MARIA GORLATOVA

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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

ACM UbiComp Best Poster Award	2022
NSF CAREER Award	2021
Facebook Research Award	2021
IBM Faculty Award	2020
Duke University Pratt School of Engineering Nortel Networks Professorship	2020 – present
ACM/IEEE IPSN Best Research Artifact Award	2020
National Academy of Engineering's US Frontiers of Engineering (US FOE) Symposium Invitation	2020
N^2 Women Rising Star in Networking and Communications	2019
IEEE Communications Society Young Author Best Paper Award	2016
Columbia University Jury Award for Outstanding Achievement in Communications	2013
MIT EECS Rising Star	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

DUKE UNIVERSITY, Durham, NC 2018 – present

Nortel Networks Assistant Professor, Pratt School of Engineering, 2020 – present

Assistant Professor, Electrical and Computer Engineering and Computer Science Departments

Leading the Intelligent Interactive Internet of Things (I^3T) Lab at Duke University Department of Electrical and Computer Engineering.

- Examining the opportunities to improve the core elements of networked mobile augmented reality systems with intelligent multi-device computing infrastructures.

- Developing frameworks and tools for understanding edge computing-enabled computational reuse opportunities in IoT and augmented and virtual reality applications.
- Teaching courses in computer networks and edge computing. Mentoring multiple graduate and undergraduate students.

PRINCETON UNIVERSITY, Princeton, NJ 2016 – 2018

Associate Director, Princeton EDGE Lab (2017 – 2018)

Associate Research Scholar, Electrical Engineering Department

Senior member of the EDGE lab led by Prof. Mung Chiang. Defined architectures and algorithms for fog computing, an emerging paradigm in which computing is placed at multiple locations between the endpoint Internet of Things devices and the cloud.

- Developed new techniques for fog-specific computing program restructuring and new approaches to service placements in distributed fog architectures. Designed and carried out a first quantitative study of service architecture primitives in distributed heterogeneous fog computing platforms with server-based and serverless execution options of multiple quality levels.
- Designed and led the development of a fog computing testbed for algorithm evaluation, spanning both local hardware and cloud computing elements (Raspberry Pis, Sense HATs, AWS Lambda, DynamoDB, EC2). Demonstrated the testbed at 3 conferences.
- Secured new research funding from Microsoft (Principal Investigator) and the Defense Advanced Research Projects Agency (DARPA) (Senior Personnel). Managed ongoing funding engagements with Comcast Corporation, BAE Systems, and LGS Innovations.
- Transferred research to industry via active involvement in the OpenFog Consortium that has over 50 industry-leading members including Intel, CISCO, Microsoft, ARM, Dell, Hitachi, and Foxconn. Co-chaired the Communications Working Group of the Consortium (elected position). Contributed to the OpenFog Reference Architecture that was adopted as an IEEE standard. Led the development of OpenFog communications and networking APIs. Co-led the development of a framework outlining fog computing support for autonomous driving.

D. E. SHAW RESEARCH, New York, NY 2014 – 2016

Engineering 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 but 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.
- 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.
- Defined, promoted, and executed organizational changes required for achieving program goals. Recruited, trained, mentored, and supervised 2 associate project managers.

IBM, Armonk, NY 2014

Senior Strategy Consultant, Corporate Headquarters, IBM Chief Economist's Office.

Applied advanced data analytics techniques to the most pressing challenges faced by the company. Focused on both the development of analytics tools and on changing the associated corporate practices.

- Led a $500,000+ identity management data 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 clients.

- 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 DARPA Assurable Mobile Ad Hoc Network (IAMANET) Program's Zero Outage Dynamic Intrinsically Assurable Communities (ZODIAC) 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
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 TEACHING EXPERIENCE

ECE 590 / COMPSCI 590, Advanced Topics in ECE/CS: *Edge Computing* Spring 2022, 2021, 2020, Fall 2018

- Graduate seminar designed and developed.
  Spring 2022: enrollment: 18. Student ratings: course 4.67/5, instructor 4.67/5.
  Spring 2021: enrollment: 16. Student ratings: course 4.0/5, instructor 5.0/5.
  Spring 2020: enrollment: 21. Student ratings: course 4.5/5, instructor 4.5/5.
  Fall 2018: enrollment: 11. Student ratings: course 4.4/5, instructor 4.7/5.
  This seminar-format class explores opportunities and challenges associated with edge computing, the diffusion of centralized cloud computing functionality to include resource-constrained systems in physical proximity to the users, such as cloudlets, mobile phones, and smart gateways. The course surveys recent advances in edge computing and its role in enabling the next generation of the Internet of Things and the smart cities of the future. Students learn the strengths and the limitations of edge computing systems, and explore a range of algorithm and system adaptation techniques for developing edge-specific platforms, algorithms, and applications. Students complete an individual or a team-based research project, theory-oriented or applied.

