Ballroom B

Session A1. Humanitarian Assistance and Disaster Relief Track   2:30 pm – 4:15 pm, Ballroom A

Development and Use of a Comprehensive Humanitarian Assessment Tool in Post-Earthquake Haiti	Marc Zissman, Mischa Shattuck, MIT Lincoln Laboratory; Erica Gralla, George Washington University; Louise Ivers, Harvard Medical School; Jarrod Goentzel, MIT
Multi-Criteria Decision Analysis Approach to Site Suitability of U.S. Department of Defense Humanitarian Assistance Projects	Richard Curran, Matthew Bates, US Army Corps of Engineers; Heather Bell, Pacific Disaster Center
An Integrated Disaster Relief Supply Chain Network Model with Time Targets and Demand Uncertainty	Anna Nagurney, University of Massachusetts Amherst; Amir Masoumi, Manhattan College; Min Yu, University of Portland
A Framework to Compare OR Models for Humanitarian Logistics	Henning Gösling, Jutta Geldermann, Universität Göttingen
HELP: Handheld Emergency Logistics Program for Generating Structured Requests in Stressful Conditions	Buck Bradley, Arijit Das, Ryan Barnes, Gurminder Singh, Naval Postgraduate School
An Exploratory Study of Vehicle Access and Road Density in Disasters	Alain Vaillancourt, Hanken School of Economics
Evidence Aid: A Resource for those Preparing For and Responding To Natural Disasters, Humanitarian Crises and Major Healthcare Emergencies	Claire Allen, Mike Clarke, Bonnix Kayabu, Dominic Mellon, Evidence Aid
Groundtruthing OpenStreetMap Damage Assessments	Clay Westrope, REACH Initiative; Robert Banick, American Red Cross
Logistics Micro-Platforms as Points of Supply in Case of a Disaster	David Hidalgo, Harold Gámez, LOGYCA

Session F1. Open Track: Water, Energy, …   2:30 pm – 4:15 pm, Ballroom B

Community Based Empowerment	Frank Bergh, Louis Woofenden, Scott Herr, Engineers Without Borders USA
Off-Grid Solar Power for Humanitarian Action: From Emergency Communication to Refugee Camp Micro-grids	Joseph Franceschi, INGOvation, Inc.; Jaron Rothkop, ZeroBase Energy; Gabriel Miller, New York University
A Biochar-Producing, Dung-Burning Cookstove for Humanitarian Purposes	Cristian Birzer, Paul Medwell, Greg MacFarlane, Matthew Read, Josh Wilkey, Matthew Higgins, Tomas West, The University of Adelaide
A Solar Disinfection Water Treatment System for Remote Communities	Peter Kalt, Cristian Birzer, Harrison Evans, Anthony Liew, Mark Padovan, Michael Watchman, The University of Adelaide
Implementing Pico-Hydropower Sites in Rural Rwanda	Victoria Tersigni, Julie Ann Haldeman, Kevin Francfort, Scott Gladstone, Dartmouth College
Understanding Performance Variability of Highly Decentralized Wastewater Treatment Systems	Laura Kohler, JoAnn Silverstein, University of Colorado Boulder
Climate Change and Infrastructure Impacts: Comparing the Impacts on Roads in Ten Countries through 2100	Amy Schweikert, Paul Chinowsky, University of Colorado Boulder; Xavier Espinet, Institute of Climate and Civil Systems; Michael Tarbert, University of Portland
Reducing Climate Change Impacts by Integrating Social Vulnerability Analyses and Climate-Resilient Infrastructure Adaptation	Amy Schweikert, Paul Chinowsky, University of Colorado Boulder
Perception on Safety and Justice Related to Social Environment in Mainland China: A Survey	Yefeng Ma, Hui Zhang, Yi Liu, Tsinghua University; Ying Gao, Changqin Lu, Peking University

Session E1. International Development, Poverty Alleviation and Food Security Track

4:30 pm – 5:45 pm, Ballroom A

The Diverse Roles of Community Health Workers: Cues for Technology Innovations	Danielle Trause, Sarah Peterson, Nathan Doty, Alyssa Ligouri, Katelyn Holmes, Khanjan Mehta, Linda Kanzleiter, The Pennsylvania State University
Pilot Results of a Telemedicine Social Franchise in Rural Kenya	Katelyn Holmes, Stephen Suffian, Jeffrey Lackey, Khanjan Mehta, The Pennsylvania State University
Remote Sensing Tools for Evaluating Poverty Alleviation Projects: A Case Study in Tanzania	Robert Morikawa, Plant With Purpose
Chinese Development Works Well In Africa	Choolwe Mandona Mandona, University of Colorado Boulder
From Polybius to Dadaab: Traumatic Urbanization in the Anthropocene	Matthew Jelacic, University of Colorado
No Really, (Crowd) Work is the Silver Bullet	Andrew Schriner, University of Cincinnati; Daniel Oerther, Missouri University of Science and Technology
Utilizing Structural Equation Modeling in the Development of a Standardized Intervention Assessment Tool	Lee Voth-Gaeddert, Daniel Oerther, Missouri University of Science and Technology

Session D1. Emerging Technologies Track

4:30 pm – 5:45 pm, Ballroom B

HAMPP: A Handheld Assistant for Military and Police Patrols for HA/DR Missions	Patrick Seipel, Gurminder Singh, Arijit Das, Naval Postgraduate School
Semantic Knowledge Management and Linked Data for Humanitarian Assistance	Timothy Clark, Laura Cassani, Milcord
Emerging Data Haven Technologies: Enabling Humanitarian Assistance, Disaster Relief, Public Safety & Emergency Management	Madhusudan Raman, Verizon Innovation Incubator
Beating the Clock: How New Technology Can Improve Information Systems and Coordination in Crisis Situation	Cécilia Blaustein, Julien Alberganti, Mathias Altmann, Action Contre la Faim
Utilizing Mobile Health Technology at the Bottom of the Pyramid	Sarah E. Oerther, Missouri EDGE; Phalakshi Manjrekar, PD Hinduja National Hospital and Medical Research Centre; Daniel B. Oerther, Missouri University of Science and Technology
Dootrips: a CO2-neutral Global Transportation System Based on Collaboration	Adrián Roselló, Jordi Ros, Jordi Garcia, Labdoo.org and BarcelonaTech University
Preliminary Performance Assessment of TV White Spaces Technology for Broadband Communication in Malawi	Chomora Mikeka, Justice Stanley Mlatho, Martin Thodi, University of Malawi; Jonathan Pinifolo, Dereck Kondwani, Lloyd Momba, Malawi Communications Regulatory Authority, Marco Zennaro, Andrés Arcia-Moret, Carlo Fonda and Ermanno Pietrosemoli, T/ICT4D Lab, ICTP, Trieste, Italy

Wednesday, 14 May 2014

7:30 am   Breakfast and Registration Opens

Morning Plenary Session: International Development   **Grand Ballroom**

8:30 am   *"Humanitarian Technologies: Legacies of the 20th Century and Challenges for the 21st"*
                 Nazli Choucri
                 Professor of Political Science
                 Massachusetts Institute of Technology

9:10 am   *"Creating Change in a Changing World "*
                 Tomicah S. Tillemann
                 Senior Advisor to the Secretary for Civil Society and Emerging Democracies
                 U.S. Department of State

9:50 am   *break*

Morning Keynote Session: Emerging Technologies   **Grand Ballroom**

10:05 am   *"Future of Imaging & eyeMITRA"*
                  Ramesh Raskar
                  Associate Professor
                  MIT Media Lab

10:25 am   *"Human-Aware Autonomy for Team-Oriented Environments"*
                  Julie Shah
                  Boeing Assistant Professor
                  Department of Aeronautics and Astronautics
                  Computer Science and Artificial Intelligence Lab
                  MIT

10:45 am   *"Using Mapping Drones to Understand Our Environment"*
                  Emanuele Lubrano
                  Founder and Vice-President for Drone Adventures
                  Head of Industrialization for senseFly

11:05 am   *"Crowdsourcing Crisis Response Using DigitalGlobe FirstLook"*
                  Andre Kearns
                  Senior Director, Solutions Marketing
                  DigitalGlobe

11:25 am   *break*

Featured Talks   **Grand Ballroom**

11:40 am   *"IBM Humanitarian Activities"*
                  Rebecca E. Curzon
                  Senior Program Manager
                  IBM Corporate Citizenship and Corporate Affairs

12:00 pm   *"IBM Humanitarian Technologies"*
                  Sreenivasan (Raj) Rajagopal, Senior Product Manager, IBM Cloud / DevOps Services
                  Laurel Dickson-Bull, IBM Rational Public Sector Offering Manager
                  IBM

12:20 pm   *"Beyond the Hackathon: Mobilizing and Managing Information Technology Disaster*
                  Response Operations on the Ground"
                  Lewis Curtis
                  Director, Microsoft Services Disaster Response
                  World Wide Public Sector Services

12:40 pm   *Lunch - on your own in Harvard, Central, or Kendall Square, Cambridge*

Special Session: **Grand Ballroom**
Novel Support Programs for Global Social Innovators: Creating A Field for Development Engineering

2:00 pm – 3:00 pm   Lina Nilsson (Panel Session Chair)
                      Innovation Director
                      Blum center for Developing Economies, University of California Berkeley

Panelists: Louise Curtis   Publishing Director, Elsevier

                    Temina Madon   Executive Director, Center for Effective Global Action, UC Berkeley

                    Laura Sampath   Senior Global Program Officer, NCIIA

Poster, Exhibit and Networking Session   **Great Room, 2nd Floor**
3:00 pm – 6:00 pm   Technical Posters and Technology Demonstrations

