

# Ana Nika

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## Education

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

**Doctor of Philosophy**, Computer Science 2017

*Dissertation*: Measurement-driven wireless network design

**Master of Science**, Computer Science 2015

**National and Kapodistrian University of Athens**, Athens, Greece

**Master of Science**, Communication Systems and Networks 2011

*Thesis*: An adaptive vertical handover decision algorithm based on the IEEE 802.21 standard

**Bachelor of Science**, Computer Science (*ranked 1<sup>st</sup>*) 2007

*Thesis*: Study and simulation of decomposition and reconfiguration of the UDT protocol

## Appointments

**Microsoft**, Yammer and Outlook Groups, Redmond, WA

- Senior Software Engineer 09/2020 – present
- Software Engineer 2 09/2018 – 08/2020
- Software Engineer 06/2017 – 08/2018

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

09/2012 – 09/2016

*Research Assistant, Systems, Algorithms, Networking, and Data (SAND) Laboratory*

Worked on measurement-driven smartphone network design, energy profiling and optimization, spectrum monitoring, data hotspots in cellular networks, crowdsourced signal measurements, crowdsourced mapping services, and social networks.

**Bell Labs Ireland**, Dublin, Ireland

06/2014 – 09/2014

*Research Intern, Data Analytics Team*

Worked on measurement-driven analysis of user communications in specialized social networks.

**INRIA**, Sophia Antipolis, France

03/2011 – 07/2011

*Research Intern, Planete Team*

Worked on a new naming mechanism called Henna implemented to support intermittent node connections in heterogeneous networks. Extended the Henna simulation code in NS-3 and evaluated its performance.

**National and Kapodistrian University of Athens**, Athens, Greece

*Research Assistant, Management of Data, Information and Knowledge Group*

12/2008 – 02/2011

Worked on user interoperability issues for digital libraries. Surveyed existing user model interoperability approaches and proposed techniques to reinforce interoperability of users in digital libraries

## Honors & Awards

N<sup>2</sup> Women Young Researcher Fellowship (2016)

Student travel grants: UCSB Academic Senate (2015), UCSB Graduate Student Association (2015)

Outstanding Reviewer Award, GSWC, UCSB (2012)

University of California President's Work-Study Award (2012-2013)

Computer Science Department Merit Fellowship, UCSB (2011-2012)

Class Valedictorian: ranked 1<sup>st</sup> in graduating class and recited the graduating oath, NKUA (2008)

## Publications

### Journal Articles

- [1] Gang Wang, Bolun Wang, Tianyi Wang, **Ana Nika**, Haitao Zheng, Ben Y. Zhao. Ghost Riders: Sybil Attacks on Crowdsourced Mobile Mapping Services. *In ACM/IEEE Transactions on Networking (TON)*, 2018.
- [2] **Ana Nika**, Zengbin Zhang, Ben Y. Zhao, Haitao Zheng. Towards Practical Spectrum Permits. *In IEEE Transactions on Cognitive Communications and Networking (TCCN)*, 2017.
- [3] **Ana Nika**, Asad Ismail, Ben Y. Zhao, Sabrina Gaito, Gian Paolo Rossi, Haitao Zheng. Understanding and Predicting Data Hotspots in Cellular Networks. *In Mobile Networks and Applications*, 2016.

