



MARIA GORLATOVA, PH.D.

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EDUCATION

COLUMBIA UNIVERSITY, New York, NY

- Ph.D., Electrical Engineering 2008 – 2013
- M.Phil., Electrical Engineering 2011
- Ph.D. Thesis: Energy Harvesting Networked Nodes: Measurements, Algorithms, and Prototyping
- Advised by Prof. Gil Zussman
- GPA: 4.18/4.0

UNIVERSITY OF OTTAWA, Ottawa, ON, Canada

- M.Sc., Electrical Engineering; Concentration: Computer Networks and System Security 2005 – 2007
- M.Sc. Thesis: Wormhole Attack Detection in Wireless Ad Hoc Networks
- Advised by Prof. Peter Mason and Prof. Ramiro Liscano
- GPA: 98/100
- B.Sc., Electrical Engineering, Concentration: Systems Engineering 2000 – 2004
- *Summa Cum Laude*; GPA: 92/100; Major GPA: 98/100

SELECTED AWARDS AND HONORS

- IEEE Communications Society Young Author Best Paper Award 2016
- MIT EECS Rising Star Recognition 2013
- Columbia University Jury Award for Outstanding Achievement in Communications 2013
- Google Inc. Anita Borg USA Fellowship 2012
- ACM SenSys Best Student Demonstration Award 2011
- IEEE Communications Society Award for Advances in Communications 2011
- ACM MobiSys Ph.D. Forum Best Speaker Award 2011
- Finalist, Microsoft Research Ph.D. Fellowship 2011
- Columbia University Presidential Fellowship 2008 – 2013
- Alexander Graham Bell Canada Graduate NSERC CGS-D Scholarship, Ph.D. studies 2008 – 2010
- Canada Graduate NSERC CGS-M Scholarship, M.Sc. studies 2005 – 2007
- Ontario Graduate Fellowship (declined) 2005 – 2007
- Xerox Canada Inc. Fellowship 2004

SELECTED EXPERIENCE

PRINCETON UNIVERSITY, Princeton, NJ 2016 – present

Associate Research Scholar, Electrical Engineering Department
Senior member of the Edge lab led by Prof. Mung Chiang. Defining architectures and protocols for fog computing, an emerging paradigm in which computing resources are distributed along the cloud-to-things continuum.

- Secured new research funding from Microsoft (Principal Investigator) and the Defense Advanced Research Projects Agency (DARPA) (Senior Personnel). Managing ongoing funding engagements with DARPA and Comcast.
- Designed and carried out a measurement-based study of globally distributed heterogeneous fog computing platforms. Developed techniques for computing program placement and restructuring in fog computing scenarios. Developing a multi-level fog computing Raspberry Pi, AWS Lambda, AWS EC2 testbed for evaluating the performance of fog computing-optimized algorithms.
- Driving the definitions of advanced fog computing use cases including fog for autonomous driving and augmented reality (AR) applications. Developing a Microsoft HoloLens-based testbed for experimenting with fog computing support for AR.
- Elected to co-chair the Communications Working Group of the OpenFog Consortium that has over 50 member organizations including Intel, CISCO, Microsoft, Dell, ARM, Hitachi, and Foxconn. Contributed to the OpenFog

MARIA GORLATOVA: CURRICULUM VITAE

Reference Architecture. Leading the development of OpenFog communications and networking APIs and industry-academia engagements in the OpenFog Consortium.

D. E. SHAW RESEARCH (Private technology company), New York, NY 2014 – 2016

Technical Product and Program Manager, reporting to company's top engineering executive.

Led a \$20mln+ custom Anton supercomputer design and development program. Managed activities of a cross-functional team of 40+ research scientists and hardware and software engineers (technical areas: ASICs, advanced PCBs, network architecture, software). Recognized as an outstanding contributor (top 10%) in all performance appraisals.

- Developed an ambitious yet realistic 5+ year product development plan by balancing design, manufacturing, and datacenter operations tradeoffs. Successfully executed 1.5 year design specification and partner selection phases of the plan.
- Defined, promoted, and executed organizational changes required for achieving program goals. Recruited, trained, mentored, and supervised 2 associate project managers.
- Drove product definition, vendor selection, and build/buy/partner decisions. Defined multi-year program roadmaps, created and managed schedules and program KPIs, managed program risks.