ECE 356 / COMPSCI 356, *Computer Network Architectures* Fall 2021, Fall 2019

- Undergraduate computer network fundamentals course.
  Fall 2021: enrollment: 43. Student ratings: course 3.4/5, instructor 3.8/5.
  Fall 2019: enrollment: 39. Student ratings: course 4.1/5, instructor 4.2/5.

This course introduces students to the fundamentals of computer networks. The layered architecture of the network protocol stack is the focus of discussion. A variety of case studies will be drawn from the Internet, combined with practical programming exercises. At the end of the semester, students will have an understand of core networking concepts, including the Internet architecture, HTTP, DNS, Sockets, TCP/IP, routing protocols, and multimedia and wireless and mobile networking. The students will be able to answer questions such as how to achieve reliable communications over unreliable channels, how to find a good path through a network, how to share network resources among competing entities, how to find an object in the network, and how to build network applications.

SELECTED PROFESSIONAL ACTIVITIES

Technical Program Committee (TPC) chair:

ACM/IEEE IPSN	2023
IEEE Sarnoff Symposium	2019

Track chair:

Edge Computing track, IEEE ICDCS	2021
Internet of Things track, ABI Grace Hopper Celebration of Women in Computing	2016 – 2018

General chair, ACM MobiSys Ph.D. Forum 2012

Co-chair, Communications Working Group, OpenFog Consortium (**elected position**) 2016 – 2017

Demo and Poster chair:

ACM SenSys	2022

Guest editor, special issue:

IEEE Network, Networking Challenges and Opportunities for Multi-user XR and the Metaverse	2023
IEEE Internet of Things Journal, Emerging Trends and Challenges in Fog Computing for the IoT	2019
IEEE Access, Sustainable Infrastructures, Protocols, and Research Challenges for Fog Computing	2019

Area chair, Elsevier Computer Networks (impact factor: 4.47) 2019 – 2022

Fellowship awards co-chair, board member, N^2 Women 2016 – 2017

TPC member, recent:

ACM MobiCom	2023
ACM HotMobile	2023
ACM/IEEE IPSN	2021, 2022
ACM SenSys	2020 – 2022
IEEE ICDCS	2020, 2022
ACM MobiHoc	2019, 2021, 2022
ACM SmartWear, co-located with ACM MobiCom	2022
IEEE MetaSys, co-located with IEEE ISMAR	2022
IEEE SafeThings, co-located with IEEE S&P	2021, 2022
ACM EMDL, co-located with ACM MobiSys	2022

TPC member, previous:

IEEE Conference on Computer Communications (IEEE INFOCOM) 2016 – 2021, IEEE ICNP 2019 – 2021, ACM ENSSys (co-located with ACM SenSys) 2014, 2019 – 2021, IEEE/ACM Workshop on Cyber-Physical-Human System Design, co-located with CPS-IoT week 2021, ACM LP-IoT, co-located with ACM MobiCom 2021, IEEE FogML'21 (co-located with IEEE INFOCOM) 2021, ACM SOSR 2020, IEEE HDR-Nets (co-located with IEEE ICNP) 2020, IEEE SECON 2016, 2018, 2019, ACM/IEEE ICCPS 2019, IEEE International Conference on Fog Computing 2019, IEEE GLOBECOM SAC - Internet of Things 2019, ACM CoNext Student Workshop 2019, IFIP Performance 2018,

ACM/SIGBED EWSN 2018, IEEE LANMAN 2018, IEEE International Conference on Fog and Edge Computing 2018, IEEE Fog World Congress 2017, IEEE VTC, M2M/Sensor Networks Track 2016, 2017.

National funding agency service:

US National Science Foundation (NSF): panelist, human-computer interactions	2021, 2022
US National Science Foundation (NSF): panelist, communications and networking	2015, 2017, 2021
US National Science Foundation (NSF): panelist, algorithms and systems	2016, 2017
Canada NSERC Discovery Grant: reviewer	2021, 2022
Dutch Research Council NWA-ORC: reviewer	2021
UK National Institute for Health Research (NIHR): reviewer	2019
Israel Science Foundation (ISF): reviewer	2016, 2017, 2019

PhD Forum panelist:

ACM/IEEE IPSN	2021

Judge, industry recognitions:

Consumer Electronics Show (CES) Innovation Awards	2016 – 2019
Consumer Electronics Show (CES) Asia Innovation Awards	2017

Advisory board member:

EU H2020 ENLIGHT'EM European Training Network in Low-Energy Visible Light IoT Systems	2019 – 2022
All Inspire Health (an Internet of Things startup)	2016 – 2017
Fit A.I. (an Internet of Things startup)	2016 – 2017

Reviewer, journals: IEEE MultiMedia 2022, ACM IMWUT 2022, IEEE Transactions on Wireless Communications 2020, 2018, 2017, 2010 – 2015, IEEE Journal on Selected Areas in Communications 2019, 2015, IEEE/ACM Transactions on Networking 2019, 2009 – 2012, IEEE Transactions on Sustainable Computing 2018, IEEE Transactions on Mobile Computing 2017, 2011, IEEE Communications Magazine 2016, IEEE Transactions on Power Electronics 2016, IEEE Network Magazine 2015, 2016, IEEE Sensors 2013, ACM Transactions on Sensor Networks 2012, IEEE Transactions on Parallel and Distributed Systems 2009**,** 2010.