### Conference and Workshop Papers

- [4] Zhijing Li, **Ana Nika**, Xinyi Zhang, Yanzi Zhu, Yuanshun Yao, Ben Y. Zhao, Haitao Zheng. Identifying Value in Crowdsourced Wireless Signal Measurements. *In Proc. of the 26<sup>th</sup> International World Wide Web Conference (WWW)*, Perth, Australia, April 2017.
- [5] Yanzi Zhu, Yibo Zhu, **Ana Nika**, Ben Y. Zhao, Haitao Zheng. Trimming the Smartphone Network Stack. *In Proc. of the 15<sup>th</sup> ACM Workshop on Hot Topics in Networks (HotNets)*, Atlanta, Georgia, USA, November 2016.
- [6] **Ana Nika**, Zhijing Li, Yanzi Zhu, Yibo Zhu, Ben Y. Zhao, Xia Zhou, Haitao Zheng. Empirical Validation of Commodity Spectrum Monitoring. *In Proc. of the 14<sup>th</sup> ACM Conference on Embedded Networked Sensor Systems (SenSys)*, Stanford, CA, USA, November 2016.
- [7] Gang Wang, Bolun Wang, Tianyi Wang, **Ana Nika**, Haitao Zheng, Ben Y. Zhao. Defending against Sybil Devices in Crowdsourced Mapping Services. *In Proc. of the 14<sup>th</sup> ACM International Conference on Mobile Systems, Applications, and Services (MobiSys)*, Singapore, Malaysia, June 2016.
- [8] **Ana Nika**, Yibo Zhu, Ning Ding, Abhilash Jindal, Y. Charlie Hu, Xia Zhou, Ben Y. Zhao and Haitao Zheng. Energy and Performance of Smartphone Radio Bundling in Outdoor Environments. *In Proc. of 24<sup>th</sup> International World Wide Web Conference (WWW)*, Florence, Italy, May 2015.
- [9] Gang Wang, Bolun Wang, Tianyi Wang, **Ana Nika**, Haitao Zheng, Ben Y. Zhao. Whispers in the Dark: Analysis of an Anonymous Social Network. *In Proc. of the 14<sup>th</sup> ACM SIGCOMM Internet Measurement Conference (IMC)*, Vancouver BC, Canada, November 2014.
- [10] **Ana Nika**, Zengbin Zhang, Xia Zhou, Ben Y. Zhao, Haitao Zheng. Towards Commoditized Real-time Spectrum Monitoring. *In Proc. of 1<sup>st</sup> ACM Workshop on Hot Topics in Wireless (HotWireless)*, Maui, HI, September 2014.
- [11] **Ana Nika**, Asad Ismail, Ben Y. Zhao, Sabrina Gaito, Gian Paolo Rossi, Haitao Zheng. Understanding Data Hotspots in Cellular Networks. *In Proc. of 10<sup>th</sup> International Conference on Heterogeneous Networking for Quality, Reliability, Security and Robustness (QShine)*, Rhodes, Greece, August 2014.
- [12] **Ana Nika**, Tiziana Catarci, Akrivi Katifori, Georgia Koutrika, Natalia Manola, Andreas Nürnberger, Manfred Thaller. Modeling Users and Context in Digital Libraries: Interoperability Issues. *In Proc. of the 2<sup>nd</sup> DL.org Workshop in conjunction with the 14<sup>th</sup> European Conference on Digital Libraries (ECDL 2010)*, Glasgow, Scotland, 2010.
- [13] **Ana Nika**, Tiziana Catarci, Yannis Ioannidis, Akrivi Katifori, Georgia Koutrika, Natalia Manola, Andreas Nürnberger, Manfred Thaller. A Survey of Context-Aware Cross-Digital Library Personalization. *In Proc. of the 8<sup>th</sup> International Workshop on Adaptive Multimedia Retrieval (AMR 2010)*, Linz, Austria, 2010.
- [14] Katerina El Raheb, George Athanasopoulos, Leonardo Candela, Donatella Castelli, Perla Innocenti, Yannis Ioannidis, Akrivi Katifori, **Ana Nika**, Stephanie Parker, Seamus Ross, Costantino Thanos, Eleni Toli, Giuseppina Vullo. Paving the way for Interoperability in Digital Libraries: The DL.org Project. *In Proc. of the 2<sup>nd</sup> International Conference on Qualitative and Quantitative Methods in Libraries (QQML 2010)*, Crete, Greece, 2010.

### Technical Reports and Other Articles

- [15] **Ana Nika**, Sofia Scataglini, Sirine Taleb. MobiSys 2015. *IEEE Pervasive Computing*, 2015.
- [16] George Athanasopoulos, Leonardo Candela, Donatella Castelli, Katerina El Raheb, Perla Innocenti, Yannis Ioannidis, Vivi Katifori, **Ana Nika**, Seamus Ross, Alice Tani, Costantino Thanos, Eleni Toli, Giuseppina Vullo. Digital Library Technology and Methodology Cookbook. *D3.4 DL.org Project Deliverable*, 2011.
- [17] Leonardo Candela, George Athanasopoulos, Donatella Castelli, Katerina El Raheb, Perla Innocenti, Yannis Ioannidis, Akrivi Katifori, **Ana Nika**, Giuseppina Vullo, Seamus Ross. The Digital Library Reference Model. *D3.2b DL.org Project Deliverable*, 2011.
- [18] **Ana Nika**, Tiziana Catarci, Yannis Ioannidis, Akrivi Katifori, Georgia Koutrika, Natalia Manola, Andreas Nurnberger, Manfred Thaller. User-Centric Perspective on Digital Library Interoperability. *Information Technology Section Newsletter of the International Federation of Library Associations and Institutions (IFLA)*, 2010.

## Posters

- [19] Zhijing Li, **Ana Nika**, Xinyi Zhang, Yanzi Zhu, Yuanshun Yao, Ben Y. Zhao, Haitao Zheng. Identifying Value in Crowdsourced Wireless Signal Measurements. *The 18<sup>th</sup> ACM Workshop on Mobile Computing, Systems, and Applications (HotMobile)*, 2017.
- [20] Gang Wang, Bolun Wang, Tianyi Wang, **Ana Nika**, Haitao Zheng, Ben Y. Zhao. Defending against Sybil Devices in Crowdsourced Mapping Services. *The 14<sup>th</sup> ACM International Conference on Mobile Systems, Applications, and Services (MobiSys)*, 2016.
- [21] **Ana Nika**, Yibo Zhu, Ning Ding, Abhilash Jindal, Y. Charlie Hu, Xia Zhou, Ben Y. Zhao and Haitao Zheng. Energy and Performance of Smartphone Radio Bundling in Outdoor Environments. *Institute for Energy Efficiency Research Review, UCSB*, 2015.
- [22] **Ana Nika**, Zengbin Zhang, Xia Zhou, Ben Y. Zhao, Haitao Zheng. Towards Real-time Spectrum Monitoring. *Graduate Student Workshop on Computing, UCSB*, 2015.
- [23] **Ana Nika**, Stratos Dimopoulos, David L. Johnson, Elizabeth M. Belding. Time-Shifting Traffic to Improve Utilization in Rural Area Networks. *Celebration of Women in Computing in Southern California, Santa Ana, USA*, 2012.