                      Best Paper/Best Poster Awards Presentation

Contributed Talks Session
4:00 pm – 5:45 pm   Public Safety and Emergency Management Track   **Ballroom A**
4:00 pm – 5:45 pm   Open Track: Water, Energy, …   **Ballroom B**

Session C2. Public Safety and Emergency Management Track	4:00 pm – 5:45 pm, Ballroom A
Novel Situational Information in Mass Emergencies: What does Twitter Provide?	Haji Mohammad Saleema, Yishi Xua, Derek Ruths, McGill University
Effects of Disaster Characteristics on Twitter Event Signature	Haji Mohammad Saleema, Yishi Xua, Derek Ruths, McGill University
Cell Phones and Motor Vehicle Fatalities	Erich Muehlegger, Daniel Shoag, John F. Kennedy School of Government, Harvard University
Sigmah - How an Information Management Perspective Can Influence the Adoption of a Quality Approach	Olivier Sarrat, Véronique de Geoffroy, Fadoi Chaouki, Hugues Maury, Groupe URD, La Fontaine des Marins, France
Dynamic-Spatial Vulnerability Assessments: A Methodical Review for Decision Support in Emergency Planning for Power Outages	Thomas Münzberg, Marcus Wiens, Frank Schultmann, Karlsruhe Institute of Technology
Algorithm for Source Mobile Identification and Deactivation in SMS triggered Improvised Explosive Devices	Francis Idachaba, Covenant University Ota. Ogun State Nigeria
Fire Disaster Management in Trains Using a New Technique of Water Pipelines-First Aid Mechanism	Adil Usman, Rahul Dutta, Arif Usman, Farzana Azmee, Divakar BP, Reva Institute of Technology and Management and Lucknow University, India
Advancing Big Data for Humanitarian Needs	Samson Oluwaseun Fadiya, Serdar Saydam, Girne American University, Turkey; Vanduhe Vany Zira, Cyprus International University, Turkey

Session F2. Open Track: Water, Energy, …	4:00 pm – 5:45 pm, Ballroom B
Public Private Not-for-Profit Partnerships	Erick F. Oechler Solana, University of Colorado Boulder
Sol-Char Sanitation System: Harnessing Solar Energy for Disinfecting Human Waste While Generating Biochar and Fertilizer	Ryan Mahoney, Cori Oversby, Karl Linden, University of Colorado Boulder
Portable Electrification using Biogas Systems	Calvin Cherry, Michael Rios, Giri Venkataramanan, University of Wisconsin-Madison
Community Development : The EZ Heat Solar Furnace Project	Aaron Brown, Kaitlin Litchfield, Elisa Teipel, Leigh Gilmore, Michael Bauer, Metropolitan State University of Denver
Quantitative Assessment of Appropriate Technology: A Decision Support Tool for Sustainable Community Development	A. Michael Bauer, University of Colorado at Boulder; Aaron Brown, Metropolitan State University of Denver
Effect of Conservation Agriculture on Maize-Based Farming System in Mid-Hills of Nepal	Bikash Paudel, Theodore J.K. Radovich, Catherine Chan-Halbrendt, Susan Crow, Jacqueline Halbrendt, University of Hawaii; B.B. Tamang, Keshab Thapa, cLocal Initiatives for Biodiversity, Research and Development, Nepal
Importance of Interactive Small Group Discussions to Educate Community Health Workers	Laurel Paul, Grace Warkulwiz, Abdalla Nassar, Khanjan Mehta, The Pennsylvania State University
Airline Industries within Global Supply Chains and their Strategic Impact on Energy Efficiency	Jaka Aminata, Samuel Grandval, NIMEC-Université du Havre, France; Abdelkader SBIHI, L'Axe Logistique Terre Mer Risque-Ecole de Management de Normandie

Deloitte.

Deloitte Humanitarian Innovation Program
Prepared to act

www.deloitte.com/humanitarian

Through the Deloitte Humanitarian Innovation Program, the professionals of Deloitte member firms and humanitarian organizations will co-create and implement solutions to the sector's most pressing challenges.

By collaborating with local, national and international humanitarian leaders – combining our diverse skills and expertise – we will enhance the ability of the sector to prepare for, and respond to, crises.

Be prepared for new ways of thinking. Be prepared for new ways of collaboration and innovation. Be prepared for positive change.

The Deloitte Humanitarian Innovation Program: *Prepared to act.*

To learn more the Deloitte Humanitarian Innovation Program and how humanitarian organizations can apply, visit www.deloitte.com/humanitarian or email HumanitarianProgram@deloitte.com

Poster, Exhibit and Networking Session

Wednesday, May 14th 3pm – 6pm

Technology Exhibits

IBM's DevOps in the Cloud
From development to deployment … and everything in between. IBM's BlueMix and DevOps Services allow you to collaborate with others to plan, develop, track and deploy software.

Skybox Imaging
In today's connected world, every organization is deeply impacted by events across the globe on a daily basis. Skybox Imaging was founded on the premise that an ability to better understand these phenomena could fundamentally change the way humanity makes decisions on a daily basis -- increasing the profitability of businesses and improving the welfare of societies worldwide.

Luminoso
Luminoso is a cloud-based multilingual text analytics solution spun out of MIT's Media Lab that provides researchers and decision-makers with the ability to quickly analyze and derive insights from large amounts of unstructured text, especially survey responses and social media. With Luminoso, organizations can identify clusters of interesting data and act upon them. Luminoso is working with the Centers for Disease Control and Prevention to enhance their disease-tracking systems using social media, and with other not-for-profit groups.

KoBoToolbox
KoBoToolbox is a collection of free/open source software solutions for robust data collection and analysis in demanding field settings and disaster zones.

SocialAI: Real-time Social Analytics for
Disaster Response & Emergency Management
SocialAI is a computational framework and dashboard tool for deriving disaster response and emergency management analytics for information discovery and decision support. Through the integration of multiple data streams, including real-time social media, the SocialAI Dashboard provides visualizations and advanced data analytics. The framework demonstrates Georgia Tech Research Institute's basic and applied research in the fields of graph analytics, natural language processing, machine learning, and behavioral modeling.

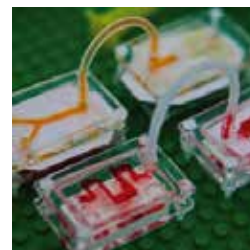## Harnessing the Power of Technology to Improve Accountability for Sexual Violence

MediCapt is a mobile application, under development by the Program on Sexual Violence in Conflict Zones at Physicians for Human Rights (PHR), to help clinicians more effectively collect, document, and preserve forensic medical evidence of sexual violence to support the prosecution of these crimes. This critical tool converts a standardized medical intake form for forensic documentation to a digital platform and combines it with a secure mobile camera to facilitate forensic photography.

Signal Program on Human Security and Technology

The Signal Program on Human Security and Technology at the Harvard Humanitarian Initiative utilizes the latest information and satellite technologies to conduct research and education projects that seek to understand how these technologies can be employed to protect vulnerable populations affected by both human and natural disasters.

Little Devices @ MIT

The Little Devices group at MIT develops empowerment technologies for health and explores the design, invention, and policy spaces for DIY health technologies around the world.

Technical Posters	
Mechanically Automated Light Weight WAstage REmover (MALWWARE)	Saronroy Albert, Duraiarasan A, IEEE Madras Section, India
SafaPani: A Household Electrocoagulation Arsenic Water Filter for Nepal and Other Developing Countries	Victoria Tersigni, Julie Ann Haldeman, Aditya Mahara, Scott Gladstone, Dartmouth College
Targeting Briquetting as an Alternative Fuel Source in Tanzania	Victoria Tersigni, Julie Ann Haldeman, Scott Gladstone, James Kennedy, Dartmouth College
@EvidenceAid: Exploring the Social Network of a Humanitarian Knowledge Translation Programme	Claire Allen, Dominic Mellon, Mike Clarke, Evidence Aid
Assessment Methodology for Alternative Lighting Systems Installed by "One Liter of Light" Foundation in the Sub-Urban Sector of "Las Palmas" (Cali, Colombia)	Diana Gasca, Isabel Ramírez-Castañeda, Mauricio Quintero-Angel, Universidad del Valle
Maslow Missed the Mark: Relationships (and Giving) are the Basic Need That Defines Development	Darin Peterson, Valerie Anderson, Brett Andersen, Common Change; Daniel Oerther, Missouri University of Science and Technology
A Crowdsourcing Framework for Emergency Management	Michael Chuang, SUNY New Paltz
Enabling Distributed Command and Control with Standards-Based Geospatial Collaboration	Paul Breimyer, MIT Lincoln Laboratory
Humanitarian Logistics: Empirical Evidences from a Natural Disaster	Marcia Regina Santiago Scarpin, Renata de Oliveira Silva, Fundação Getulio Varga, Brazil

Thursday, 15 May 2014

7:30 am   Breakfast and Registration Opens

Featured Talk   **Grand Ballroom**

8:30 am   *"Social Enterprises and Their Role in Humanitarian Operations"*
                 Paulo Gonçalves, Associate Professor of Management
                 Academic Director of the Advanced Master in Humanitarian Logistics and Management
                 Università della Svizzera italiana

Morning Plenary Session: Public Safety and Emergency Management   **Grand Ballroom**

8:50 am   *"Innovation to Build Resilience in the Face of Disaster"*
                 RADM Nicole Lurie, M.D., M.S.P.H.
                 Assistant Secretary for Preparedness and Response
                 U.S. Public Health Service
                 U.S. Department of Health and Human Services

9:30 am   *break*

Morning Keynote Session: Humanitarian Assistance and Disaster Relief   **Grand Ballroom**