IBM, Armonk, NY 2014

Senior Strategy Consultant, Corporate Headquarters, Business Performance Services

Applied advanced business analytics to the most pressing challenges faced by the company.

- Led a \$500,000+ identity management analytics project with IBM C-suite visibility. Directed a team of 5 business analysts and software developers from internal and external teams.
- Designed and developed SPSS-based sales fraud detection toolset data quality KPI tracking modules. Presented regular KPI updates to senior executives from IT, Legal, Software Sales, and Hardware Sales teams.
- Carried out a high-priority cross-functional sales fraud detection toolset design and development project. Launched market-tailored toolsets in several growth markets including Turkey, Russia, and South Africa. Developed and led toolset training sessions for offshore sales support teams.

COLUMBIA UNIVERSITY, New York, NY 2008 – 2013

Research Assistant and Presidential Fellow, Electrical Engineering Department

Founding member of an ambitious Energy Harvesting Active Networked Tags project (EnHANTs, enhants.ee.columbia.edu) dedicated to enabling digital networking of commonplace objects – the Internet of Things.

- Led student effort in designing and developing a prototype and a first-of-its-kind prototype testbed for the Energy Harvesting Active Networked Tags project that involves 5 faculty members and over 50 students in the Electrical Engineering and Computer Science departments. Mentored and supervised more than 25 students from high school, undergraduate and M.S. Electrical Engineering and Computer Science programs.
- Designed, developed, and evaluated resource allocation and networking algorithms for networks of low-power wireless energy harvesting nodes.
- Designed and orchestrated a first-of-its-kind 1.5-year-long indoor light energy study using a custom-designed sensor system. Designed and orchestrated an innovative measurement-based study of object and human motion energy. Examined statistical properties of the energy based on acceleration traces for 9 motions of 40+ participants. Shared the obtained datasets with the community via CRAWDAD.

TELCORDIA TECHNOLOGIES (Fortune 500 telecom R&D company), Piscataway, NJ 2007 – 2008

Research Scientist, Telcordia Applied Research

Examined network performance and security topics for US Department of Defense client projects.

- Led one of 7 in-house R&D teams jointly designing and developing a secure wireless ad hoc system architecture for a multi-million dollar Defense Advanced Research Projects Agency (DARPA) project.
- Designed, developed and integrated CSMA-based, TDMA-based, and hybrid MAC modules for a comprehensive in-house-developed network design tool. Provided in-depth analysis on applicability of tools and technologies (OPNET, NS-2, MAC and networking protocols) to the needs of the US Department of Defense clients.

DEFENSE R&D CANADA (Scientific agency of the Department of National Defense), Ottawa, ON 2004 – 2007

Research Scientist (2006 – 2007), Research Assistant (2004 – 2005), Network Information Operations

MARIA GORLATOVA: CURRICULUM VITAE

Examined a range of network layer and medium access layer wireless network security topics (ad hoc network routing attacks, encryption, stealthy localization).

- Designed and developed new cross-layer network analysis techniques for attack detection in wireless networks.
- Designed, developed, tested, and integrated network simulation and network traffic analysis modules using MATLAB, NS-2, C, and Perl.

SELECTED ADDITIONAL EXPERIENCE

WALT DISNEY RESEARCH, *Research Assistant* (Ph.D. Intern), Zurich, Switzerland Spring 2011
Examined feasibility of providing proprietary wireless location services in Walt Disney parks. Granted a patent on the proposed base station identity management techniques.

SIRIUS SATELLITE RADIO, *Back-end Software Developer*, New York, NY Summer 2007
Enhanced functionality of a business-critical subscriber management system. Participated in all stages of software development lifecycle.

NORTEL NETWORKS, *Web Software Developer* (B.Sc. Intern), Ottawa, ON Fall 2003
Developed Intranet web applications using Perl, MySQL, ODBC/JDBC, Java, HTML, and shell scripting.

CANADIAN PATENT OFFICE, *Assistant Patent Examiner* (B.Sc. Intern), Hull, QC Spring 2003
Examined patent applications in the areas of software, electrical, and computer engineering.