## Teaching Experience

- [1] Data Driven Networking and Systems Design, *Guest Lecturer*, UCSB, Spring 2016
- [2] Introduction to Computer Science, *Teaching Assistant*, UCSB, Fall 2011/2012, Winter 2012
- [3] Computer Organization, *Teaching Assistant*, UCSB, Spring 2012
- [4] DL.org Autumn School, *Lecturer*, University of Athens, October 2010
- [5] Communication Networks I, *Teaching Assistant*, University of Athens, Spring 2010
- [6] Data Structures, *Teaching Assistant*, University of Athens, Spring 2008
- [7] Introduction to Programming, *Teaching Assistant*, University of Athens, Fall 2007

## Professional Activities

- [1] IEEE Transactions on Cognitive Communications and Networking (TCCN), *Reviewer*, 2017
- [2] IEEE Transactions on Wireless Communications (TWC), *Reviewer*, 2016, 2017
- [3] Journal of Mobile Networks and Applications (MONET), *Reviewer*, 2015
- [4] ACM SIGCOMM Internet Measurement Conference (IMC), *External Reviewer*, 2015, 2016
- [5] ACM/USENIX Symposium on Networked Systems, Design and Implementation (NSDI), *External Reviewer*, 2014
- [6] Graduate Student Workshop on Computing at UCSB (GSWC), *Technical Program Committee Member*, 2014
- [7] Graduate Student Workshop on Computing at UCSB (GSWC), *Technical Program Committee Member, Poster Committee Member, and Financial Coordinator*, 2012

## Community Service

### Undergraduate Mentorship

- [1] *Du Bois Event* at University of California, Santa Barbara, 2013
- [2] *init(together) conference* at University of California, Irvine, 2013.

### Women in Computer Science

- [1] Networking Networking Women (N<sup>2</sup> Women) Board Member: Social Media Co-chair 2014-2015
- [2] Women in Computer Science at UCSB: Co-president 2012-2013

## Selected Press

- [1] If you use Waze, hackers can stalk you, *Fusion (4/2016)*
- [2] Hackers can stalk you via Waze app, *Channel 10 CBS News (4/2016)*
- [3] Vulnerability In Popular Waze Navigation App Could Let Hackers Stalk You In Real Time, *Tech Times (4/2016)*
- [4] Waze downplays exploit that let researchers track users, *Tech Crunch (4/2016)*
- [5] Flaw in maps app Waze lets hackers track you, *The Telegraph (4/2016)*
- [6] Here's How Google's Waze Can Reportedly Be Used to Stalk Drivers, *Fortune (4/2016)*
- [7] Waze hack lets creeps track your driving, *Engadget (4/2016)*
- [8] Millions of Waze users can have their movements tracked by hackers, *Slashdot (4/2016)*
- [9] Waze Drivers Can Be Tracked, Network Flooded with Fake Traffic, *Softpedia (4/2016)*
- [10] Waze Hackers Have You in Their Sights, *TechNewsToday (4/2016)*
- [11] Waze App: The Road to Stalking Drivers, *Infosecurity Magazine (4/2016)*
- [12] Hackers Can Exploit Waze to Track Drivers in Real Time, *Android Headlines (4/2016)*
- [13] At Whisper's news-gathering operation, data collection comes under siege, *LA Times, (10/2014)*

## Talks

- [1] Energy and performance of smartphone radio bundling in outdoor environments. The 24<sup>th</sup> *International World Wide Web Conference, Florence, Italy, May 2015.*
- [2] Towards commoditized real-time spectrum monitoring. The 1<sup>st</sup> *ACM Workshop on Hot Topics in Wireless, Maui, Hawaii, USA, September 2014.*
- [3] Understanding data hotspots in cellular networks. The 10<sup>th</sup> *International Conference on Heterogeneous Networking for Quality, Reliability, Security and Robustness, Rhodes, Greece, August 2014.*
- [4] Modeling Users and Context in Digital Libraries: Interoperability Issues. *The 2<sup>nd</sup> DL.org workshop within the 14th European Conference on Digital Libraries, Glasgow, Scotland, UK, September 2010.*
- [5] A Survey of Context-Aware Cross-Digital Library Personalization. *The 8<sup>th</sup> International Workshop on Adaptive Multimedia Retrieval (AMR), Linz, Austria, August 2010.*