
RESEARCH INTERESTS

Mobile wireless networks; network design, deployment, monitoring and evaluation; cognitive radio and dynamic spectrum access; networking for developing regions.

EDUCATION

PhD, Department of Computer Science <i>University of California Santa Barbara, Santa Barbara, CA</i>	<i>July 2014</i>
MS, Department of Computer Science <i>University of California Santa Barbara, Santa Barbara, CA</i>	<i>December 2013</i>
MEng, Department of Telecommunications <i>Technical University – Sofia, Sofia, Bulgaria</i>	<i>February 2008</i>
BEng, Department of Telecommunications <i>Technical University – Sofia, Sofia, Bulgaria</i>	<i>July 2006</i>

WORK EXPERIENCE

Assistant Professor, University at Albany SUNY.	<i>January 2016 - Present</i>
Visiting Assistant Professor, University at Albany SUNY.	<i>August 2014 - December 2015</i>
Research Assistant, MOMENT Lab, UCSB.	<i>January 2010 - July 2014</i>
Research Intern at Microsoft Research.	<i>June 2013 - September 2013</i>
Research Intern at Broadcom Corporation.	<i>June 2011 - September 2011</i>

PUBLICATIONS

• **Journals**

- **Mariya Zheleva**, Ranveer Chandra, Aakanksha Chowdhery, Paul Garnett, Anoop Gupta, Ashish Kapoor, Matt Valerio, “*Enabling a Nationwide Radio Frequency Inventory Using the Spectrum Observatory*”, in IEEE Transactions on Mobile Computing (IEEE TMC), June 2017.
- **Mariya Zheleva**, Paul Schmitt, Morgan Vigil, Elizabeth Belding. “*Internet Bandwidth Upgrade: Implications on Performance and Usage in Rural Zambia*”, in Journal of Information Technology and International Development (ITID), May 2015.
- **Mariya Zheleva** and HuyngJune Lee. “*Power-aware relay selection and routing scheme for multi-interface sensor networks*”, in Journal of Computers Communications and Control (IJCCC), January 2015.
- **Mariya Zheleva** and Michael Nekrasov. “*Conferences: MobiSys 2013*”, in IEEE Pervasive Computing. October-December 2013.
- Veljko Pejovic, David Johnson, **Mariya Zheleva**, Elizabeth Belding, Lisa Parks, Gertjan van Stam. “*The Bandwidth Divide: Obstacles to efficient broadband adoption in rural Sub-Saharan Africa*,” in International Journal of Communication (IJoC). September, 2012.
- Vinod Kone, **Mariya Zheleva**, Mike Wittie, Ben Y. Zhao, Elizabeth M. Belding, Haitao Zheng, Kevin C. Almeroth. “*AirLab: Consistency, Fidelity and Privacy in Wireless Measurements*,” in SIGCOMM Computer Communication Review (CCR). January, 2011 as an Editorial Note.

• **Conferences**

- Paul Schmitt, Daniel Iland, Elizabeth Belding, **Mariya Zheleva** “*PhoneHome: Robust Extension of Cellular Coverage*”, in IEEE ICCCN, Waikoloa, Hawaii, USA, 1-4 August, 2016.
- Paul Schmitt, Daniel Iland, **Mariya Zheleva**, Elizabeth Belding “*HybridCell: Cellular connectivity on the fringes with demand-driven local cells*”, in IEEE INFOCOM, San Francisco, California, USA, 10-15 April 2016.