SELECTED ADDITIONAL TRAINING

Micro-MBA (IBM 2014), Project Management (New York University 2015), Product Management (New York General Assembly 2014), Proposal Writing (Princeton University 2016).

Certifications: Project Management Professional PMI PMP, 2016 – 2019.

SELECTED ACADEMIC COMMUNITY AND GRANT AGENCY SERVICE

Track chair, Internet of Things Track, ABI Grace Hopper Celebration of Women in Computing 2016, 2017
General chair, ACM MobiSys Ph.D. Forum Workshop 2012

TPC member:

IEEE Conference on Computer Communications (IEEE INFOCOM) 2016 – 2018
ACM/SIGBED Embedded Wireless Systems and Networks (EWSN) 2018
IEEE Fog World Congress 2017
IEEE/IFIP Wireless On-demand Network Systems and Services (WONS) 2017
IEEE Conference on Sensing, Communication and Networking (IEEE SECON) 2016
IEEE Vehicular Technology Conference (IEEE VTC), M2M/Sensor Networks Track 2016, 2017
IEEE WiMAN, co-located with IEEE ICCCN 2014, 2016, 2017
ACM ENSSys, co-located with ACM SenSys 2014
IEEE EnHaNSS, co-located with IEEE INSS 2012

Judge, ACM Student Poster Competition, ABI Grace Hopper Celebration of Women in Computing 2016
Session chair, IoT, Cloud, and Weather Session, ABI Grace Hopper Celebration of Women in Computing 2016

Panelist, communications and networking, US National Science Foundation (NSF) 2015, 2017

Panelist, algorithms and systems, US National Science Foundation (NSF) 2016, 2017

External reviewer, Israel Science Foundation (ISF) 2016, 2017

Fellowship Awards Co-chair and Board Member, N² Women 2016 – 2017

Scholarship committee member, ABI Grace Hopper Celebration of Women in Computing 2015, 2016

Organizer: N² Women Meeting, IEEE SECON 2010, EE/CS Networking Seminar Series, Columbia University 2010, N² Women Meeting, ACM MobiCom 2009, EnHANTs Summer Students Workshop, 2009.

Editor, Wiley Transactions on Emerging Telecommunication Technologies Special Issue on Big Data in Future Internet Architectures, 2018

External reviewer, journals: IEEE Communications Magazine 2016, IEEE Transactions on Mobile Computing 2017, 2011, IEEE Transactions on Power Electronics 2016, IEEE Network Magazine 2015, 2016, IEEE Journal on Selected Areas in Communications 2015, IEEE Transactions on Wireless Communications 2010 – 2015, IEEE Sensors 2013, IEEE/ACM Transactions on Networking 2009 – 2012, ACM Transactions on Sensor Networks 2012, IEEE Transactions on Parallel and Distributed Systems 2009 – 2010.

External reviewer, conferences: IEEE INFOCOM 2009 – 2014, ACM SIGMETRICS 2011 – 2013, IEEE DCOSS 2012, IEEE GLOBECOM 2011, IEEE/IFIP WONS 2011, IEEE WiOpt 2009, IEEE MILCOM 2008.

SELECTED ADDITIONAL PROFESSIONAL ACTIVITIES

Chair, Communications Working Group, OpenFog Consortium (**elected position**) 2016 – present

Panelist, technology:

Expert Panel, OpenFog Consortium Fog Forum Denver	2017
Fog Computing and the Internet of Things, IoT Central NYC Meetup	2017
IEEE Women in Engineering International Leadership Conference (IEEE WIE ILC)	2017
Expert Panel, OpenFog Consortium Fog Forum Atlanta	2017
Expert Panel, Wireless Energy Transfer and Scavenging Techniques Workshop	2012

Panelist, student guidance and career advice:

Undergraduate Women in Computer Science Summit, D. E. Shaw Research	2015
Industry Careers Panel, Columbia University Office of Postdoctoral Affairs	2015
Career Speaker Series, Columbia University Graduate Society of Women Engineers	2015
Panel for Women in Engineering, Columbia University School of Engineering	2012, 2013
Graduate Student Panel, Department of Electrical Engineering, Columbia University	2011

Invited participant:

Massachusetts Institute of Technology (MIT) Rising Stars in EECS Career Workshop	2013
Google Inc. Scholars Retreat	2012
ACM MobiSys'11 Ph.D. Forum. Best Speaker Award	2011
Google Inc. Graduate Researchers in Academia of Diverse Backgrounds CS Forum	2010
Illinois Wireless Summer School, University of Illinois at Urbana-Champaign (UIUC)	2009

Judge:

Innovation Awards, Consumer Electronics Show (CES)	2016, 2017
Innovation Awards, Consumer Electronics Show (CES) Asia	2017

Adviser:

All Inspire Health (an Internet of Things startup)	2016 – 2017
Fit A.I. (an Internet of Things startup)	2016 – 2017

RESEARCH GRANTS

[**AZURE17**] *Principal Investigator*, Microsoft Azure Research Award, Internet of Things: Optimizing Fog-based IoT Systems. Equivalent of \$20,000 in Azure computing credits. Co-PIs Liang Zhang, Mung Chiang, 2017 – 2018.

[**DARPA17BAE**] *Senior Personnel*, Defense Advanced Research Projects Agency (DARPA) Dispersed Computing (DCOMP) Network Back-haul Layered Architecture (NEBULA) \$9.7 mln award led by BAE Systems with subcontractors from Princeton University, MIT, NYU, and LGS Innovations, 2017 – 2019.

[DARPA17LGS] *Senior Personnel*, Defense Advanced Research Projects Agency (DARPA) Dispersed Computing (DCOMP) Dispersed Computing via Successive Refinement and Pricing with Resilience and Scale (DSPRS) \$7.6 mln award led by LGS Innovations with subcontractors from Princeton University and BAE Systems, 2017 – 2019.

Travel grants: IEEE INFOCOM 2013, ACM SIGCOMM 2012, IEEE PerCom 2012, ABI Grace Hopper 2012, ACM SenSys 2011, ACM MobiSys 2011, ACM MobiCom 2010, IEEE SECON 2010, ACM MobiCom 2009.

PUBLICATIONS

Journal Publications

[TOSN15] R. Margolies, **M. Gorlatova**, J. Sarik, G. Stanje, J. Zhu, P. Miller, M. Szczodrak, B. Vignham, L. Carloni, P. Kinget, I. Kymissis, G. Zussman, Energy Harvesting Active Networked Tags (EnHANTs): Prototyping and Experimentation, *ACM Transactions on Sensor Networks*, Vol. 11, No. 4, Nov. 2015.

[JSAC15] **M. Gorlatova**, J. Sarik, G. Grebla, M. Cong, I. Kymissis, G. Zussman, Movers and Shakers: Kinetic Energy Harvesting for the Internet of Things, *IEEE Journal on Selected Areas in Communications*, Vol. 33, No. 9, 2015.

[TMC13] **M. Gorlatova**, A. Wallwater, G. Zussman, Networking Rechargeable Low-Power Devices: Measurements and Algorithms, *IEEE Transactions on Mobile Computing*, Vol. 12, No. 9, Sept. 2013.

Winner: 2016 IEEE Communications Society Young Author Best Paper Award.

[WirComm10] **M. Gorlatova**, P. Kinget, I. Kymissis, D. Rubenstein, X. Wang, G. Zussman, Energy Harvesting Active Networked Tags for Ubiquitous Object Networking, *IEEE Wireless Communications Magazine*, Vol. 17, No 6, pp. 18-25, Dec 2010.

Winner: 2011 IEEE Communications Society Award for Advances in Communications.

Selected media coverage: IEEE Comm. Technology News Editor-in-Chief's **top 3 pick for 2014.**

Conference Proceedings

[URTC17] S. Ahn, **M. Gorlatova**, M. Chiang, Leveraging Fog and Cloud Computing for Efficient Computational Offloading, to appear in Proc. IEEE MIT Undergraduate Research Technology Conference (*IEEE URTC*), Boston, MA, Nov. 2017.