Reviewer, other: Springer book proposal reviewer 2019.

RESEARCH GRANTS

Current research grants:

[NASA22STTR] *Co-Principal Investigator*, NASA STTR *"*Demonstration of Space-Qualified Environmental Evaluation Drones with Wireless Intelligent Networked Data Processing (SPEEDWINDs)," collaboration between Nanohmics (PI John Sarik) and Duke University (Co-PI Maria Gorlatova). PI Gorlatova's portion $50,000. Aug. 2022 – Aug. 2023.

[LordEducInnov22] *Principal Investigator*, Thomas Lord Educational Innovation Grant Program, "User Context-Aware Augmented Reality (AR) for Medical and Human-Robot Collaboration Applications," $15,600, July 2022 – July 2023.

[NSF21CAREER] *Principal Investigator*, NSF IIS-2046072, "CAREER: Foundations of IoT-Supported Mobile Augmented Reality." $550,000. 2021 – 2026.

[NSF21AI] *Senior Investigator*, NSF CNS-2112562, "AI Institute: Athena: AI-Driven Next-generation Networks at the Edge." Duke University-led center (PI Yiran Chen). Total $20,000,000. 2021 – 2026. Gorlatova portion ~ $550,000.

[NSF19CNS] *Principal Investigator*, NSF CNS-1908051, "Small: Collaborative Research: Towards Intelligent Multi-User Augmented Reality with Edge Computing." A collaborative Carnegie Mellon University (PI Carlee Joe-Wong) and Duke University (PI Maria Gorlatova) proposal. PI Gorlatova's portion $250,000. 2019 – 2022.

Faculty awards:

[Facebook21] Facebook Faculty Award, "Provably Robust 3D Point Cloud Classification for Mobile Augmented Reality." Joint with co-PI Neil Gong (Duke University), 2021.

[IBM20] IBM Faculty Award, "Robust Collaborative Inference in Multi-Tier Device-to-Cloud Internet of Things Architectures." 2020.

Previous since joining Duke:

[NSF19CC*] *Co-Principal Investigator*, NSF CC*-1925550, "Integration: Archipelago: Linking Researchers On-Campuses and in the Cloud through SDN-Enabled Microsegmentation," Duke University submission jointly with Tracy Futhey (PI), Richard Biever (Co-PI), and William Brockelsby (Co-PI). $1,000,000 total. PI Gorlatova's portion $63,277. 2019 – 2022.

[NSF19REU] *Principal Investigator*, REU supplement for NSF CSR-1903136, "Small: Collaborative Research: Multi-tier Service Architecture in IoT-Edge-Cloud-Paradigms," $16,000, 2019 – 2021.

[NSF18CSR] *Principal Investigator*, NSF CSR-1903136, "Small: Collaborative Research: Multi-tier Service Architecture in IoT-Edge-Cloud-Paradigms," 2018 – 2021. A collaborative Yale University (PI Wenjun Hu) and Duke University (PI Maria Gorlatova) proposal. Duke University portion $38,872.

[LordFoundation19] *Principal Investigator*, "Towards Pervasive Multi-User Augmented Reality: Undergraduate Research and Course Development." $12,260. 2019 – 2020. `

[NCWIT19] *Principal Investigator*, National Center for Women, and Information Technology (NCWIT) Academic Alliance Seed Fund Award, Microsoft Research Faculty Summit Track, "Towards Engaging Women in Systems and Networking Research with Code+R&D project across ECE, CS, and OIT departments". Co-PIs Tracy Futhey, John Board. $10,000 total. 2019 – 2020.

[DARPA18BAE] *Senior Personnel*, Defense Advanced Research Projects Agency (DARPA) Dispersed Computing (DCOMP) Network Back-haul Layered Architecture (NEBULA) program. A $36,520 subcontract under the NEBULA program led by BAE Systems. 2018 – 2019.

[AWS18] *Principal Investigator*, Amazon Web Services Cloud Credits for Research, "Optimizing Fog-based IoT Systems". Equivalent of $4,800 in Amazon Web Services Cloud computing credits. Co-PI Liang Zhang. 2018 – 2019.

Prior to joining Duke:

[AZURE17] *Principal Investigator*, Microsoft Azure Research Award, Internet of Things: Optimizing Fog-based IoT Systems. Equivalent of $20,000 in Microsoft 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, CMU, and LGS Innovations. 2017 – 2018.

[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, University of Colorado Boulder, and BAE Systems. 2017 – 2018.

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.