9:50 am   *"Data Analysis and Visualization at USAID/OTI"*
                 Amy Noreuil
                 Geographic Information Specialist and Co-Team Lead, Geographic Information Unit
                 USAID Office of Transition Initiatives (USAID/OTI)

10:10 am   *"Building the Map, Growing the Crowd: MapGive and the Geographic Dimensions of
                 Digital Diplomacy"*
                 Benson Wilder
                 Humanitarian Information Unit, Office of the Geographer and Global Issues
                 U.S. Department of State

10:30 am   *"Imagery, Analytics, and Impact: Humanitarian Monitoring with the Skybox Constellation"*
                 John Clark
                 Enterprise Market Manager
                 Skybox Imaging

10:50 am   *"Crisis Response - Google.org"*
                 Nigel Snoad
                 Product Manager
                 Google.org Crisis Response

11:20 am *"Next Generation Humanitarian Technologies"*
Patrick Meier
Director of Social Innovation
Qatar Computing Research Institute

11:50 am *Lunch - on your own in Harvard, Central, or Kendall Square, Cambridge*

Featured Talks **Grand Ballroom**

1:20 pm *"Steppin' it up with STIP (Science, Technology, Innovation and Partnerships)"*
Corinne Ringholz
AAAS S&T Policy Fellow, Data and Analytics Team
Center for Data, Analytics, and Research
USAID Global Development Lab

1:40 pm *"Coordinating Humanitarian Data at the UN: A Flexible Approach to Sharing and Standards"*
David Megginson, Architect, Humanitarian Data Exchange
UN OCHA

2:00 pm *"The Opportunities for Biometrics in the Developing World"*
Justin Hughes, Consultant
PA Consulting

2:20 pm *break*

Special Session **Grand Ballroom**
Technology & Human Interface: Lessons from the Boston Marathon Bombings

2:35 pm – 3:35 pm Tim Pitoniak (Panel Session Chair), American Red Cross

Panelists: Steve Napoli, American Red Cross
Casey Levesque, American Red Cross/AmeriCorps
Mary Clark, Bureau Director, Massachusetts Department of Public Health

Afternoon Plenary Session **Grand Ballroom**
Focus Session Haiyan – An Agenda for Future Research

3:50 pm – 4:50 pm Bartel Van de Walle, Tina Comes (Panel Session Chairs), The Disaster Resilience Lab

Panelists: Jennifer Chan, Feinberg School of Medicine, Northwestern University
Vincenzo Bollettino, Executive Director, Harvard Humanitarian Initiative

5:00 pm Closing Remarks

Humanitarian Communications Roster

The global Humanitarian Communications Roster is the product of a partnership between Internews and the Communicating with Disaster Affected Communities (CDAC) Network, made possible by a grant from the UK Department for International Development (DFID).

The CDAC Network promotes the coordinated provision of information and communication with crisis-affected communities as a key humanitarian deliverable. The goal is to ensure that communities are better able to withstand, and recover from, humanitarian emergencies by actively engaging in decisions about their own relief and recovery through the use of information and communication tools. The roster, conceived by and currently managed by Internews for the CDAC Network, serves the needs of a broad group of CDAC Network members. Uniquely, the Network convenes: humanitarian organizations, media development organizations, and technology providers.

Aden Hassan Tarah, a reporter for Kenya's Star FM radio station, interviews refugees at the Ifo Extention camp, the world's largest refugee camp, in Dadaab, Kenya.
Credit: Meridith Kohut/Internews

opinions and provide feedback, it enhances their sense of well-being, helps them adapt to the challenges they face, and better enables them to take an active role in their own recovery.

Communication, whether through new technologies or more traditional means, is therefore essential for the engagement of disaster-affected people in humanitarian action, and in fostering their decision-making.

CDAC Network members believe that communicating with disaster-affected communities is a cross-cutting function that facilitates greater quality and effectiveness of aid delivery; supports accountability; enhances resilience-building; and promotes understanding between humanitarian organizations and the communities they serve.

PROGRAM HIGHLIGHTS:

Prioritizing Affected Communities

Communicating with disaster-affected communities is a growing field of humanitarian response that helps to meet the information and communication needs of people affected by crisis. It is based on the principle that information and communication are critical forms of aid. Without information and communication, affected people cannot access services or make the best decisions for themselves and their communities; neither can they hold aid agencies to account. When people are given the opportunity to voice their

Roster Profiles

- Communicating with Affected Communities Coordinator (CwC)
- Humanitarian Communication Specialist (HCS)
- Research/Monitoring & Evaluation (M&E) Officer
- Team Leader
- Humanitarian Innovation Advisor
- Humanitarian Journalism Trainer
- Radio Producer/Trainer
- Radio Technician
- Emergency Multimedia Documentation Officer
- Logistics Officer

Credit: Max Graef

The development of the Humanitarian Communications Roster is part of a broader strategy that seeks to build the capacity of the humanitarian response system to improve communication with disaster-affected populations and mainstream this effort into all emergency and recovery responses.

Building the Capacity of the Emergency Response Sector

The deployment roster aims to ensure CDAC Network Members can access standing capacity to implement communications-related preparedness and emergency response activities. The roster is meant to fill an important skill gap and pre-identify qualified candidates with the right media and communication competencies to work with local populations and local press.

As one of the founding members of the CDAC Network, Internews sees this global roster as a means to scale up technical capacity for communicating with disaster-affected communities by working with both local media and first responders.

Target Candidates

The Humanitarian Communication Roster recruits people with unique talent sets that transcend both the media and the humanitarian sectors.

We are looking for people who have multiple language skills, previous experience in complex emergencies, ability to adapt to rapidly changing situations, technical competency in media and/or communications, capacity to engage with local populations and media, and in-depth knowledge of the humanitarian response system. We are looking for people from all over the world, and especially encourage talented individuals from the Global South to apply.

Besides having the required technical skills, roster candidates will also be evaluated on a set of core competencies that are intrinsic to working in the humanitarian sector and with local populations.

To apply to the Humanitarian Communications Roster, go to: internews.org/roster

Internews
www.internews.org

Internews is an international non-profit media development organization whose mission is to empower local media worldwide to give people the news and information they need, the ability to connect and the means to make their voices heard.

CDAC Network
www.cdacnetwork.org

The goal of the CDAC Network is that communities affected by or prone to crises are supported to better withstand, and recover from, humanitarian emergencies through active engagement in decisions about the relief and recovery efforts in their country.

MAY 2014

Humtech2014 Organizing Committee

Conference Committee

David Lazer, Northeastern University
Daniel Shoag, Harvard University
Andy Vidan, MIT Lincoln Laboratory

Technical Program Committee

Willow Brugh, MIT and Geeks Without Bounds
Benjamin Lee, National Renewable Energy Laboratory (NREL)
Les Servi, MITRE

Session Organizers and Program Reviewers

Ryan Bank, Social Intelligence
Tina Comes, Centre for Integrated Emergency Management, University of Agder
Mark Henderson, Global Institute of Sustainability and GlobalResolve, Arizona State University
Leighton Jones, American Red Cross
Khanjan Mehta, The Pennsylvania State University
Lina Nilsson, UC Berkeley
Derek Ruths, McGill University
Daniel Soto, Sonoma State University

Industry Program Liaisons

Martin Bakal, Flexera Software
Stephen Gordon, Flatiron Strategies
Brent Segal, Lockheed Martin

HumTech2014 is an ISCRAM affiliated event. The International Association for Information Systems for Crisis Response and Management (ISCRAM) primary mission is to foster a community dedicated to promoting research and development, exchange of knowledge and deployment of information systems for crisis management. ISCRAM 2014 will be held the following week at the Pennsylvania State University.
We encourage all HumTech2014 participants to attend ISCRAM 2014 and other ISCRAM Workshops, Conferences and Summer Schools.

Cover Image: USS Iwo Jima assists Haiti after Hurricane Tomas. Photo by Sgt Alicia R. Leaders.

Speaker Biographies

Nazli Choucri
Professor of Political Science
Massachusetts Institute of Technology

Nazli Choucri is Professor of Political Science. Focusing on international relations, she concentrates on sources and consequences of international conflict and violence. Professor Choucri is the Principal Investigator and Director of a multi-year multi-disciplinary collaborative research project of MIT and Harvard University on Explorations in Cyber International Relations. She is the Associate Director of MIT's Technology and Development Program (TDP), and the architect and Director of the Global System for Sustainable Development (GSSD), a multi-lingual web-based knowledge networking system focusing on the multi-dimensionality of sustainability.

Professor Choucri is the founding Editor of the MIT Press Series on Global Environmental Accord and the former General Editor of the International Political Science Review. The author of eleven books and over 120 articles, Dr Choucri has been involved in research or advisory work for national and international agencies, and for a number or countries, including: Algeria, Canada, Colombia, Egypt, France, Germany, Greece, Honduras, Japan, Kuwait, Mexico, Pakistan, Qatar, Sudan, Switzerland, Syria, Tunisia, Turkey, United Arab Emirates and Yemen. She is a member of the European Academy of Sciences, and has been re-elected President of the Scientific Advisory Committee of UNESCO's Management of Social Transformation (MOST) Program.

John Clark
Enterprise Market Manager
Skybox Imaging

John is an Enterprise Market Manager at Skybox Imaging. Skybox empowers global businesses, governments, and non-governmental organizations to make better decisions with timely satellite imagery and analytic services. At Skybox, John is building a network of humanitarian partners that leverage Skybox technology to advance their missions.