[Sigmetrics14] **M. Gorlatova**, J. Sarik, G. Grebla, M. Cong, I. Kymissis, G. Zussman, Movers and Shakers: Kinetic Energy Harvesting for the Internet of Things, in Proc. *ACM SIGMETRICS'14*, Austin, TX, July 2014 (**~17% acceptance rate**). **Selected media coverage: MIT Technology Review 2014, New Yorker 2017.**

[ITiCSE13] **M. Gorlatova**, J. Sarik, P. Kinget, I. Kymissis, G. Zussman, Project-Based Learning within a Large-Scale Interdisciplinary Research Effort, in Proc. 18th ACM Conference on Innovation and Technology in Computer Science Education (*ACM ITiCSE'13*), Canterbury, UK, July 2013.

[Infocom13] **M. Gorlatova**, R. Margolies, J. Sarik, G. Stanje, J. Zhu, B. Vignham, M. Szczodrak, L. Carloni, P. Kinget, I. Kymissis, G. Zussman, Prototyping Energy Harvesting Active Networked Tags (EnHANTs), in Proc. 32nd IEEE Conference on Computer Communications (*IEEE INFOCOM'13*), Turin, Italy, Apr. 2013.

[WiOpt11] **M. Gorlatova**, A. Bernstein, G. Zussman, Performance Evaluation of Resource Allocation Policies for Energy Harvesting Devices, in Proc. 9th IEEE Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (*IEEE WiOpt'11*), Princeton, NJ, May 2011.

[Infocom11] **M. Gorlatova**, A. Wallwater, G. Zussman, Networking Rechargeable Low-Power Devices: Measurements and Algorithms, in Proc. 30th IEEE Conference on Computer Communications (*IEEE INFOCOM'11*), Shanghai, China, Apr. 2011 (**~16% acceptance rate**).

[Milcom11] **M. Gorlatova**, R. Aiello, S. Mangold, Managing Base Station Location Privacy, in Proc. 30th IEEE Military Communications Conference (*IEEE MILCOM'11*), Baltimore, MD, Nov. 2011.

- [**MobiCom09**] **M. Gorlatova**, P. Kinget, I. Kymissis, D. Rubenstein, X. Wang, G. Zussman, Challenge: Ultra-Low-Power Energy Harvesting Active Networked Tags, in Proc. 15th ACM Conference on Mobile Computing and Networking (*ACM MobiCom'09*), Beijing, China, Sept. 2009 (**~10% acceptance rate**).
- [**ASC08**] D. Lynch, S. Knight, **M. Gorlatova**, Y. Lacharite, L. Lamont, R. Liscano, P. Mason, Providing Effective Security in Mobile Ad Hoc Networks without Affecting Bandwidth or Interoperability, in Proc. 25th Army Science Conference (*ASC'08*), Orlando, FL, Dec. 2008.
- [**Milcom08**] L. Kant, K. Chang, A. McAuley, K. Manousakis, O. Younis, **M. Gorlatova**, K. Young, C. Graff, NEDAT: A Toolset to Design and Analyze Future Force Networks, in Proc. 27th IEEE Military Communications Conference (*IEEE MILCOM'08*), San Diego, CA, Nov. 2008.
- [**SecureComm07**] **M. Gorlatova**, M. Kelly, R. Liscano, P. Mason, Enhancing Frequency-Based Wormhole Attack Detection with Novel Jitter Waveforms, in Proc. 5th ICST Conference on Security and Privacy in Communication Networks (*ICST SecureComm'07*), Nice, France, Sept. 2007.
- [**Milcom06**] **M. Gorlatova**, P. Mason, M. Wang, L. Lamont, R. Liscano, Detecting Wormhole Attacks in Mobile Ad Hoc Networks through Protocol Breaking and Packet Timing Analysis, in Proc. 25th IEEE Military Communications Conference (*IEEE MILCOM'06*), Washington, DC, Oct. 2006.

Workshop Proceedings

- [**Iofc11**] **M. Gorlatova**, R. Aiello, S. Mangold, Managing Location Privacy in Cellular Networks with Femtocell Deployments, in Proc. 3rd IEEE Workshop on Indoor and Outdoor Femtocells (*IEEE IOFC'11*), Princeton, NJ, May 2011 (co-located with *IEEE WiOpt'11*).
- [**NPSec05**] M. Wang, L. Lamont, P. Mason, **M. Gorlatova**, An Effective Intrusion Detection Approach for the Optimized Link State Routing (OLSR) Mobile Ad hoc Networking Protocol, in Proc. 1st IEEE Workshop on Secure Network Protocols (*IEEE NPSec'05*), Boston, MA, Nov. 2005 (co-located with *IEEE ICNP'05*).

