Mitchell Sutika-Sipus www.mitchellsipus.com & www.sipusdesign.com
mitchell.sipus@gmail.com (USA Tel) 1.313.603.6588

SUMMARY

Expertise: Conflict Cities, Migration, Research & Design Methods, Design Theory, Informatics

Experience: 10+ years creating radical transformation in complex environments by design

Greatest Achievement: Oversaw the transformation of Mogadishu Somalia from the "worlds most dangerous city" of 21 years to the 3rd fastest growing urban economy in 2013/2014

Key Highlight: First Designer to advise and assist US National Security Council

EDUCATION

2014 - PhD Design (ABD), Carnegie Mellon University

2011 Masters of Science in Architecture & Historic Preservation, University of Cincinnati DAAP

2010 Masters of City Planning in International Development University of Cincinnati DAAP

2009 Graduate Diploma in Migration and Refugee Studies, American University in Cairo, Egypt
*Funded by Fulbright Fellowship

2004 Bachelors of Fine Arts in Drawing, Art Academy of Cincinnati

2002 AICAD New York Studio Program, Parsons The New School for Design

Current

The White House, Presidential Innovation Fellow Washington DC

- Design, Build, and Advance groundbreaking initiatives for National Security Council, Office of Science and Technology Policy, Environmental Protection Agency, the Directorate of National Intelligence, Veterans Affairs, and US Department of State
- Designed and currently piloting the the largest declassification of government records in history, with pending release of 12+ billion classified intelligence documents through machine learning applications for metadata creation, indexing, and situation awareness
- Pending January 1 2017: Detailed to State Department *Bureau of Arms Verification and Compliance* to build social innovation networks and design new technologies for the identification of nuclear weapons and the enforcement of international weapons treaties

Symkala, Founder and CEO Pittsburgh PA, Aleppo Syria, Gaziantep Turkey

- Symkala is new approach to GIS leveraging unstructured inputs, Symkala applies a fusion of machine learning, computer vision, and network analytics to extract refined and accessible geospatial data for analysis. Additional experiments with ABM simulation in place.
- This startup includes 3 co-founders, 8-member team, 2 locations, has a working prototype and is pursing DARPA support for commercialization to shift geospatial industries into a new era of mixed methods and data fluidity

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PRIVATE PRACTICE

Sutika Sipus Research + Design (Selected Contracts) *October 2011 to 2015*
Sutika Sipus is a private research and design firm committed to social research, monitoring and evaluation, technology creation, service design, and temporally-appropriate urban systems change

09/2015 – 12/2015
UN High Commissioner on Refugees, Erbil Iraq
- Consultancy for Organizational Design to Enhance Data Collection Methods and Technologies for Rapid Needs Assessments concerning protection of internally displaced populations.

11/2014 - 03/2015
US Institute of Peace, via **Centre for Conflict and Peace Studies** Kabul, Afghanistan
- Trained 15 members of CAPS staff on data recording and survey techniques to interview active Taliban commanders and members of militant groups in multiple provinces
- Collated, cleaned, and analyzed data to map organizational structures, organizational resilience, and to identify key stakeholders for brokering peace agreements

01/2014 – 03/2014
American Association for the Advancement of Sciences (AAAS) Washington, DC
- Requested by AAAS Dept. of Human Rights and Technology to invent new strategies for on the ground monitoring of destruction of cultural heritage in Syria
- Established partnership with **Microsoft Research** to use MS photosynth capability for media collected by mobile users, and geolocate 3D synthesis into satellite imagery to produce real-time monitoring of Syrian conflict. Project development with Microsoft is ongoing.

12/2013-08/2014
Spatial Networks Inc. via **U.S. Army Corps of Engineers, Department of Defense** Horn of Africa
- Compiled the **world's most accurate map of Mogadishu** from on the ground data collection
- Baseline fieldwork for research indicator determination of communication infrastructure, health facilities, religious practice, and security conducted for 21 days throughout Ethiopia
- Interface Design for Geo-Spatial Social Data Collection Application within Fulcrum for data collection fieldwork in Mogadishu

04/2012 -05/2012
The Municipality of Kabul Afghanistan USAID Kabul City Initiative Afghanistan
- Over 8 weeks, trained 50 members of the municipal administration on issues of participatory urban planning for Kabul City Initiative funded by USAID
- Conducted exercises on community engagement, map concepts, services management, and urban design for improved services provision