Tina Comes
Associate Professor
Centre for Integrated Emergency Management
University of Agder

Tina Comes is Associate Professor at the Department of ICT, University of Agder, Norway and Deputy Director of the Centre for Integrated Emergency Management. She studied Mathematics, literature and philosophy. After receiving her Ph.D. on the topic of distributed scenario-based multi-criteria decision support from the Karlsruhe Institute of Technology (KIT), she was head of a research group on Risk Management (2011-2013). She was heading the group on socio-economic impact assessment of the Centre for Disaster Management and Risk Reduction Technology (CEDIM), a joint initiative by the German Research Centre for Geosciences and KIT and lead the Risk Management Team at the KSRI Supply Chain Lab, to which she is still affiliated.

Tina's research aims at supporting decision-making and risk management in complex, dynamic and uncertain situations, when experts and decision-makers with different backgrounds and skills need to build a consensus that must be acceptable for various actors across organizations. To this end, she develops methods and tools designed to bridge the gap

between formal models, expert systems and simulations and transparent, understandable and ready- to-use evaluations and presentations of results. Particularly, she focuses on the development of collaborative and distributed decision support tools, which are designed to enhance under- standing, communication and compliance. Tina's main research areas include modeling of supply chains and logistics networks, critical infrastructures and the impact of their disruption, crisis management, policy-making and design of viable strategies in a dynamic context as well as multi-criteria decision analysis. To cover this domain, she combines her formal and analytic background in mathematics with programming skills, knowledge in economics, decision theory and cognition.

Tina is author of various papers that are published in international journals and conferences. She has organized tracks at different international conferences such as HICSS or AMCIS, was Programme Chair of the ISCRAM2013 Conference, Program Director of the 2014 ISCRAM Summer School, Conference Chair of ISCRAM2015 and is Chair of the ISCRAM Events Committee.

Lewis Curtis
Director, Microsoft Services Disaster Response
Microsoft

As the Director of Microsoft Services Disaster Response, Lewis is accountable for the safety and success of all Microsoft services teams and ground operations for disaster response worldwide. Lewis has been a long time technology architect and program manager for many years at Microsoft leading initiatives in datacenter design, cyber security and disaster recovery and resiliency operations. Before Microsoft, Lewis worked for Sun Microsystems and Digital Equipment Corporation.

Outside of work, He and his wife Linda have been married for over 15 years and reside on their 12 acre farm in Duvall WA raising dairy goats, chickens, honey bees and hogs.

Rebecca E. Curzon
Senior Program Manager
IBM Corporate Citizenship and Corporate Affairs

Rebecca E. Curzon is Senior Program Manager with IBM Corporate Citizenship and Corporate Affairs, with leadership roles in business integration, philanthropy, and volunteer enablement. Ms. Curzon manages IBM's global strategy in humanitarian disaster response, applying IBM technology, solutions, expertise and innovation to critical needs in the aftermath of disaster; and developing strategic partnerships around mitigation of the effects of disaster using technology for smarter and more resilient cities. She represents IBM on the US Chamber of Commerce Foundation's Disaster Assistance and Recovery Working Group. She is on the board of directors of the American Red Cross of Massachusetts.

Ms. Curzon also leads IBM's global citizenship Grant-making Center of Excellence, providing IBM's worldwide citizenship team with training, tools, resources, and best practices for awarding strategic grants from IBM's growing portfolio of Impact Grant offerings, all in support of local nonprofit and education partners as they address societal issues and achieve results.

Ms. Curzon has been part of global teams to integrate IBM's strategies in corporate citizenship into the business and to leverage business offerings for community benefit. In 2003 she helped launch the On Demand Community, IBM's flagship global initiative and website to support IBMers as they volunteer in their communities. For nine years she led creation of all content for the site, including dozens of activity kits for use in volunteering in schools and nonprofits, which were made available to the public (ibm.com/volunteer) in honor of IBM's Centennial Celebration of Service in 2011. These free

kits focus on topics ranging from STEM and "Watson" (the gameshow-winning computer) to mentoring and nonprofit capacity building. Ms. Curzon came to IBM from Lotus Development Corporation where she managed volunteerism and philanthropic programs focusing on nonprofit use of Lotus software. Previously she was with the Smithsonian Institution. She is a certified Project Management Professional through the Project Management Institute. She has volunteered actively for decades at schools, nonprofits, and in her faith community.

Laurel Dickson-Bull
IBM Rational Public Sector Offering Manager

As Offering Manager for the Public Sector, Laurel defines compelling Rational software offerings for government, healthcare and education. Laurel has worked in software development, including release management, globalization, and software support and client management for over 20 years, the last 10 years in IBM. Laurel is a certified Project Management Professional and holds a BA from Dickinson College, an MA in Teaching, an MA in French and a certificate of technical translation from Binghamton University.

Albert Gembara
Technology Integration Officer
Office of Foreign Disaster Assistance
U.S. Agency for International Development
(USAID/OFDA)

Albert Gembara is the Technology Integration Officer (TIO) for the U.S. Agency for International Development – Office of Foreign Disaster Assistance (USAID/OFDA). OFDA is the office that is responsible for leading and coordinating the U.S. Government's response to international crises and disasters. As TIO, Albert serves as OFDA's lead advisor on the use of Information and Communication Technology (ICT) in humanitarian assistance and foreign disaster relief operations. Prior to this assuming this position, Albert was a disaster operations specialist (DOS), where he assisted in developing USG foreign disaster response strategies, and managed grants for humanitarian donor organizations. He has been with USAID/OFDA since 2010, and has supporting disaster response activities around the world.

Before coming to USAID, Albert was on active and reserve duty as a commissioned officer in the U.S. Navy. He served in the Navy Expeditionary Combat Command, where he was a team leader for a Maritime Civil Affairs team (MCAT). As a Maritime Civil Affairs officer, he acted as a civil-military liaison, and supported foreign humanitarian assistance and disaster relief operations in Latin America, the Middle East, and Africa.

Jarrod Goentzel
Director
MIT Humanitarian Response Lab

Jarrod Goentzel is founder and director of the MIT Humanitarian Response Lab, which strives to make supply chains more responsive to human needs. His research focuses on supply chain design and management, transportation procurement and planning, humanitarian needs assessments, information management and the use of technology to facilitate decision-making. Based in the MIT Center for Transportation and Logistics, Dr. Goentzel has developed graduate-level courses in supply chain finance, international operations and humanitarian logistics and has extensive experience using simulation games to develop intuition and leadership skills. He also directs the MIT Renewable Energy Delivery project.
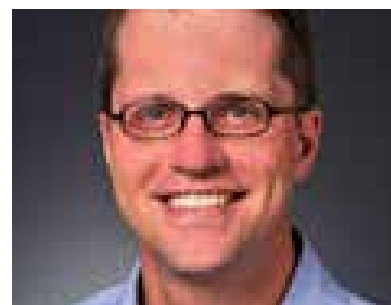
Previously, Dr. Goentzel was Executive Director of the MIT Supply Chain Management Program, where he was

responsible for design and management of the nine-month professional master's degree program. He joined MIT in 2003 to establish the MIT-Zaragoza International Logistics Program, which developed novel education, research, and outreach programs with the Zaragoza Logistics Center in Spain. Dr. Goentzel has also led supply chain consulting and product development teams with a large ERP company and technology startups.

Dr. Goentzel received a Ph.D. from the School of Industrial and Systems Engineering at the Georgia Institute of Technology, a M.S. in applied mathematics from Colorado State University, and a B.A. in mathematics from Tabor College with studies at the Technical University of Budapest (Hungary).

Paulo Gonçalves
Associate Professor of Management
Academic Director, Advanced Master in Humanitarian Logistics and Management
Università della Svizzera italiana

Prof. Gonçalves is Associate Professor of Management and Founder and Director of the Master in Advanced Studies in Humanitarian Logistics and Management (MASHLM) and Humanitarian Operations and Supply Chain Management (MASHOM) at the Universita della Svizzera Italiana (USI), Switzerland. He is also a Research Affiliate at the Massachusetts Institute of Technology Sloan School of Management (MIT Sloan) and a Visiting Faculty Fellow at the Logistics Institute Asia Pacific at the National University of Singapore (NUS). Previously, he has held appointments at the MIT Sloan School of Management and the University of Miami Graduate School of Business. He obtained his Ph.D. in Management Science and System Dynamics from MIT Sloan School of Management and his M.Sc. degree in Technology and Policy from the Massachusetts Institute of Technology (MIT). While at Sloan, Paulo worked with Intel's Strategic Capacity group as an Intel scholar. For his work, he has received the Intel Foundation Graduate Research Fellowship Award (2003-2004). For his dissertation, he has won the 2004 Doctoral dissertation award given annually by the Council of Supply Chain Management Professionals (CSCMP).

His work focuses on understanding behavioral aspects of common operational decisions. Current research interests focuses on behavioral operations management in humanitarian contexts, including the development of supply chain experiments for understanding and improving managerial decision making. His work combines a number of techniques such as simulation, optimization, econometrics and non-linear dynamics. He has taught a range of courses such as operations management, project management, decision models and system dynamics, at undergraduate, graduate (MBA and PhD) level. He has also taught executive programs in operations management and system dynamics. He has published in the areas of supply chain management, behavioral operations, nonlinear dynamics, and humanitarian logistics. His publications have appeared in Production and Operations Management, Journal of Business Logistics, System Dynamics Review, IEEE Engineering Management Review, Sloan Management Review and California Management Review.

Paulo is also SwissLeg's Co-founder and Chief Executive Officer (CEO) an affordable high-mobility prosthetic social enterprise that aims to restore mobility to the most destitute amputees in the world. In 2013, Paulo was selected as a Venture Leader and Captain of the Swiss National Startup Team. With Paulo's support, SwissLeg has obtained the prestigious Swiss CTI label and won a number of awards, including Venture Kick (Stages I, II & III), Future Impact Prize, Startups.CH, Hub Zurich KickStart, SEIF Social Entrepreneurship Award and the Best Entrepreneurial Idea of the Canton Ticino in 2013. In 2013, SwissLeg was ranked 51st among the best Swiss startups. Currently, SwissLeg is involved in projects in Iraq, Syria, Jordan and Turkey.