Other:

[REUSITEDUKE] *Faculty Mentor*, NSF REU Site: Research Experience for Undergraduates for Meeting the Grand Challenges in Engineering, Duke University Pratt School of Engineering, 2017 – 2022 (current), 2022 – 2025 (under review).

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. Adopted as the **IEEE 1934 standard**, June 2018.

PUBLICATIONS

Names of students and postdocs I advised are underlined.

Book Chapters

[Wiley20] Y. Ruan, L. Zheng, **M. Gorlatova**, M. Chiang, C. Joe-Wong, Pricing Tradeoffs for Data Analytics in Fog-Cloud Scenarios, *Fognet and Fogonomics: Challenges and Practices of Fog Computing, Communication, Networking, Strategy, and Economics*, Wiley & Sons, March 2020. (**invited book chapter**).

Journal Publications

[MajorRevisionSubmittedTNSM22] S. Wang, S. Hosseinalipour, **M. Gorlatova**, C. Brinton, M. Chiang, UAV-assisted Online Machine Learning over Multi-Tiered Networks: A Hierarchical Nested Personalized Federated Learning Approach, submitted to the *IEEE Transactions on Network and Service Management*. Major revision submitted Aug. 2022.

[ToAppearTMC22] X. Zhang, S. Chen, Y. Zhang, Y. Im, **M. Gorlatova**, S. Ha, C. Joe-Wong, Optimal Network Protocol Selection for Competing Flows via Online Learning, to appear in the *IEEE Transactions on Mobile Computing*, 2022.

[ToAppearIoTJ22b] Y. Han, Y. Chen, R. Wang, J. Wu, **M. Gorlatova**, Intelli-AR Preloading: A Learning Approach to Proactive Hologram Transmissions in Mobile AR, to appear in the *IEEE Internet of Things Journal*, 2022.

[IoTJ22a] J. Manjarres, G. Lan, **M. Gorlatova**, M. Hassan, M. Padro, Deep Learning for Detecting Human Activities from Kinetic Energy Signals, *IEEE Internet of Things Journal*, Special Issue on Sustainable Solutions for the IoT, Vol. 9, No. 10, May 2022.

[TOSN22] G. Lan, Z. Liu, Y. Zhang, T. Scargill, J. Stojkovic, C. Joe-Wong, **M. Gorlatova**, Edge-assisted Collaborative Image Recognition for Mobile Augmented Reality, *ACM Transactions on Sensor Networks*, Vol. 18, No 1, Feb. 2022.

[IoTJ21a] G. Lan, M. F. Imani, Z. Liu, J. Manjarres, W. Hu, A. Lan, D. R. Smith, **M. Gorlatova**, MetaSense: Boosting RF Sensing Accuracy using Dynamic Metasurface Antenna, *IEEE Internet of Things Journal*, Vol. 8, No. 18, Sept. 2021.

[IOTJ20] C. Yu, K. Kam, Y. Xu, Z. Cui, D. Steingart, **M. Gorlatova**, P. Culligan, I. Kymissis, Plant Spike: A Low Cost, BLE Beacon with On-Board Sensors for Smart City Soil Health Monitoring, *IEEE Internet of Things Journal*, Vol. 7, No. 9, June 2020.

[CNets20] M. Gorlatova, H. Inaltekin, M. Chiang, Characterizing Task Completion Latencies in Multi-point Multi-quality Fog Computing Systems, *Elsevier Computer Networks*, Vol. 181, Nov. 2020.

[CommunMag20] G. Lan, M. F. Imani, P. Del Hougne, W. Hu, D. Smith, **M. Gorlatova**, Wireless Sensing Using Dynamic Metasurface Antennas: Challenges and Opportunities, *IEEE Communications Magazine*, Vol. 58, No. 6, June 2020.

[IOTJ18] H. Inaltekin, **M. Gorlatova**, M. Chiang, Virtualized Control over Fog: Interplay between Reliability and Latency, *IEEE Internet of Things Journal*, Vol. 5, No. 6, 2018.

[TOSN15] R. Margolies, **M. Gorlatova**, J. Sarik, G. Stanje, J. Zhu, P. Miller, M. Szczodrak, B. Vigraham, 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.
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.
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

[ConditionallyAcceptedSenSys22] J. Sun, A. Li, L. Duan, S. Alam, X. Deng, X. Guo, H. Wang, **M. Gorlatova**, M. Zhang, H. Li, Y. Chen, FedSEA: A Semi-Asynchronous Federated Learning Framework for Extremely Heterogeneous Devices, conditionally accepted to appear at *ACM SenSys*, Nov. 2022.

[ToAppearISMAR22a] S. Eom, D. Sykes, S. Rahimpour, **M. Gorlatova**, NeuroLens: Augmented Reality-based Contextual Guidance through Surgical Tool Tracking in Neurosurgery, to appear in Proc. *IEEE ISMAR*, Oct. 2022 (**21% acceptance rate**).