12/2011-11/2014

The Municipality of Mogadishu Somalia, Advisor to the Mayor on Post-War Reconstruction

- With zero resources, founded Urban Technology Center to rebuild Mogadishu and to improve government efficiency, increase transparency, and improve security
- Integrated open-source technologies to create a spatial database of city assets to inform city management, reduce power of local warlords, and improve relations with United Nations staff
- Used social media and Somali diaspora networks to design and distribute a global and local city rebranding media campaign to facilitate the inflow of new economic assets

01/13 -04/2013

CaerusGeo Caerus Associates and USAID OTI Egypt, Afghanistan, Somalia

- Provided rigorous testing and design strategy services for CaerusGeo (now FirstMileGEO) a tool to conduct GPS-located social research in low bandwidth environments
- Tested product in rigorous environments including with multiple research designs
- Conducted large scale testing with over 100 users for improved workflow management

08/2012 to 05/2012

Mapping of Urban Graffiti to Measure Social Tensions and Predict Conflict, Kabul Afghanistan

- Trained 100 mapping participants on FirstMile Geo for Urban Data Mapping
- Created a database of graffiti in Kabul to measure the validity of graffiti as an indicator of social tension and predictor of social conflict
- Collaborated with Spatial Networks, resulting in iOS application, graffitimapper.org, to expand data collection to global scale with an array of users and locations
- Graffitimapper is presently used by Urban Planning Department of Long Beach, CA
- Presented application and findings on conflict analysis, at *MIT Media Lab* in May 2013

TEACHING EXPERIENCE

08/2016 - present

The Johns Hopkins University & Maryland College Institute of Art, Joint MBA in Design

Cultural Awareness and Relevance - Fall 2016. Graduate Core Curriculum. This course is a fusion of social science research methods, geography, design sense-making methods, and data science analytics. Integrated with the White House Office of Science and Technology Policy and White House CTO initiative, *Opportunity Project 2.0*, students build a deep understanding of the migrant entrepreneurship ecosystem among migrants living in Baltimore. Students conduct deep ethnographic research, quantify and spatially map their findings, and utilize federal Open Data to extrapolate new opportunities for the migrant communities.

08/2014 - 01/2016

Carnegie Mellon University, School of Design & Human Computer Interaction Institute

Systems – Spring 2014. Undergraduate Freshman Core Curriculum, Design Studies
This course introduces students to models of design thinking and processes. Includes introductions to, chaotic systems, complex systems, complex adaptive social systems, soft systems, business and organization models, systems analysis, and diagramming techniques

Sensing Environments - Fall 2015. Graduate Studio for Masters of Design and HCI
Students are trained in methods outside of traditional HCD, exploring the realm of environmental psychology, post-occupancy analysis, spatial anthropology, and economic geography. Students leverage these analytical tools and frameworks to generate and prototype product-service systems for poorly structured problems to create hybrid spaces and technologies generated from new value propositions.

07/2011- 12/2013

The American University of Afghanistan, Kabul Afghanistan
Full Faculty, Department of Information Technology and Computer Science

- Designed Afghanistan's first BA degree curriculum in Multimedia & Mass Communications
- Designed ITCS curriculum in response to student abilities, university goals, and resource capacity leading to increased enrollment and reduction in drop-out
- Prototyped and piloted tools for online-learning within low-bandwidth environments
- Obtained donation valued over $280,000 USD in GIS software donations from ESRI

Designed and taught the following courses (Total of 4 sessions per semester):
Social Science Research Methods 320 – Introduction to epistemological research theories, research design, survey design, ethnography, participatory action research, qualitative field methods and analytical tools for qualitative analysis. All field research conducted within Kabul, Herat, and Mazar-Sheriff

Public Policy Formation 210 – Surveyed an array of public policy concerns for sustainable community development with exposure to issues of economics, job creation, sanitation, water, resource consumption, and urbanism. Students studied policy formation as bottom-up, top-down, and mixed models, then developed a rich policy proposal for urban issues in their home provinces.

Intro to Communications 100 – This course provided a historical overview of media in society and a survey of contemporary media topics including social media, mass media and non-state actors, the global digital divide, surveillance, data-centric governance, mobile driven economic growth.