- **Mariya Zheleva**, Ranveer Chandra, Aakanksha Chowdhery, Ashish Kapoor, Paul Garnett “*TxMiner: Identifying Transmitters in Real-World Spectrum Measurements*”, in IEEE DySpan, Stockholm, Sweden, 29 September - 2 October, 2015.
- Veljko Pejovic, David Johnson, **Mariya Zheleva**, Albert Lysko, Elizabeth Belding “*VillageLink: Wide-Area Wireless Coverage*,” in COMSNETS, Bangalore, India, January 2014.
- **Mariya Zheleva**, Paul Schmitt, Morgan Vigil, Elizabeth Belding “*The Increased Bandwidth Fallacy: Performance and Usage in Rural Zambia*”, in ACM DEV 2013, Cape Town, South Africa.
- **Mariya Zheleva**, Paul Schmitt, Morgan Vigil, Elizabeth Belding “*Bringing visibility to rural users in Cote D’Ivoire*”, short paper, in ICTD2013, Cape Town, South Africa.
- **Mariya Zheleva**, Paul Schmitt, Morgan Vigil, Elizabeth Belding “*Community detection in cellular network traces*”, short paper, in ICTD2013, Cape Town, South Africa.
- Paul Schmitt, Morgan Vigil, **Mariya Zheleva**, Elizabeth Belding “*Communication flow patterns in the Orange Telecom D4D dataset*”, in NetMob 2013, Boston, MA.
- **Mariya Zheleva**, Arghyadip Paul, David Johnson, Elizabeth Belding “*Kwiizya: Local cellular network services in remote areas*”, in MobiSys 2013, Taipei, Taiwan.
- **Workshops**
 - **Mariya Zheleva**, Petko Bogdanov, Daphney-Stravoula Zois, Wei Xiong, Ranveer Chandra, Mark Kimball “*Smallholder Agriculture in the Information Age: Limits and Opportunities*”, in ACM LIMITS’17, Santa Barbara, CA, 22-24 June, 2017.
- **Abstracts, Demos, Posters and Videos**
 - Wei Xiong, **Mariya Zheleva**. “*Visualizing Wireless Coverage Through Drone and Augmented Reality*,” poster in NSDI, Boston, MA, March 2017.
 - Stuti Misra, **Mariya Zheleva**. “*Low-cost ubiquitous spectrum sensing and characterization*,” poster in NSDI, Santa Clara, CA, March 2016.
 - Timothy Larock, Paul Schmitt, Petko Bogdanov, Elizabeth Belding, **Mariya Zheleva**. “*AirPress: Towards spectrum inventory at scale*,” poster in NSDI, Santa Clara, CA, March 2016.
 - Daniel Iland, **Mariya Zheleva**, Paul Schmitt, Elizabeth Belding. “*NosyNeighbor: Augmenting post-disaster cellular services with local cellular networks*,” poster and demo in HotMobile, Santa Fe, New Mexico, February 2015.
 - **Mariya Zheleva**, Abigail Hinsman, Elizabeth Belding, Lisa Parks. “*Kwiizya*,” video, in ACM MobiSys, Taipei, Taiwan, June 2013.
 - **Mariya Zheleva**, Ceren Budak, Arghyadip Paul, Biyang Liu, Elizabeth Belding, Amr El Abbadi. “*ImmuNet: Improved immunization of children through cellular network technology*,” 2nd best paper award in UCSB Graduate Student Workshop in Computing (GSWC). October, 2012.
 - **Mariya Zheleva**, Bing Wei, Elizabeth Belding “*APMap - Towards mapping the Wi-Fi weather*,” poster in Grace Hopper Celebration (GHC). November, 2011.
 - **Mariya Zheleva**, Ashish Sharma, Sumit Singh, Elizabeth Belding, Upamanyu Madhow “*Towards efficient medium access for 60GHz networks*,” poster in Grace Hopper Celebration (GHC). September, 2010.
 - Vinod Kone, **Mariya Zheleva**, Mike Wittie, Zengbin Zhang, Xiaohan Zhao, Ben Y. Zhao, Elizabeth M. Belding, Haitao Zheng, Kevin C. Almeroth “*AirLab: Distributed Infrastructure for Wireless Measurements*,” poster in USENIX Symposium on Networked Systems Design and Implementation (NSDI). April, 2010.

SOCIAL OUTREACH

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| • FarmNet: Dynamic Spectrum Access for smallholder agriculture, Essex Farm, NY | <i>Ongoing</i> |
| • Kwiizya for health care in Macha, Zambia | <i>December 2013</i> |
| • Kwiizya: local cellular network deployment in Macha, Zambia | <i>June/July 2012</i> |

INVITED TECHNICAL TALKS

- Spectrum inventory at scale, *NSF workshop on Future Directions in Spectrum Management Research*, 29 September 2015, Stockholm, Sweden.
- Modular wireless networks for infrastructure-challenged environments, *University of Massachusetts, Amherst*, October 2015.
- Local cellular network services in remote areas, *Computer Science Departmental Series, University of Birmingham*, October 2013.