[ToAppearISMAR22b] T. Scargill, Y. Chen, N. Marzen, **M. Gorlatova**, Integrated Design of Augmented Reality Spaces Using Virtual Environments, to appear in Proc. *IEEE ISMAR*, Oct. 2022 (**21% acceptance rate**).

[IMWUT22] Y. Zhang, T. Scargill, A. Vaishnav, G. Premsankar, M. Di Francesco, **M. Gorlatova**, InDepth: Real-time Depth Inpainting for Mobile Augmented Reality, in Proc. *ACM IMWUT'22*, Sept. 2022.

[IPSN22] G. Lan, T. Scargill, **M. Gorlatova**, EyeSyn: Psychology-inspired Eye Movement Synthesis for Gaze-based Activity Recognition, in Proc. *IEEE/ACM IPSN'22*, May 2022. **Selected media coverage: vice.com, hackster.io. Highlighted in the university-wide Duke Daily and in the NSF-wide Discoveries newsletters.**

[INFOCOM22] Y. Chen, H. Kwon, H. Inaltekin, **M. Gorlatova**, VR Viewport Pose Model for Quantifying and Exploiting Frame Correlations, in Proc. *IEEE INFOCOM'22*, May 2022. (**19.9% acceptance rate**).

[HotChips21] P.J. Adams, B. Batson, A. Bell, J. Bhatt, J.A. Butts, T. Correia, B. Edwards, P. Feldmann, CH Fenton, A. Forte, J. Gagliardo, G. Gill, **M. Gorlatova**, B. Greskamp, JP Grossman, J. Hunt, B. Jackson, M. Kirk, J. Kuskin, RJ Mader, R. McGowen, A. McLaughlin, M. Moraes, M. Nasr, L. Nociolo, L. O'Donnell, A. Parker, J. Peticolas, T. Quan, TC Schwink, K.-S. Shim, N. Siddique, J. Spengler, M. Theobald, B. Towles, W. Vick, SC Wang, M. Wazlowski, M. Weingarten, JM Williams, D.E. Shaw, The ΛnTON 3 ASIC: A Fire-breathing Monster for Molecular Dynamics Simulations, in Proc. *IEEE HotChips'21*, Aug. 2021.

[CoNext20] X. Ran, C. Slocum, Y.-Z. Tsai, K. Apicharttrisorn, **M. Gorlatova**, J. Chen, Multi-User Augmented Reality with Communication Efficient and Spatially Consistent Virtual Objects, in Proc. *ACM CoNEXT'20*, Dec. 2020.

[SenSys20] G. Lan, B. Heit, T. Scargill, **M. Gorlatova**, GazeGraph: Graph-based Few-Shot Cognitive Context Sensing from Human Visual Behavior, in Proc. *ACM SenSys'20*, Nov. 2020 (**20.6% acceptance rate**).

[IPSN20] Z. Liu, G. Lan, J. Stojkovic, Y. Zhang, C. Joe-Wong, **M. Gorlatova**, CollabAR: Edge-assisted Collaborative Image Recognition for Mobile Augmented Reality, in Proc. *ACM/IEEE IPSN'20*, Apr. 2020 (**21.7% acceptance rate**). **ACM/IEEE IPSN Best Research Artifact Award**.

[ICCAD19] M. Ibrahim, **M. Gorlatova**, K. Chakrabarty, The Internet of Microfluidic Things: Perspectives on System Architecture and Design Challenges, in Proc. *IEEE/ACM ICCAD'19*, Westminster, CO, Nov. 2019.

[ICNP19] X. Zhang, S. Chen, Y. Im, **M. Gorlatova**, S. Ha, C. Joe-Wong, Towards Automated Network Management: Learning the Optimal Protocol Selection for Network Flows, in Proc. *IEEE ICNP'19*, Chicago, IL, Oct. 2019 (short paper; **19.3% acceptance rate**).

[INFOCOM19] P. Naghizadeh, **M. Gorlatova**, A. Lan, M. Chiang, Hurts to be Too Early: Benefits and Drawbacks of Communication in Multi-Agent Learning, in Proc. *IEEE INFOCOM'19*, Paris, France, May 2019 (**19.7% acceptance rate**).

[URTC17] S. Ahn, **M. Gorlatova**, M. Chiang, Leveraging Fog and Cloud Computing for Efficient Computational Offloading, in Proc. 3rd IEEE MIT Undergraduate Research Technology Conference (*IEEE URTC'17*), Cambridge, 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, The New Yorker Magazine 2017**.

[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. *IEEE GlobalSIP'13* Symposium on Energy Harvesting and Green Wireless Communications, Austin, TX, Dec. 2013 (**invited paper**).

[ITiCSE13] M. Gorlatova, J. Sarik, P. Kinget, I. Kymissis, G. Zussman, Project-Based Learning within a Large-Scale Interdisciplinary Research Effort, in Proc. 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. Vigraham, M. Szczodrak, L. Carloni, P. Kinget, I. Kymissis, G. Zussman, Prototyping Energy Harvesting Active Networked Tags (EnHANTs), in Proc. *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. *IEEE WiOpt'11*, Princeton, NJ, May 2011.