José Holguín-Veras
Rensselaer Polytechnic Institute

Dr. José Holguín-Veras, is the William H. Hart Professor and Director of the Volvo Research and Educational Foundations Center of Excellence for Sustainable Urban Freight Systems, and the Center for Infrastructure, Transportation, and the Environment at Rensselaer Polytechnic Institute. He is the recipient of numerous awards, including the 2013 White House's Transportation Champion of Change Award, the 1996 Milton Pikarsky Memorial Award, and the 2001 National Science Foundation's CAREER Award. His research interests are in the areas of freight transportation modeling and economics, and humanitarian logistics. His work has opened the door to new paradigms of freight systems that, not only increase economic efficiency environmental justice. His research has led to major changes in transportation policy and substantial improvements in the ability to improve urban freight systems. His work on humanitarian logistics has played an influential role in disaster response procedures, and has led to deeper insight into how best to respond to large disasters and catastrophic events. He is President of the Scientific Committee of the Pan-American Conferences of Traffic and Transportation Engineering, and member of the Scientific Committee of the World Conference of Transport Research. He is a member of numerous technical committees and editorial boards of leading journals. He received his Ph.D. from The University of Texas at Austin in 1996; a M.Sc. from the Universidad Central de Venezuela in 1984; and a B.Sc. from the Universidad Autónoma de Santo Domingo en 1982.

Justin Hughes
Consultant
PA Consulting

Justin Hughes is a consultant based in New York with PA Consulting, a technology and management consultancy that is headquartered in the UK.

Prior to joining PA Consulting, Mr. Hughes was employed by security-printer De La Rue and played a key role in the delivery of the new UK biometric passport, as well as many other identity management projects around the world. His last role was as Head of Procurement and Supply Chain for the Identity Systems division of De La Rue where he oversaw all sourcing, supply management, risk analysis and innovation support for identity management projects.

Since joining PA Consulting, Mr. Hughes has supported clients across the world in their technology sourcing and supply chain projects with a focus on new and innovative technologies including biometrics and medical devices.

Andre Kearns
Senior Director, Solutions Marketing
DigitalGlobe

Andre Kearns is currently Senior Director, Solutions Marketing at DigitalGlobe and leads the effort to identify, evaluate and incubate new solutions that enable the company to drive profitable growth. An accomplished executive, Andre has focused his career in technology, primarily serving in marketing and strategy roles.

Andre holds an MBA from Harvard University and a BA in Business Administration from Morehouse College. He lives in Washington, DC with his wife and two children and offices out of the DigitalGlobe Herndon office.

Jacob Korenblum
President & CEO
Souktel

Jacob leads Souktel's growing team, building on his past experience managing economic development and emergency relief projects for US Agency for International Development (USAID) and the Canadian International Development Agency (CIDA) projects. Fluent in Arabic and French, Jacob has worked in the emergency aid sectors in the Middle East, East Africa, South Asia, and the Caribbean. He is a frequent panelist on technology, development, and labor markets–with speaking engagements ranging from the GSMA Mobile World Congress to the World Bank Human Development Forum. He has co-authored a chapter in the sector publication "Mobile Technologies for Conflict Management" and has written articles on mobile technology for the MIT Innovations Journal, CNBC Online, and the Overseas Development Institute. His work as a Souktel co-founder has been profiled by The Wall Street Journal, Forbes, Fast Company and the UK's Guardian newspaper. Jacob holds an Ed.M. from Harvard University, where he also served as a Harvard Reynolds Foundation Fellow in Social Enterprise from 2005-06.

Jonathan Lascher
Haiti Program Manager
Partners In Health

Jonathan Lascher is the Haiti Program Manager at Partners In Health (PIH). Since joining PIH in 2009, Jonathan has been responsible for managing programs and operations in Haiti. He helped manage the Haiti-based response efforts to the 2010 earthquake, coordinating emergency relief supplies, donated materials, and product distribution throughout PIH's network of hospitals. Jonathan also managed PIH's campaign to introduce the cholera vaccine in Haiti and oversaw the vaccination of nearly 50,000 people in the rural Lower Artibonite region. He also managed a partnership with the Abbott Fund to construct a production facility for peanut-based ready-to-use therapeutic food (RUTF). In addition to his work at PIH, Jonathan serves as Outreach Director for Hope Through Health (HTH), www.hthglobal.org, a health and social justice organization based in Togo, West Africa dedicated to ensuring access to health care. Before joining PIH, Jonathan served as a Peace Corps Volunteer in northern Togo working with the community, local government, and HTH to open the region's first community-based HIV/AIDS treatment center. Jonathan graduated from The George Washington University in 2005 with a Bachelor's degree in International Affairs and African Studies and a minor in Peace Studies.
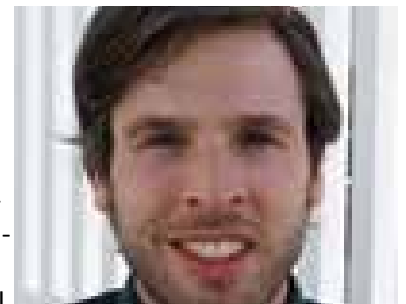
Emanuele Lubrano
Founder and Vice-President for Drone Adventures
Head of Industrialization for senseFly

Emanuele Lubrano, Ph.D., is one of the founders of Drone Adventures. The goal of this non-profit organization is to demonstrate the many great applications of drones in conservation, cultural, humanitarian and search and rescue domains. This is done by carrying out practical missions using drones in the four corners of the earth and communicating the results through videos, articles and conferences. Emanuele organized and took part in several Drone Adventures mapping missions, including one in Haiti with the IOM, and another in Peru with University College London. He is also the Head of Industrialization of the civil drone manufacturing firm senseFly.

Before working for senseFly and founding Drone Adventures, Emanuele was working for the Swatch Group. Emanuele has a Ph.D. in Manufacturing Systems and Robotics, from the Ecole Polytechnique Fédérale de Lausanne (Switzerland), on the subject of nano-precision robotics.

Nicole Lurie, M.D., M.S.P.H.
Assistant Secretary for Preparedness and Response
U.S. Public Health Service
U.S. Department of Health and Human Services

Dr. Lurie is the Assistant Secretary for Preparedness and Response (ASPR) at the US Department of Health and Human Services (HHS). The mission of her office is to lead the nation in preventing, responding to and recovering from the adverse health effects of public health emergencies and disasters, ranging from hurricanes to bioterrorism.

Dr. Lurie was previously Senior Natural Scientist and the Paul O' Neill Alcoa Professor of Health Policy at the RAND Corporation. There she directed RAND's public health and preparedness work as well as RAND's Center for Population Health and Health Disparities. She also served as Principal Deputy Assistant Secretary of Health in the US Department of Health and Human Services; in state government, as Medical Advisor to the Commissioner at the Minnesota Department of Health; and in academia, as Professor in the University of Minnesota Schools of Medicine and Public Health. Dr. Lurie has a long history in the health services research field, primarily in the areas of access to and quality of care, mental health, prevention, public health infrastructure and preparedness and health disparities.

Dr. Lurie attended college and medical school at the University of Pennsylvania, and completed her residency and MSPH at UCLA, where she was also a Robert Wood Johnson Foundation Clinical Scholar. She is the recipient of numerous awards, and is a member of the Institute of Medicine.

Finally, Dr. Lurie continues to practice clinical medicine in the health care safety net in Washington, DC. She has three sons.

David Megginson
Architect, Humanitarian Data Exchange
UN OCHA

David has been active within the data-sharing community since 1991. Over the past two decades, he served on the W3C XML working group, chaired the W3C XML Core working group, contributed to data standards for the news industry and government, and launched the initiative that created the Simple API for XML (SAX), which is now the most widely-used streaming API for XML. More recently, David created the original schemas for the International Aid Transparency Initiative (IATI), is currently leading the Humanitarian Exchange Language (HXL) standards initiative within the United Nations, and is serving as architect for UN OCHA's new crisis-data initiative, the Humanitarian Data Exchange (HDX).

David's work also includes two books: Structuring XML Documents (Prentice Hall, 1998) and Imperfect XML (McGraw-Hill, 2004).   In Spring 2000, he was proud to receive the Java Technology Achievement Award For Outstanding Individual Contribution to the Java Community from Sun Microsystems and JavaPro magazine.

Outside of information technology, David is a tea drinker, an instrument-rated private pilot flying volunteer non-emergency medical flights for Hope Air, and the founder of the OurAirports aviation open-data project.

Patrick Philippe Meier
Director of Social Innovation
Qatar Computing Research Institute

Patrick Meier (PhD) is an internationally recognized thought leader on the application of new technologies for crisis early warning, humanitarian response and resilience. He presently serves as Director of Social Innovation at the Qatar Computing Research Institute (QCRI) where he develops and prototypes Next Generation Humanitarian Technologies using Social Computing, Big Data Analytics, Artificial Intelligence and Machine Learning. Patrick is also a UNICEF Humanitarian Innovations Fellow, a Rockefeller Foundation and PopTech Fellow, a Harvard Humanitarian Initiative (HHI) Fellow, a National Geographic Emerging Explorer and a member of the Academy of Achievement (AoA). His influential blog iRevolution has received over 1.2 million hits and his LinkedIn profile is in the top 1% of most-viewed profiles.