SELECTED PRESS

- A Ruined Christmas: When More Bandwidth Led to Worse User Experiences, ICTWorks, December 2016, <http://www.ictworks.org/2016/12/22/a-ruined-christmas-when-more-bandwidth-led-to-worse-user-experiences/>
- Google's Project Loon to float the internet on balloons, New Scientist, June 2013, <http://www.newscientist.com/article/dn23721-googles-project-loon-to-float-the-internet-on-balloons.html>
- Wi-Fi-hopping brings phone signal to remote villages, New Scientist, June 2013, <http://www.newscientist.com/article/mg21829235.900-wifihopping-brings-phone-signal-to-remote-villages.html>
- Experimental Zambian network explores economic benefits of rural communications, CIO, July 2013, http://www.cio.de/news/cio_worldnews/2013/2923028/#
- Moment Lab tests Range Networks grid in rural Zambia, Telecompaper, July 2013, <http://www.telecompaper.com/news/moment-lab-tests-range-networks-grid-in-rural-zambia>
- Range Networks and University Research Group Bring Cellular Access to Zambian Village, Market Watch, July 2013, <http://www.marketwatch.com/story/range-networks-and-university-research-group-bring-cellular-access-to-zambian-village-2013-07-16>
- Experimental network connects Zambias most remote, IT News Africa, July 2013, <http://www.itnewsafrika.com/2013/07/experimental-network-connects-zambias-most-remote/>
- Range Networks deploys cellular network in Southern Zambia, Communications Africa, July 2013, <http://www.communicationsafrica.com/mobile/range-networks-deploys-cellular-network-in-southern-zambia>

AWARDS

- NSF CISE Career Initiation Initiative Award. National Science Foundation, February, 2017
 - Project title: CRII: NeTS: Next Generation Spectrum Measurement Algorithms and Infrastructures
- FRAP-A. University at Albany Faculty Research Award Program, February, 2017
- President's Work-Study Award for 2009-2010, 2010-2011 and 2011-2012, UCSB

PROFESSIONAL ACTIVITIES

- **Conference organization**
 - **Session chair** IEEE DySPAN 2017, 6-9 March, 2017, Baltimore, MD, USA
 - **Web/social chair** DySPAN 2017
 - **Web chair** NSF Workshop on Spectrum Measurement Infrastructures, April 2016
 - **Vice chair** First Workshop on Robust Socio-technical Architectures in Support of Displaced Persons, Cape Town, South Africa, 4-5 December 2013
- **Program committee member**
 - IEEE ICC, NGNI symposium, 20-24 May 2018 Kansas City, MO, USA
 - IEEE DySPAN 2017, 6-9 March, 2017, Baltimore, MD, USA
 - IEEE ICC, NGNI symposium, 21-25 May 2017, Paris, France
 - ACM Symposium on Computing for Development (ACM DEV-7), Nov. 18-21 2016, Nairobi, Kenya

- International Conference on Information and Communication Technology for Development (ICTD2016), June 3-6 2016, Ann Arbor, Michigan, USA
- 25th International World Wide Web Conference (WWW2016), April 11-15 2016, Montreal, Canada
- ACM Symposium on Computing for Development (ACM DEV-6), December 1-2 2015, London, UK
- **Reviewer**
 - IEEE Transactions on Cognitive Communications and Networking
 - IEEE AFRICON
 - International Conference on Information and Communication Technology for Development (ICTD)
 - International World Wide Web Conference (WWW)
 - IEEE Transactions on Mobile Computing
 - Computer Communications
 - IEEE International Conference on Communications
 - IEEE Transactions on Networking
 - IEEE International Conference on Electronics Circuits and Systems
- **Other appointments**
 - **National Science Foundation (NSF) invited proposal funding panelist**
 - * CISE panel March 2017
 - * CISE panel March 2016
 - * CISE panel July 2016
 - * CISE ad-hoc reviewer
 - **NSF Broadband 2021 invited workshop participant**