Conference Demonstrations

- [**Infocom13demo**] R. Margolies, L. Pena, K. Kim, Y. Kim, M. Wang, **M. Gorlatova**, J. Sarik, J. Zhu, P. Kinget, I. Kymissis, and G. Zussman, Demo: An Adaptive Testbed of Energy Harvesting Active Networked Tag Prototypes, in Proc. 32nd IEEE Conference on Computer Communication (*IEEE INFOCOM'13*), Apr. 2013, Turin, Italy.
- [**IDTechEx12demo**] J. Sarik, L. Pena, M. Wang, K. Kim, H. Wang, F. Duque, G. Burrow, R. Margolies, **M. Gorlatova**, B. Vignham, P. Kinget, I. Kymissis, and G. Zussman, Demo: Energy Harvesting Active Network Tag Prototypes and Prototype Testbed, *IDTechEx Energy Harvesting and Storage USA Conference and Trade Show*, Washington, DC, Nov. 2012 (**invited demonstration**).
- [**SenSys11demo**] G. Stanje, P. Miller, J. Zhu, A. Smith, O. Winn, R. Margolies, **M. Gorlatova**, J. Sarik, M. Szczodrak, B. Vignham, L. Carloni, P. Kinget, I. Kymissis, and G. Zussman, Demo: Organic Solar Cell-Equipped Energy Harvesting Active Networked Tag Prototypes, in Proc. 9th ACM Conference on Embedded Networked Sensor Systems (*ACM SenSys'11*), Seattle, WA, Nov. 2011. Video of the demo: <https://www.youtube.com/watch?v=QFCf62lBATI>
Winner: ACM SenSys'11 Best Student Demonstration Award.
- [**MobiSys11demo**] J. Zhu, G. Stanje, R. Margolies, **M. Gorlatova**, J. Sarik, Z. Noorbhaiwala, P. Miller, M. Szczodrak, B. Vignham, L. Carloni, P. Kinget, I. Kymissis, G. Zussman, Demo: Prototyping UWB-Enabled Energy Harvesting Active Networked Tags, in Proc. 9th ACM Conference on Mobile Systems, Applications, and Services (*ACM MobiSys'11*), Washington, DC, June 2011.
- [**MobiCom10demo**] **M. Gorlatova**, J. Chen, M. Szczodrak, E. Xu, A. Skolnik, A. Schwartz, Z. Noorbhaiwala, M. Zapas, L. Carloni, P. Kinget, I. Kymissis, D. Rubenstein, G. Zussman, Demo: Prototyping Energy Harvesting Active Networked Tags: Phase II MICA Mote-Based Devices, 16th ACM Conference on Mobile Computing and Networking (*ACM MobiCom'10*), Chicago, IL, Sept. 2010.

[**Secon10demo**] **M. Gorlatova**, T. Sharma, D. Shrestha, E. Xu, J. Chen, A. Skolnik, D. Piao, P. Kinget, I. Kymissis, D. Rubenstein, G. Zussman, Demo: Prototyping Energy Harvesting Active Networked Tags with MICA2 Motes, in Proc. 7th IEEE Conference on Sensing, Communication, and Networking (*IEEE SECON'10*), Boston, MA, June 2010.

Selected Poster Presentations

[**Columbia2014**] G. Grebla, **M. Gorlatova**, J. Sarik, M. Cong, I. Kymissis, G. Zussman, Movers and Shakers: Kinetic Energy Harvesting for the Internet of Things, Columbia University Postdoc Research and Career Symposium, Aug. 2014. **Winner: Top 10 poster award.**

[**GlobalSIP13**] J. Sarik, K. Kim, **M. Gorlatova**, I. Kymissis, G. Zussman, More than Meets the Eye – a Portable Measurement Unit for Characterizing Light Energy Availability, in Proc. 1st IEEE Global Conference on Signal and Information Processing (*IEEE GlobalSIP'13*) Symposium on Energy Harvesting and Green Wireless Communications, Austin, TX, Dec. 2013 (**invited paper**).