Prior to QCRI, Patrick co-founded and co-directed the Harvard Humanitarian Initiative's (HHI) Program on Crisis Mapping & Early Warning and served as Director of Crisis Mapping at Ushahidi. He has consulted extensively for several international organizations including the United Nations and the World Bank. He co-founded CrisisMappers, MicroMappers, Digital Humanitarians, the award-winning Standby Task Force and sits on the Board of iLab Liberia. Patrick is an accomplished speaker, having given talks at the White House, UN, Google, Harvard, Stanford and MIT. He has also presented at major international conferences including the Skoll World Forum, Club de Madrid, Mobile World Congress, PopTech, Where 2.0, TTI/Vanguard, SXSW and several TEDx's. In 2010, he was publicly praised by President Bill Clinton for his digital humanitarian efforts. Given his unique expertise, Patrick is often interviewed by the media, which has included the New York Times, Washington Post, BBC, The Economist, Wall Street Journal, UK Guardian, CNN, NPR and Wired. He is also a distinguished scholar, holding a PhD from The Fletcher School, a Pre-Doctoral Fellowship from Stanford University, an MA from Columbia University and EAP from UC Berkeley. In addition, he was a Research Fellow at the Peace Research Institute, Oslo (PRIO) and holds an advanced certificate in complexity science from the Santa Fe Institute (SFI). Patrick has given numerous guest lectures and has taught several professional, graduate and undergraduate courses. He writes the widely respected iRevolution blog and tweets at @patrickmeier.

Lina Nilsson
Innovation Director, Blum Center for Developing Economies
University of California Berkeley

Lina Nilsson is the Innovation Director at the Blum Center for Developing Economies at the University of California Berkeley. At the Center's Development Impact Lab (DIL), a USAID Development Lab headquartered at UC Berkeley, she designs financial and technical support platforms for university innovations (from 'lab bench to community').

Lina also runs the Center's On-Ramp, a pre-accelerator program for early stage innovators. She has previously worked on novel TB diagnostics in Vietnam, and is also the founder of Tekla Labs, a group that creates instructions for building laboratory equipment using locally available supplies.

Lina has a Dr.sc from the ETH Zurich and is a recipient of the ETH Medal for her doctoral thesis work. In 2013, she was recognized as a MIT Tech Review Innovator under 35.

Amy Noreuil
Geographic Information Specialist and Co-Team Lead, Geographic Information Unit
Office of Transition Initiatives, U.S. Agency for International Development (USAID/OTI)

Amy Noreuil is a Geographic Information Specialist and Co-Team Lead for the USAID Office of Transition Initiatives (OTI) Geographic Information Unit. USAID/OTI supports U.S. foreign policy objectives by helping local partners advance peace and democracy in priority countries in crisis. Seizing critical windows of opportunity, OTI works on the ground to provide fast, flexible, short-term assistance targeted at key political transition and stabilization needs. The Geographic Information Unit is tasked with providing data analysis and visualization support to inform OTI country programs around the world.

Amy holds a BA in International Affairs from the Elliot School of International Affairs and a MA in Geography from the Columbian College of Arts and Sciences at The George Washington University in Washington, DC. Prior to working for USAID/OTI, she held positions at USAID Office of Foreign Disaster Assistance, U.S. Embassy Gabon – Political Section, United Nations Office on Drugs and Crime and the Council for Excellence in Government.

Ted Okada
Chief Technology Officer
Federal Emergency Management Agency (FEMA)

A member of the Senior Executive Service and FEMA's Chief Technology Officer (CTO), Mr. Ted Okada is responsible for leading the technology strategy and direction for a wide variety of mission, business and enterprise systems, providing guidance, advisory services as well as investment and change management planning. Under his leadership, he has aspired to drive FEMA towards the ethos of an "expeditionary start-up organiza- tion" by leveraging a broad range of continuous improvement initiatives involving open data, geospatial technologies, as well as a whole community approach to interoperable communications in the event of a disaster.

Mr. Okada is the creator and executive sponsor of OpenFEMA—a project that ensures FEMA is providing timely, usable, and accurate information to constituents to enhance and promote a transparent and collaborative culture within FEMA. This growing open source and digital nature of information-sharing and communications were opened up for use by the media, non-profits, and universities immediately after the Hurricane Sandy disaster that resulted in a number of out- comes benefitting storm survivors.

Mr. Okada has been with FEMA since March 2012 and previously served as the Senior Advisor for Technology for the FEMA Administrator. He has over thirty previous years in international relief and development with a decade in internet services architecture and two technology start-ups. He served as the Director of U.S. Global Public Private Partnerships as well as Director of the Humanitarian Systems Group, both positions at Microsoft. In this position, Mr. Okada developed solutions to the world's most vexing and least served humanitarian problems. He supported and developed programs in Uganda, Afghanistan, Ethiopia, Kenya, Rwanda, Haiti, DR Congo, Albania, Dominican Republic, Kosovo, Pakistan, Gua- temala and the Philippines. With a background in child survival, community health systems, food security, agricultural extension, and emergency management, Mr. Okada also managed advocacy programs for refugees during the 1980's and worked on landmark citizenship legislation.

While at Microsoft, Mr. Okada led his team in response to the Kashmir Pakistan earthquake in 2005, humanitarian efforts in Afghanistan, and was part of the rapid deployment team that assisted the city of Galveston during Hurricane Ike. He is also lead inventor with former colleagues at Microsoft's Concept Development Labs on a 2009 US patent filing related to mesh networks in disasters.

Mr. Okada is a 1982 graduate of Northwestern University with a B.A. in Mathematical Methods in the Social Sciences and Economics, studying under the late Michael Dacey and Nobel Laureate, Dale Mortensen. Mr. Okada is a member of Burke Fire Station 14 in Fairfax County, Virginia, and is a licensed General Class Amateur Radio Operator. While reachable through email, Mr. Okada typically listens on the Maritime Mobile and National Hurricane Nets at 14.300 and 14.325 Mhz.

John Peyrebrune
Management and Administration Team Leader
USAID/OFDA

John Peyrebrune is with the U.S. Agency for International Development's Office of Foreign Disaster Assistance (USAID/OFDA). OFDA is the office responsible for leading and coordinating the U.S. Government's response to international crises and disasters. As Team Leader, John oversees OFDA's budget, finance, and information and communications technology (ICT) functions.   John has been with OFDA for ten years and has supported its operations and disaster response activities around the world.

Before coming to USAID, John worked as a consultant on major IT acquisition projects at the Federal Aviation Administration and the Department of Veterans Affairs. He also served for four years as a volunteer Disaster Action Team Lead with the National Capital Area chapter of the American Red Cross. John has a B.A. in Political Science from LeMoyne College, and an M.B.A. and Graduate Certificate in Crisis and Emergency Management, both from the The George Washington University.

Sreenivasan (Raj) Rajagopal
Senior Product Manager
IBM Cloud / DevOps Services

Raj manages App Development & DevOps in the cloud solution for IBM. He has over 16 years of software industry experience and has previously managed Test Automation, Service Virtualization (GreenHat) and Enterprise Change and Configuration Management Solutions (ClearCase, ClearQuest, Rational Team Concert, Jazz Integrations) for IBM.

Raj has worked closely with several startups, non profits and public sector organizations on commercial and open access software tools and is passionate about promoting technology to solve humanitarian needs.

You can follow Raj via twitter @SreenivasanRaj

Ramesh Raskar
Associate Professor
MIT Media Lab

Ramesh Raskar is an Associate Professor at MIT Media Lab. Ramesh Raskar joined the Media Lab from Mitsubishi Electric Research Laboratories in 2008 as head of the Lab's Camera Culture research group. His research interests span the fields of computational photography, inverse problems in imaging and human-computer interaction. Recent projects and inventions include transient imaging to look around a corner, a next generation CAT-Scan machine, imperceptible markers for motion capture (Prakash), long distance barcodes (Bokode), touch+hover 3D interaction displays (BiDi screen), low-cost eye care devices (Netra,Catra), new theoretical models to augment light fields (ALF) to represent wave phenomena and algebraic rank constraints for 3D displays(HR3D).

In 2004, Raskar received the TR100 Award from Technology Review, which recognizes top young innovators under the age of 35, and in 2003, the Global Indus Technovator Award, instituted at MIT to recognize the top 20 Indian technology innovators worldwide. In 2009, he was awarded a Sloan Research Fellowship. In 2010, he received the Darpa Young Faculty award. Other awards include Marr Prize honorable mention 2009, LAUNCH Health Innovation Award, presented by NASA, USAID, US State Dept and NIKE, 2010, Vodafone Wireless Innovation Project Award (first place), 2011. He holds over 50 US patents and has received four Mitsubishi Electric Invention Awards. He is currently co-authoring a book on Computational Photography.

Corinne Ringholz
AAAS S&T Policy Fellow, Data and Analytics Team
Center for Data, Analytics, and Research
USAID Global Development Lab

Corinne Ringholz is an American Academy for the Advancement of Science Science and Technology Policy Fellow at the U.S. Agency for International Development – Global Development Lab (USAID/LAB). The Lab is a new entity within USAID that seeks to increase the application of science, technology, innovation and partnerships (STIP) to achieve, sustain, and extend the Agency's development impact to help hundreds of millions of people lift themselves out of extreme poverty. Within the Lab, Corinne works on the Data and Analytics Team to increase access to new data and innovative analytics in support of Agency programs, with a focus on social media.

Before starting her fellowship, Corinne was a Senior Analyst at Analytic Services Inc., where she advised the Joint Science and Technology Office of the Department of Defense as an epidemiology and biosurveillance subject matter expert.

Corinne holds a Ph.D. in epidemiology from the University of Rochester, which allowed her to conduct her dissertation research at the National Institutes of Health's Fogarty International Center.