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

[Milcom11] M. Gorlatova, R. Aiello, S. Mangold, Managing Base Station Location Privacy, in Proc. *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. *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. 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. *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. *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. *IEEE MILCOM'06*, Washington, DC, Oct. 2006.

Workshop Proceedings

[DigiBiom22] Y. Jiang, W. Wang, T. Scargill, M. Rothman, **M. Gorlatova**, J. Dunn, Digital biomarkers reflect stress reduction after Augmented Reality guided meditation: a feasibility study, in Proc. *ACM Workshop on Emerging Devices for Digital Biomarkers*, July 2022 (co-located with ACM MobiSys 2022).

[CPHSS22] T. Scargill, G. Premsankar, J. Chen, **M. Gorlatova**, Here to Stay: A Quantitative Comparison of Virtual Object Stability in Markerless Mobile AR, in Proc. *IEEE/ACM Workshop on Cyber-Physical-Human System Design and Implementation*, May 2022 (co-located with CPS-IoT Week 2022).

[XRMetaBuild22] T. Scargill, Y. Chen, S. Eom, J. Dunn, **M. Gorlatova**, Environmental, User, and Social Context-Aware Augmented Reality for Supporting Personal Development and Change, in Proc. *IEEE Workshop for Building the Foundations of the Metaverse*, Mar. 2022 (co-located with *IEEE VR'22*).

[XRHealth22] S. Eom, S. Kim, S. Rahimpour, **M. Gorlatova**, AR-Assisted Surgical Guidance System for Ventriculostomy, in Proc. *IEEE XR for Healthcare and Wellbeing Workshop*, Mar. 2022 (co-located with *IEEE VR'22*).

[SmartEdge20] M. Glushakov, Y. Zhang, Y. Han, T. Scargill. G. Lan, **M. Gorlatova**, Edge-based Provisioning of Holographic Content for Contextual and Personalized Augmented Reality, in Proc. *IEEE Workshop on Smart Edge Computing and Networking* (co-located with *IEEE PerCom'20*), Austin, TX, Mar. 2020 (**invited paper**).

[HotNets19] X. Ran, C. Slocum, **M. Gorlatova**, J. Chen, ShareAR: Communication-efficient Multi-User Mobile Augmented Reality, in Proc. *ACM HotNets'19*, Princeton, NJ, Nov. 2019 (**20.4% acceptance rate**).

[MLSystemsISCA19] X. Zhang, S. Chen, Y. Im, **M. Gorlatova**, S. Ha, C. Joe-Wong, Optimal Learning-based Network Protocol Selection, in Proc. *ML for Systems Workshop*, Phoenix, AZ, June 2019 (co-located with *ISCA'19*).

[InfocomWshop19] V. Balasubramanian, F. Zaman, M. Aloqaily, S. Alrabaee, **M. Gorlatova**, M. Reisslein, Reinforcing the Edge: Autonomous Energy Management for Mobile Device Clouds, in Proc. *IEEE Workshop on Intelligent Cloud Computing and Networking*, May 2019 (co-located with *IEEE INFOCOM'19*).

[CPSweekWshop19] S. Ahn, **M. Gorlatova**, P. Naghizadeh, M. Chiang, Personalized Augmented Reality Via Fog-based Imitation Learning, in Proc. *IEEE Workshop on Fog Computing and the IoT*, Apr. 2019 (co-located with *IEEE CPS-IoT Week'19*).

[ARVR18] S. Ahn, **M. Gorlatova**, P. Naghizadeh, M. Chiang, P. Mittal, Adaptive Fog-based Output Security for Augmented Reality, in Proc. *ACM SIGCOMM VR/AR Network Workshop*, Budapest, Hungary, Aug. 2018 (co-located with *ACM SIGCOMM'18*).

[Iofc11] **M. Gorlatova**, R. Aiello, S. Mangold, Managing Location Privacy in Cellular Networks with Femtocell Deployments, in Proc. 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. IEEE Workshop on Secure Network Protocols *(IEEE NPSec'05)*, Boston, MA, Nov. 2005 (co-located with *IEEE ICNP'05*).

Conference Demonstrations

[INFOCOM22] Y. Chen, H. Inaltekin, **M. Gorlatova**, Demo: Pixel Similarity-Based Content Reuse in Edge-Assisted Virtual Reality, in Proc. IEEE INFOCOM'22, May 2022.