[**Google2012**] **M. Gorlatova**, P. Kinget, I. Kymissis, D. Rubenstein, X. Wang, G. Zussman, Energy Harvesting Active Networked Tags for Ubiquitous Object Networking: Challenges and Solutions, Google Scholars Retreat, July 2012.

[**Photovoltaic12poster**] Y. Afsar, J. Sarik, **M. Gorlatova**, G. Zussman, I. Kymissis, Poster: Evaluating Photovoltaic Performance Indoors, in Proc. 38th IEEE Photovoltaic Specialist Conference (*IEEE PVSC'12*), Austin, TX, June 2012.

[**Infocom11poster**] S. Schmid, **M. Gorlatova**, D. Giustiniano, V. Vukadinovic, S. Mangold, Poster: Networking Smart Toys with ToyTalk and ToyBridge, in Proc. 30th IEEE Conference on Computer Communications (*IEEE INFOCOM'11*), Shanghai, China, Apr. 2011.

Datasets

[**Crowdad14**] M. Cong, K. Kim, **M. Gorlatova**, J. Sarik, I. Kymissis, G. Zussman, Human Motion for the Internet of Things Kinetic Energy Dataset, Community Resource for Archiving Wireless Data At Dartmouth (CRAWDAD), May 2014.

[**Crowdad11**] **M. Gorlatova**, M. Zapas, E. Xu, M. Bahlke, I. Kymissis, G. Zussman, Indoor Light Energy Measurements Dataset, Community Resource for Archiving Wireless Data At Dartmouth (CRAWDAD), Apr. 2011.

Selected Additional Publications and Technical Reports

ArXiv:

[**ArXiv14**] R. Margolies, **M. Gorlatova**, J. Sarik, P. Kinget, I. Kymissis, G. Zussman, Project-Based Learning within a Large-Scale Interdisciplinary Research Effort, arXiv: 1410.6935, Oct. 2014.

[**ArXiv13**] **M. Gorlatova**, J. Sarik, M. Cong, I. Kymissis, G. Zussman, Movers and Shakers: Kinetic Energy Harvesting for the Internet of Things, arXiv:1307.0044, July 2013. **Selected media coverage: MIT Technology Review 2013.**

Other:

Columbia University Department of Electrical Engineering: 3 technical reports (first author).

Telcordia Technologies: 3 technical reports submitted to the US Department of Defense clients (coauthor).

Defense R&D Canada: 7 technical reports (4 first author, 3 coauthor).

PATENTS

[**Patent14**] S. Mangold, R. Aiello, **M. Gorlatova**, System and Method for Managing Location Services in Wireless Networks, Disney Research Zurich, Patent # US 2014/032,3150.

CONTRIBUTIONS TO INDUSTRY STANDARDS

[**OpenFog17**] OpenFog Consortium Reference Architecture, Feb. 2017.

Fast-tracked for adoption by the IEEE via IEEE RRSA.

SELECTED MEDIA COVERAGE

[**NewYorker2017**] If Donald Trump Were Actually a Battery, *New Yorker*, 2017
www.newyorker.com/tech/elements/if-donald-trump-were-actually-a-battery

[**ECD2017**] OpenFog Reference Architecture: Baseline for Interoperability in the Industrial IoT Cloud-to-Things Continuum, *Embedded Computing Design*, 2017
www.embedded-computing.com/embedded-computing-design/the-openfog-reference-architecture-a-baseline-for-interoperability-in-the-iiot-cloud-to-things-continuum

[**MITTechBusiness**] The Internet of You, *MIT Technology Review Business Report*, 2014
www.technologyreview.com/news/527386/the-internet-of-you/

[**MITTechPhysics**] Human Motions Will Power the Internet of Things, Say Energy Harvesting Engineers, *MIT Technology Review Physics ArXiv Blog*, 2013
www.technologyreview.com/view/516816/human-motion-will-power-the-internet-of-things-say-energy-harvesting-engineers/

SELECTED INVITED TALKS

Conferences and Workshops

[**GHC17**] Fog Computing: Challenges and Solutions, *ABI Grace Hopper Celebration of Women in Computing*, Orlando, FL, Oct. 2017.