Julie Shah
Boeing Assistant Professor
Department of Aeronautics and Astronautics
Computer Science and Artificial Intelligence Lab
MIT

Julie Shah is an Assistant Professor in the Department of Aeronautics and Astronautics and leads the Interactive Robotics Group in CSAIL. Her research goals are to develop innovative methods for enabling more fluid human-robot teamwork in high intensity domains—drawing on expertise in artificial intelligence, human factors, and systems engineering. Her research interests include multi-agent coordination, dynamic plan execution under uncertainty, and temporal reasoning. Prior to joining the MIT faculty, Julie Shah worked with Boeing Research and Technology on robotics applications for aerospace manufacturing.

James A. Smith
Professor, University of Virginia
Founder & Director, PureMadi

James A. Smith is the Henry L. Kinnier Professor of Environmental Engineering in the Department of Civil and Environmental Engineering at the University of Virginia. He received his B.S. and M.S. degrees in Civil Engineering from Virginia Tech in 1983 and 1984, respectively. He received his Ph.D. in Civil Engineering from Princeton University in 1992. He has worked as a research hydrologist with the U.S. Geological Survey from

1985 to 1992. In 1992, he accepted his current position as a faculty member in the Civil and Environmental Engineering Department at the University of Virginia. Mr. Smith has served as the UPS Foundation Visiting Professor of Environmental Engineering at Stanford University (1998-99) and as the William R. Kenan Visiting Professor for Distinguished Teaching at Princeton University (2004-05). At the University of Virginia, he has been the recipient of the Alumni Board of Trustees Teaching Award (1997) and has held the Cavalier's Distinguished Teaching Chair (2000-02). He was selected to receive the AEESP/McGraw Hill Outstanding Teaching Award in 2002. Mr. Smith is a Fellow of the American Society of Civil Engineers and is the founder of PureMadi, a not-for-profit organization working to solve global water and health problems by working at the interface of water, societal, and human health disciplines. His research interests include sustainable point-of-use water treatment technologies for the developing world and their impact on human health, the disinfection properties of zero-valent nano-silver and nano-copper particles, organic vapor transport in the vadose zone, low-impact development (LID) teachnologies for stormwater runoff, the fate and transport of emerging environmental pollutants, the engineering properties of organoclays, phytoremediation, and bacterial chemotaxis in porous media.

Nigel Snoad
Product Manager
Google Crisis Response

Nigel is a product manager for Google's Crisis Response team, which is changing how citizens stay informed during crises by providing information and tools to help people collaborate during emergencies and build resilient communities.

Before joining Google in 2011, Nigel led R&D on humanitarian systems at Microsoft working on crisis solutions and responses in Afghanistan, Haiti and elsewhere. Nigel spent several years at the United Nations helping lead global pandemic contingency planning and the UN Joint Logistics Center's responses in Iraq in 2003, after the 2004 tsunami in Indonesia and in Darfur in 2004/2005. Nigel has taught courses in Humanitarian Design at Parsons the New School for Design, partnering with groups like the World Bank and the Red Cross to develop innovative design-thinking approaches to complex humanitarian and development problems. Nigel has a PhD in complex adaptive systems from the Australian National University and has held research fellowships at the Santa Fe Institute and Stanford University.

Martha Symko-Davies
Director, Energy Systems Integration
National Renewable Energy Laboratory (NREL)

Dr. Martha Symko-Davies is the Director of Partnerships for Energy Systems Integration (ESI) at the National Renewable Energy Laboratory (NREL) in Golden. Specific collaborations are focused around the Energy Systems Integration Facility (ESIF) addressing the challenges of large-scale integration of energy technologies into the energy systems infrastructure. Previous to this role she was the architect for the PV Technology Incubator resulting in over $1.4 billion in private investments. Recently she was selected by DOE as one of the top Innovators in the area of photovoltaics. In addition to numerous publications/presentations in this area she has also recently received four R&D 100 Awards. She recently spoke at TEDXDU.

Tomicah S. Tillemann
Senior Advisor to the Secretary for Civil Society and Emerging Democracies
U.S. Department of State

Secretary Clinton appointed Dr. Tomicah Tillemann as the State Department's Senior Advisor to the Secretary for Civil Society and Emerging Democracies in October 2010. He continues his service under Secretary Kerry.

Dr. Tillemann and his team operate like venture capitalists, identifying ideas that can strengthen new democracies and civil society, and then bring together the talent, technology and resources needed to translate promising concepts into successful diplomacy. He and his team have developed over 20 major initiatives on behalf of the President and Secretary of State.

Dr. Tillemann came to the State Department as a speechwriter to Secretary Clinton in March 2009 and collaborated with her on over 200 speeches. Earlier, he worked for the Senate Foreign Relations Committee, where he was the principal policy advisor on Europe and Eurasia to Committee Chairmen, Senators Joe Biden and John Kerry. He also facilitated the work of the Senate's Subcommittee on European Affairs, then chaired by Senator Barack Obama. Dr. Tillemann's other professional experience includes work with the White House Office of Media Affairs and five U.S. Senate and Congressional campaigns. He was a reporter with Reuters New Media and hosted a commercial radio program in Denver, Colorado.

Dr. Tillemann is also a co-holder of four patents on advanced clean technologies and a co-founder of IRIS Engines. He has helped to found and lead numerous civil society organizations, including the Lantos Foundation for Human Rights and Justice and the Student Campaign for Child Survival.

Dr. Tillemann received his B.A. magna cum laude from Yale University. He holds a Ph.D. with distinction from the School for Advanced International Studies at Johns Hopkins University (SAIS) where he also served as a graduate level instructor in American foreign policy. He has lectured at Yale and Princeton and testified repeatedly before Congress. Secretary Clinton personally nominated him for the State Department's Distinguished Honor Award in recognition of his innovative efforts to strengthen democracy and civil society worldwide.

Follow Dr. Tillemann on Twitter, @TomicahTD.

Bartel Van de Walle
Associate Professor, Department of Information Management
Tilburg School of Economics and Management

Dr. Bartel Van de Walle is a tenured Associate Professor at the Department of Information Management, Tilburg School of Economics and Management at Tilburg University (the Netherlands), visiting professor at Harbin Engineering University (China) and guest professor at the Universita della Svizzera Italiana in Lugano. He served as a staff advisor on science policy to the Flemish minister of science and innovation in 2010-2011, and is board member of the Flemish Institute for Technological Research (VITO) since 2010.

He received his MSc and his PhD in Applied Mathematics and Computer Science from Ghent University (Belgium). His dissertation research was on decision support for individuals and groups, two areas which are still at the core of his current research interests at the intersection of information and communication technologies and the (humanitarian) crisis management domain.

These interests have lead him to work for various European or UN funded research and consultancy projects in Africa

(Cameroon, Chad, Democratic Republic of Congo, Egypt, Morocco, Mozambique, Senegal, and South-Africa), the Middle East (occupied Palestinian territories and Jordan), China, Russia, as well as in several universities and research labs in Europe and the USA.

Bartel has published nearly 100 reviewed papers in proceedings of international conferences and journals. He has served as a reviewer, advisor or consultant for the American, Dutch and Flemish National Science Foundations, the European Commission, and the United Nations (ISDR, OCHA and WHO). Bartel received a prestigious Marie Curie Fellowship in 2005 for his research on threat rigidity and computer-mediated communication and decision making.

Bartel co-founded the international Information Systems for Crisis Response and Management (ISCRAM) Community in 2004, and has since co-organized special sessions, tracks, international workshops, conferences and PhD Summer Schools in Europe, the USA and China. Bartel was elected founding chair of the Board of the ISCRAM Association, established as an international non-profit organization in Belgium in 2009.

Patrick Vinck
Director, Program for Vulnerable Populations
Harvard Humanitarian Initiative

Patrick Vinck, Ph.D., is the director of the Program for Vulnerable Populations at the Harvard Humanitarian Initiative. He works on peace, reconstruction and development projects throughout Africa and Asia including most recently in the Democratic Republic of the Congo and the Ivory Coast. He has written about the consequences of war, trauma and societal reconstruction, displacement and resettlement, and the role of justice, better governance and transitional mechanism to achieve peace. He also serves as a regular consultant on vulnerability analysis and evaluations to the United Nations World Food Programme, World Bank, and Peacebuilding Fund. Prior to joining HHI in 2011, he founded the program at the University of California Berkeley's Human Rights Center. Vinck also-cofounded KoBoToolbox (www.kobotoolbox.org), a digital data collection project to advance human rights, humanitarian, and social science data collection. This work has led him to focus part of his research on the opportunities and challenges of new application of technologies in the field. He was the editor of the 2013 World Disasters Report on Technology and Humanitarian Action.

