Mariya Zheleva

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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 *July 2014*
University of California Santa Barbara, Santa Barbara, CA

MS, Department of Computer Science *December 2013*
University of California Santa Barbara, Santa Barbara, CA

MEng, Department of Telecommunications *February 2008*
Technical University – Sofia, Sofia, Bulgaria

BEng, Department of Telecommunications *July 2006*
Technical University – Sofia, Sofia, Bulgaria

Work Experience

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

Publications

- **Journals**

  - **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 Communicaion (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.

- **Abstracts, Demos, Posters and Videos**
  - 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

- Kwiizya for health care in Macha, Zambia — *December 2013*
- Kwiizya: local cellular network deployment in Macha, Zambia — *June/July 2012*

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

- 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.itnewsafrica.com/2013/07/experimental-network-connects-zambias-most-remote/`
- Range Networks deploys cellular network in Southern Zambia, Communicaions Africa, July 2013,
  `http://www.communicationsafrica.com/mobile/`
  `range-networks-deploys-cellular-network-in-southern-zambia`

Awards

- President's Work-Study Award for 2009-2010, 2010-2011 and 2011-2012, UCSB

Professional Activities

- **Conference organization**
  - Web chair NSF Workshop on Spectrum Measurement Infrastructures
  - **Web/social chair** DySpan2017
  - **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**
  - ACM Symposium on Computing for Development (ACM DEV-7), November 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**
  - 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: CNS-NeTS Small 2016.
    * CISE panel: US IGNITE Health/Public Safety 2016.
    * CISE ad-hoc reviewer
  - **NSF Broadband 2021 invited workshop participant**