Introduction to Computers 101 – Hardware Basics, MS Word and Excel, GIMP, Data Visualization with IBM Many Eyes, Intro to GIS with FirstMileGeo and GeoCommons, Intro to HTML

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Other Professional Experience

06/2015 – 01/2016

The Randy Pausch Lab, Human Computer Interaction Institute, Carnegie Mellon University

- Human Robotics Interaction Research with Dr. Jodi Forlizzi concerning the benchmarking, assessment, and design of Human-Machine-Interfaces for workforce development in industrial robotics applications
- Conducted participatory and non-participatory ethnographic research on human machine interactions in Cranberry Pennsylvania, Toledo Ohio, and Roche Sur Yon France

08/2010-07/2011

National Academy of Sciences, Editorial Design Assistant, Washington DC USA

Editorial support for publications in Sustainability Science including special features in "Poverty and Hunger Alleviation" in monthly publication of Proceedings of National Academies (PNAS)

10/2009-12/2009

Samasource, Technology Consultant, Kenya

Conducted a comprehensive analysis of 11 Nairobi projects, assessed participant capacities and resources, provided training, acquired new project partners and provided organizational strategy

08/2008 – 08/2009

LEAD Project, Gang Violence Project Co-Founder and Operations Management, Cairo Egypt

- Co-founded, designed, and implemented violence reduction programming for Sudanese refugee street gangs living in the Ain Shemz, Maadi, and Hey-al-Asher neighborhoods of Cairo, Egypt with zero funding or external partners
- Led a sub-project using to write original hip-hop music, create music videos, and communication media for participants as a strategy for alternative dispute resolution and livelihood creation among gang members
- Projected resulted in permanent truce of 240 gang members, various video and audio products, support of United Nations, local non-profits, and receipt of $60,000 in grants for expansion

07/2007 – 08/2007

Save the Children UK, Consultant, Dadaab Refugee Camps Kenya

- Planned and designed safe child spaces and housing solutions for vulnerable Somali children according to Inter-Agency Network for Education in Emergencies (INEE) standards and Sphere Minimum Standards
- Used primitive equipment to conduct all site planning and design at scale within challenging conditions, including the use of satellite phones and graph paper to geolocate all work in CAD

06/2007 – 08/2007

Norwegian Refugee Council, Sustainable Design Researcher, Dadaab Refugee Camps Kenya

- Initiated and designed ground-breaking research to assist international agencies with the creation of better housing solutions for a protracted crisis
- Conducted 3 month evaluation of refugee housing provided by CARE and Norwegian Refugee Council to determine socio-economic, environmental, and cultural sustainability of housing
- Designed and implemented Community Development workshop for at-risk youth to engage youth in working with local aid agencies to examine the sectorial overlap of housing, security, and infrastructure
- Recruited, trained and managed 30 research assistants for quantitative data collection
- Following 90 days of mixed methods research, provided NGOs with final report and recommendations

05/2006 – 05/2007

Gray & Pape Cultural Resource Consultants Technical Specialist, USA

- Conducted historic preservation assessments of historic buildings and cities
- Personal responsibilities included field visits assessments, archival research, data analysis, report writing, documentation, GIS analysis, database development with Microsoft Access

05/2005 – 05/2006

Cincinnati Museum of Natural History, Archaeology Intern

- Cleaned, repaired, and archived Native American artifacts from Paleolithic and Woodland eras
- Documented and reconstructed shattered pottery artifacts for museum exhibition
- Created a digital archive of Paleolithic artifacts acquired from throughout the US

Invited Presentations (Selected)

2017 MAAD City, Keynote Speaker, Rig Latvia (upcoming May 23)

2017 Notre Dame University at Louzane, Lebanon (upcoming Mar)

2016 Reconsidering Technology in National Security, National Defense University Dec 3

2016 *Human Factors in CyberSecurity,* National Defense University Sep 26

2016 *Unfolding the Rhizome*, George Washington University, Department of Geography, Sep 9

2016 *GISFutures***,** Harvard University, *Dynamic Mapping of Secondary Cities Symposium, Jun 14-15*

2016 *New Models of Cease-Fire Monitoring,* AAAS, Feb 18

2015 "*[M]," Geography2050, Earth Institute, Columbia University Nov 19-20*

2014 *Making Sense of Syria 2014,* School of Visual Arts, New York City

2013 Graffiti & Stability in Kabul, *MIT8 Media In Transition,* Massachusetts Institute of Technology

2012 *3rd International Conference on Space and Place*, Oxford University UK

2010 *Humanitarian Standards*, Georgetown University Washington DC.