[IPSN22] T. Scargill, G. Lan, **M. Gorlatova**, Demo: Catch My Eye: Gaze-Based Activity Recognition in an Augmented Reality Art Gallery, in Proc. IEEE IPSN'22, May 2022. Video of the demo: https://sites.duke.edu/timscargill/catchmyeye-demo/

[HotMobile21] T. Scargill, S. Hurli, J. Chen, **M. Gorlatova**, Demo: Will it Move? Indoor Scene Characterization for Hologram Stability in Mobile AR, in Proc. *ACM HotMobile'21*, Feb. 2021. Video of the demo: https://sites.duke.edu/timscargill/sceneit-prototype/

[SenSys19a] J. Stojkovic, Z. Liu, G. Lan, C. Joe-Wong, **M. Gorlatova**, Demo: Edge-assisted Collaborative Image Recognition for Augmented Reality, in Proc. *ACM SenSys'19*, New York City, NY, Nov. 2019. Video of the demo: https://www.youtube.com/watch?v=RFCxe9ZAVQw

[SenSys19b] J. DeChicchis, S. Ahn, **M. Gorlatova**, Demo: Adaptive Augmented Reality Visual Output Security using Reinforcement Learning Trained Policies, in Proc. *ACM SenSys'19*, New York City, NY, Nov. 2019. Video of the demo: https://www.youtube.com/watch?v=WgOaaUE9wtQ

[SenSys17] T. Chang, L. Zheng, **M. Gorlatova**, C. Gitau, C. Huang, M. Chiang, Demo: Decomposing Data Analytics in Fog Networks, in Proc. *ACM SenSys'17*, Delft, Netherlands, Nov. 2017. Video of the demo: https://youtu.be/nz_s5gSvMBo.

[FWC17] L. Zheng, **M. Gorlatova**, A. Lan, C. Gitau, M. Chiang, Demo: Decomposing Complex Data Analytics in Fog Computing, *IEEE Fog World Congress*, Santa Clara, CA, Oct. 2017 (**invited demonstration**).

[NYCMediaLab17] L. Zheng, **M. Gorlatova**, C. Gitau, M. Chiang, Demo: Decomposing Complex Data Analytics in Fog Computing, *NYC Media Lab Summit*, New York City, NY, Sept. 2017.

[Infocom13] 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. *IEEE INFOCOM'13*, Turin, Italy, Apr. 2013.

[IDTechEx12] J. Sarik, L. Pena, M. Wang, K. Kim, H. Wang, F. Duque, G. Burrow, R. Margolies, **M. Gorlatova**, B. Vigraham, 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**).

[SenSys11] G. Stanje, P. Miller, J. Zhu, A. Smith, O. Winn, R. Margolies, **M. Gorlatova**, J. Sarik, M. Szczodrak, B. Vigraham, L. Carloni, P. Kinget, I. Kymissis, and G. Zussman, Demo: Organic Solar Cell-Equipped Energy Harvesting Active Networked Tag Prototypes, in Proc. *ACM SenSys'11*, Seattle, WA, Nov. 2011. Video of the demo: https://www.youtube.com/watch?v=QFCf62lBATI
ACM SenSys'11 Best Student Demonstration Award.

[MobiSys11] J. Zhu, G. Stanje, R. Margolies, **M. Gorlatova**, J. Sarik, Z. Noorbhaiwala, P. Miller, M. Szczodrak, B. Vigraham, L. Carloni, P. Kinget, I. Kymissis, G. Zussman, Demo: Prototyping UWB-Enabled Energy Harvesting Active Networked Tags, in Proc. *ACM MobiSys'11*, Washington, DC, June 2011.

[MobiCom10] 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, *ACM MobiCom'10*, Chicago, IL, Sept. 2010.

[Secon10] 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. *IEEE SECON'10*, Boston, MA, June 2010.

Selected Poster Presentations

[UbiComp22] T. Scargill, A. Dabrowski, A. Xu, **M. Gorlatova**, Poster: IoT-Enabled Environment Illuminance Optimization for Augmented Reality, in *Proc. ACM UbiComp*, Cambridge, UK, Oct. 2022. **ACM UbiComp'22 Best Poster Award**.

[NAEFOE21] M. Gorlatova, Edge Computing-Supported Mobile Augmented Reality, National Academy of Engineering's US Frontiers of Engineering (NAE US FOE) Symposium, Feb. 2021 (**invited participant**).

[NSFPIMeeting19] M. Gorlatova, Intelligent Augmented Reality with Edge Computing, NSF CSR/NeTS 2019 Joint PI Meeting, Arlington, VA, Nov. 2019.

[HouseOfRepresentatives19] M. Gorlatova, M. Glushakov, M. Wilkinson, J. DeChicchis, P. Naghizadeh, M. Chiang, Intelligent Augmented Reality with Edge Computing, 2nd Coalition for National Security Research's (CNSR) Science, Technology, and Innovation Exchange (STIx) on the Hill Briefing, Washington, DC, May. 2019.

[EngineeringShowcase19] M. Glushakov, **M. Gorlatova**, Collaborative Augmented Reality with Edge Computing and Google ARCore, Duke Spring Engineering + Computing Showcase, Feb. 2019.

