

WORK EXPERIENCE

- The Center for Technology and Economic Development** New York University Abu Dhabi, UAE
Research & Project Coordinator September 2014 - Present
- Coordinate 3-6 person teams of software developers across our UAE, Ghana, and US offices
 - Lead the agile development, scaling, maintenance, and testing of Android applications enabling farmers to map 5000+ farms and collect production data from 2 rural districts in central Ghana
 - Designed UI layouts to improve app accessibility for semi-literate users
 - Introduced a NodeJS web tool to efficiently validate crowdsourced spatial data (> 50% time savings) and generate parameters to improve automated filtering algorithms
 - In-depth research areas include geospatial databases, drone/aerial imagery collection, and GPS accuracy in smartphones and their suitability for mapping projects
- Research Associate 2012 - 2014
- Conducted multi-stage user studies and trainings of various Android app prototypes in Ghana
 - Determined end-to-end system specifications (UI/UX design; data transfer, storage, and visualization) based on assessments of technical and resource constraints in the field
 - Devised and wrote an Open Data Kit-based survey to collect data on food transportation costs
 - Tested and provided design insights for an app using accelerometers to assess road roughness
 - In-depth research areas included agricultural production data collection methods in Ghana, food transportation cost inputs in Ghana, and road quality surveying techniques
- Soul Communications, FZE** Dubai, UAE
Interim Chief Technology Officer Fall 2013
- Advised a start-up mobile phone company catered to the African market by developing target specifications, evaluating global suppliers, and identifying core content for product localization
- United Nations Industrial Development Organization** New York, NY
Energy Expert Intern Spring 2012
- Drafted speeches and strategy notes for meetings with government, private sector, and civil society stakeholders participating in the UN's *Rio+20 Conference on Sustainable Development*
- Woodrow Wilson School of Public and International Affairs** Princeton University, NJ
Science, Technology, and Environmental Policy Fellow 2009 - 2012
- Conducted an independent field study in central Kenya to assess the adoption and impact of solar lanterns on 52 households in an electrically off-grid community
- em[POWER] Energy Group, Inc.** Princeton, NJ
President of the Board of Trustees, Co-founder 2008 - 2011
- Co-founded a 501(c)(3) non-profit dedicated to alleviating poverty in waste landfill-based slums (Karachi, Pakistan and Dhaka, Bangladesh) through sustainable income-generating activities

EDUCATION

- Princeton University** Princeton, NJ
Ph. D., Electrical Engineering June 2012
Thesis: Adhesion and Interfacial Failure: From Organic Light Emitting Diodes and Photovoltaic Cells to Solar Lanterns for Developing Countries
- M.A., Electrical Engineering June 2009
- University of California, Los Angeles** Los Angeles, CA
B.S., Electrical Engineering (Major); Political Science (Minor) May 2006

SELECTED PUBLICATIONS AND PRESENTATIONS

T. M. Tong, J. Asare, E.R. Rwenyagila, V. Anye, O. K. Oyewole, A. A. Fashina, W. O. Soboyejo, "A Study of Factors that Influence the Adoption of Solar Powered Lanterns in a Rural Village in Kenya" *Perspectives on Global Development and Technology* 05/2015; 14(4):448-491.

DEV-4 Conference; Cape Town (South Africa)

"Experiences in Designing a Mobile GIS Mapping Tool for Rural Farmers in Ghana"
Poster, December 2013.

T. Tong, W. Akande, and W.O. Soboyejo. "Off-Grid Solar in the Developing World." Fundamentals of Materials for Energy and Environmental Sustainability. Eds. David S. Ginley and David Cahen. Cambridge University Press, November 2011.

Colloquium on Education, Science, and Technology in African Development; Princeton University
"Scientific and Technological Initiatives for Africa"
Invited Speaker, Moderator, April 2011.

SKILLS

Language: (Native) English; (Intermediate) French; (Beginner) Farsi, Arabic, Serbo-Croatian, Chinese

Computer: Java, JavaScript, NodeJS, Espresso; PostgreSQL, QGIS, Pix4D; (Basic) Matlab, (Basic) STATA; Open Data Kit; Asana; MS Office; Adobe Photoshop, Lightroom; Balsamiq, Sketch

ADDITIONAL INFORMATION

International Experience:

- Worked in USA (citizen), GCC, sub-Saharan Africa
- Studied abroad in Hong Kong, Croatia, and France
- Traveled to 55+ countries

Fellowships and Awards:

- National Science Foundation *Nanotechnology for Clean Energy* IGERT (1 year support)
- *Science, Technology and Environmental Policy* Fellowship (1 year support)
- *US-Africa Materials Institute* Fellowship to conduct research in Nigeria (2 month travel grant)
- *Technology for Developing Regions* Fellowship (1 semester support)

Selected Outreach Activities:

- *Princeton University Global Development Network* (2009): Led 5 students in building a bamboo camel saddle for medical workers to deliver vaccines to nomadic communities in Kenya and Ethiopia using a solar-powered refrigerator
- *International Rescue Committee* (2008): Initiated and facilitated a summer science class to teach 30 high-school aged refugees the basics of solar energy and its potential societal impacts

Hobbies: Photography; Graphic Design; Ice Hockey; Amateur DJ