2009 Fulbright Committee Regional Conference, Amman Jordan

2007 *45th Commission on Economic and Social Development*, United Nations, NY

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Awards, Grants, Fellowships & Scholarships (Selected)

2015 White House Presidential Innovation Fellowship

2013 Carnegie Mellon University, School of Design, Full Fellowship

2012 AUAF Student Voted Exceptional Teaching Award, Department of IT and Computer Science

2009 UNESCO Education in Post-Conflict Reconstruction Fellowship Finalist

2008 U.S. Department of State *Fulbright Fellowship* to Cairo, Egypt

2006 University of Cincinnati, Graduate Fellowship

2004 Wilder Traveling Artist Grant

2000 Art Academy of Cincinnati Scholarship

Publications - Peer Review

2015 Sipus, Mitchell. "Rebuilding Mogadishu with Lessons from Kabul," in *Beyond the PostModern: Reconceptions of Space and Place for the Early 21st Century.* Ed. Harris Breslow and Antje Ziethen. Interdisciplinary Press, Oxford

2011"Support for al-Shabaab by Diaspora" Forced Migration Review, 37.

Other Publications

2016 Satiani S, Sipus M & Fullenwider K. "Service Design as a Human Centered Approach to Veteran Services," The White House Office of Science and Technology Policy, Presidential Innovation Fellows Report for Office of Veterans Affairs

2015 "The Legal Constraints for Architectural and Spatial Enhancement of Refugee Camps," available at FUGA Architecture Center, Budapest Hungary, Nov 8

2015 w/ Sutika, Mallory. "Insurgent Alliances in Afghanistan," PeaceBrief 186, US Institute of Peace, June 15 http://www.usip.org/publications/2015/06/15/insurgent-alliances-in-afghanistan

2014 "Qualitative and Ethnographic Research with Fulcrum," *Fulcrum* March 26, accessible at http://www.fulcrumapp.com/blog/qualitative-and-ethnographic-research-with-fulcrum/

2013 "Slow and steady in Kabul," *Open Democracy, 12 March, https://www.opendemocracy.net/opensecurity/mitchell-sutika-sipus/slow-and-steady-in-kabul*

Other Writing (Selected)

2008 – Present: Humanitarian Space

For several years I have maintained the blog, thehumanitarianspace.com, to explore the interaction of technology, urbanism, and conflict with over 300 articles

External Coverage (Selected)

2016. Grey, David. *Liminal Thinking: Create the change you want by Changing the way you think. O'Reilly*

2014 Atherton, Kelsey D. "The Future of Urban Planning: Zoning for Drones" ***Popular Science***, August 22, http://www.popsci.com/article/technology/what-zoning-drones-could-be

2013 Grimmit, Chuck. "Rebuilding Mogadishu with Local Knowledge" ***FEE: Foundation For Economic Education***, August 28 http://www.fee.org/the_freeman/detail/rebuilding-mogadishu-with-local-knowledge

2013 Rogers, Adam. "Life After Warfare: How a digital map could revive a devastated Mogadishu," ***WIRED Magazine***, June (also available at www.wired.com/2013/06/fa_mogadishu/)

Technical Skills

Social Research – Qualitative, Quantitative, GeoSpatial, Agent Based Modeling, Social Network Analysis, Photometrics, Web Data Scrapping and Mining

Design – UI/UX Design, Spatial + Physical Planning, Information Architectures + Systems Design

Analytical tools – ESRI GIS, QGIS, SPSS, Excel w/ Statistical Package, "R", CytoScape,

Programming –HTML, CSS, CARTO, Processing, Python

Media –Adobe Creative Suite, Sketchup, AutoCad, Final Cut Pro, Logic, Ableton Live, MS Office

Mapping – ESRI ArcMap, QGIS, TileMill, CartoDB, Open Data Kit, FirstMileGEO, Fulcrum, Mapbox,

Languages

English - Native
Arabic - Proficient in *Egyptian* Dialect
Farsi/Dari, Kiswahili, Spanish - Basic