[**Pisa17**] The OpenFog Reference Architecture: Unified Framework and a Roadmap, *Through the Fog Workshop*, University of Pisa, Pisa, Italy, Feb. 2017.

[**WMF12**] Energy Harvesting Active Networked Tags for Ubiquitous Object Networking: Challenges and Solutions, Wireless Energy Transfer and Scavenging Techniques Workshop, IEEE Microwave Symposium (*IEEE IMS'12*), Montreal, QC, Canada, June 2012.

[**MobiSysPhDF11**] Energy Harvesting Active Networked Tags for Ubiquitous Object Networking, ACM Conference on Mobile Systems, Applications, and Services (*ACM MobiSys'11*) Ph.D. Forum, Bethesda, MD, June 2011.

[**IdTechEx10**] Energy Harvesting Active Networked Tags for Ubiquitous Object Networking, *IDTechEx Energy Harvesting and Storage USA '10 Conference*, Boston, MA, Nov. 2010.

Academic and Industrial Seminars

[**Princeton17**] In and Out of the Fog: Working with Industry to Define New Computing Architectures, *Princeton University Postdoctoral Council Seminar Series*, Princeton, NJ, June 2017.

[**UCSB17**] Towards Networking Commonplace Objects, *UC Santa Barbara Department of Electrical and Computer Engineering*, Santa Barbara, CA, Mar. 2017.

[**Princeton16**] Towards Networking Commonplace Objects, *Princeton University Department of Electrical Engineering EDGE Lab*, Princeton, NJ, June 2016.

[**CMU16**] Towards Networking Commonplace Objects, *Carnegie Mellon University Department of Electrical and Computer Engineering*, Pittsburgh, PA, June 2016.

[**Fujitsu16**] Towards Networking Commonplace Objects, *Fujitsu Laboratories of America*, Sunnyvale, CA, May 2016.

[**ICL13**] Energy Harvesting Active Networked Tags for Ubiquitous Object Networking, *Imperial College London Department of Electrical Engineering*, London, United Kingdom, July 2013.

[**MSR13**] Energy Harvesting Active Networked Tags for Ubiquitous Object Networking: Challenges and Solutions, *Microsoft Research*, Seattle, WA, Mar. 2013.

Talk video available at <http://research.microsoft.com/apps/video/default.aspx?id=188869>

MARIA GORLATOVA: CURRICULUM VITAE

- [**Qualcomm13**] Energy Harvesting Active Networked Tags for Ubiquitous Object Networking: Challenges and Solutions, *Qualcomm Systems Engineering Group Seminar Series*, San Diego, CA, Feb. 2013.
- [**ATT13**] Energy Harvesting Active Networked Tags for Ubiquitous Object Networking: Challenges and Solutions, *AT&T Technology Security Group Seminar Series*, New York, NY, Jan. 2013.
- [**IEEEOttawa12**] Energy Harvesting Active Networked Tags for Ubiquitous Object Networking, *IEEE Ottawa Signal Processing Society Seminar Series*, Ottawa, ON, Canada, Nov. 2012.
- [**DRZ12**] Energy Harvesting Active Networked Tags for Ubiquitous Object Networking, *Walt Disney Research Zurich*, Zurich, Switzerland, Mar. 2012.
- [**DRDC11**] Energy Harvesting Active Networked Tags for Ubiquitous Object Networking, *Defense R&D Canada Network Information Operations Group Seminar Series*, Ottawa, ON, Canada, May 2011.
- [**Telcordia10**] Energy Harvesting Active Networked Tags, *Telcordia Technologies Applied Research Seminar Series*, Piscataway, NJ, Dec. 2010.
- [**UBC07**] Wormhole Attack Detection in Wireless Ad Hoc Networks, *University of British Columbia Department of Electrical Engineering Seminar Series*, Vancouver, BC, Canada, Feb. 2007.

Invited Lectures

- [**Columbia13**] Characterizing New Environmental Energy Sources for the Internet of Things, *Columbia University Undergraduate Computer Science and Statistics STATW100 Seminar*, New York, NY, Nov. 2013.