Vinck holds appointments at the Brigham and Women's Hospital, Harvard School of Public Health, the Harvard Faculty of Arts and Science and Tulane University. He also serves as a member on the Committee on Scientific Freedom and Responsibility of the American Association for the Advancement of Science. He graduated as an engineer in applied biological sciences from Gembloux Agricultural University (Belgium), and holds a Ph.D. in International Development from Tulane University.
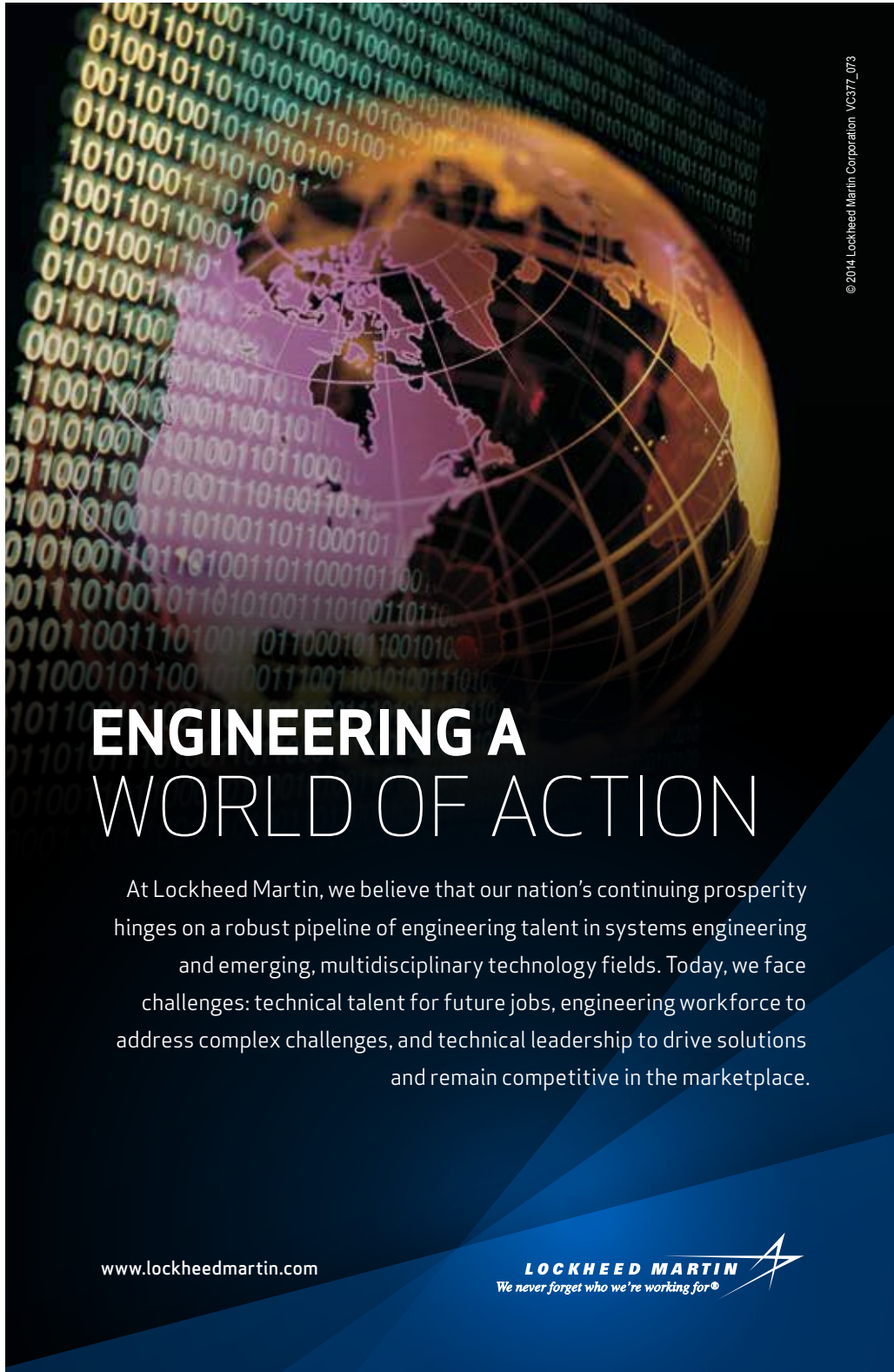
Benson Wilder
Humanitarian Information Unit, Office of the Geographer and Global Issues
U.S. Department of State

Benson Wilder is a geographer and human security analyst in the U.S. State Department's Office of the Geographer and Global Issues, Humanitarian Information Unit (HIU). The HIU is an interagency unit whose mission is to identify, collect, analyze, and disseminate information critical to U.S. decision-makers and international partners in preparation for and response to complex emergencies and natural disasters, and to promote best practices for humanitarian information management.

Benson joined the HIU in July 2008 following several years of work in the non-profit sector. He received his B.A. in Biology from Swarthmore College and an M.A. in Geography from the University of Colorado at Boulder, where his graduate research focused on political ecology, sustainable livelihoods, and governance in southern Africa. His work in the HIU centers on complex emergencies, conflict, and human security in sub-Saharan Africa, in particular Sudan, South Sudan, and the Democratic Republic of the Congo. He also works on improving data availability to support humanitarian response, through a number of initiatives including Imagery to the Crowd (https://hiu.state.gov/ittc/ittc.aspx) and MapGive (http://mapgive.state.gov/).

	Monday **12 May 2014**	**Tuesday** **13 May 2014**	**Wednesday** **14 May 2014**	**Thursday** **15 May 2014**

0830

1030

1230

1430

1630

1800

1900

2100

Monday 12 May 2014

Check-In and Cocktail Hour

Tuesday 13 May 2014

Plenary Session
HHI
FEMA
USAID/OFDA

Morning Keynotes
NREL
UVa
MIT
PIH

Featured Talks
RPI
Souktel

Track A1   Track F1

Track E1   Track D1

Wednesday 14 May 2014

Plenary Session
MIT
State Dept.

Morning Keynotes
MIT Media Lab
MIT CSAIL
Drone Adventures
Digital Globe

IBM
Microsoft

Panel Session
UC Berkeley

Exhibit, Poster and Networking Session

Track C2   Track F2

Thursday 15 May 2014

Plenary Session
US HHS

Morning Keynotes
USAID/OTI
State Dept.
Skybox Imaging
Google
QCRI

Featured Talks
USAID
UN OCHA
PA Consulting

Panel Session
Red Cross

Afternoon Plenary
Disaster Resilience Lab
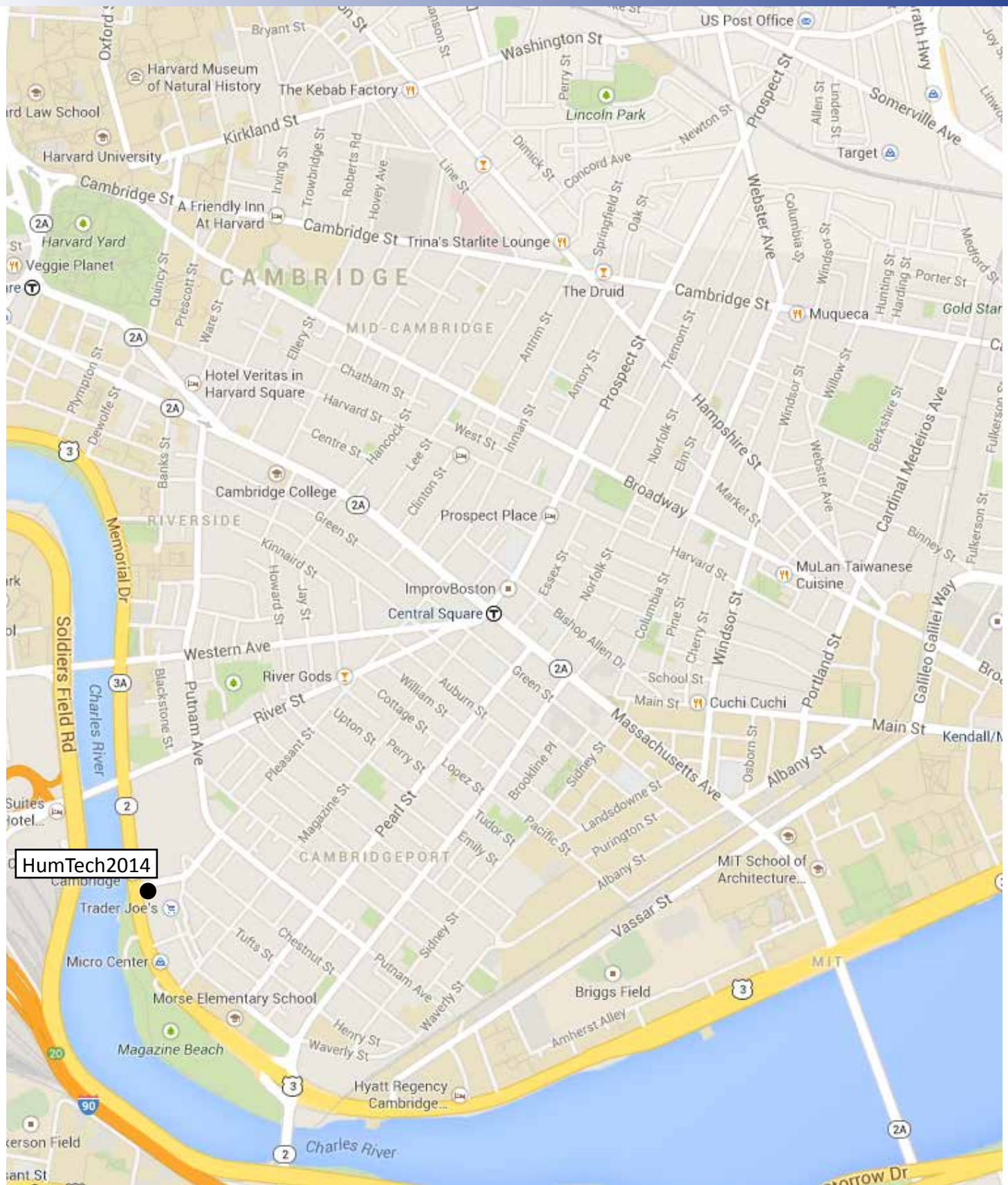
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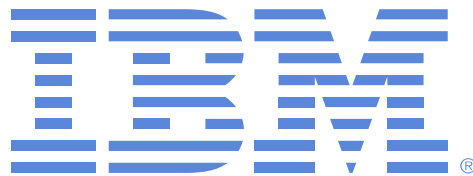
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