[Facebook18] M. Gorlatova, C. Joe-Wong, P. Naghizadeh, R. Younes, J. Chen, M. Chiang, Intelligent Augmented Reality with Edge Computing, 1st Facebook Connectivity Lab Research Workshop, Dec. 2018 (**invited participant**).

[Columbia14] 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. **Top 10 poster award**.

[Google12] 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 (**invited participant**).

[Photovoltaic12] Y. Afsar, J. Sarik, **M. Gorlatova**, G. Zussman, I. Kymissis, Poster: Evaluating Photovoltaic Performance Indoors, in Proc. IEEE Photovoltaic Specialist Conference *(IEEE PVSC'12)*, Austin, TX, June 2012.

[Infocom11] S. Schmid, **M. Gorlatova**, D. Giustiniano, V. Vukadinovic, S. Mangold, Poster: Networking Smart Toys with ToyTalk and ToyBridge, in Proc. *IEEE INFOCOM'11*, Shanghai, China, Apr. 2011.

Datasets and Codebases

[GitHub22] G. Lan, T. Scagill, **M. Gorlatova**, EyeSyn: Eye Movement Dataset and Emulator Implementation. Available at https://github.com/EyeSyn/EyeSynResource. Accompanies ACM/IEEE IPSN'22 paper EyeSyn: Psychology-inspired Eye Movement Synthesis for Gaze-based Activity Recognition.

[GitHub21] Y. Chen, H. Kwon, H. Inaltekin, **M. Gorlatova**, VR Viewport Pose Dataset, Dec. 2021. Available at https://github.com/VRViewportPose/VRViewportPose. Accompanies IEEE INFOCOM'22 paper VR Viewport Pose Model for Quantifying and Exploiting Frame Correlations.

[GitHub20a] G. Lan, **M. Gorlatova**, DesktopActivity Eye Tracking Dataset, GitHub, Nov. 2020. Available at https://github.com/GazeGraphResource/GazeGraph/. Accompanies ACM SenSys'20 paper GazeGraph: Graph-based Few-Shot Cognitive Context Sensing from Human Visual Behavior.

[GitHub20b] Z. Liu, J. Blanco, G. Lan, **M. Gorlatova**, Collaborative Augmented Reality: Multi-view Multi-distortion Image Dataset (MVMDD) and CollabAR Codebase, GitHub, Feb. 2020. Available at https://github.com/CollabAR-Source/. Accompanies IEEE IPSN'20 paper CollabAR: Edge-assisted Collaborative Image Recognition for Mobile Augmented Reality. **IEEE IPSN 2020 Best Research Artifact Award**.

[GitHub20c] M. Glushakov, Y. Zhang, **M. Gorlatova**, Google ARCore and Magic Leap One hologram provisioning frameworks, GitHub, Feb. 2020. Available at https://github.com/michaelglu/SmartEdgePaper and https://github.com/YunfanZhang42/SmartEdgeMagicLeap. Accompanies IEEE SmartEdge'20 paper Edge-based Provisioning of Holographic Content for Contextual and Personalized Augmented Reality.

[Crawdad14] 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.

[Crawdad11] **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 Technical Reports and Proprietary Publications

ArXiv:

[ArXiv21b] T. Scargill, J. Chen, **M. Gorlatova**, Here to Stay: Measuring Hologram Stability in Markerless Smartphone Augmented Reality. arXiv: 2109.14757, Sept. 2021.

[ArXiv21a] S. Wang, S. Hosseinalipour, **M. Gorlatova**, C. Brinton, M. Chiang, UAV-assisted Online Machine Learning over Multi-Tiered Networks: A Hierarchical Nested Personalized Federated Learning Approach. arXiv:2106.15734, June 2021.

[ArXiv18] **M. Gorlatova**, H. Inaltekin, M. Chiang, Characterizing Task Completion Latencies in Fog Computing. arXiv:1811.02638, Nov. 2018.

[ArXiv17] H. Inaltekin, **M. Gorlatova**, M. Chiang, Virtualized Control over Fog: Interplay between Reliability and Latency. arXiv:1712.00100, Nov. 2017.

[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**.

Industry whitepapers:

[OFC17] H. Moustafa, **M. Gorlatova**, C. Byers, E. Schooler, K. Walcott, J. Acharya, A. Mosenia, B. Murthy, C. Vasters, S. Kambhatla, OpenFog Consortium Fog Use Case Scenarios: Autonomous Driving, Oct. 2017.

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).

SELECTED MENTORSHIP

Postdoctoral associates:

Guohao Lan. **First subsequent position: Assistant Professor at TU Delft**	2018 – 2021

Ph.D. students:

Tianyi Xu	2022 – present
Lin Duan	2022 – present
Sarah Sangjun Eom	2021 – present
Ying Chen	2019 – present
Timothy James Scargill	2019 – present
Yuqi Han, Tongji University, China (PhD advisor Jun Wu)	2019 – 2020
Jose Manjarres, Universidad del Norte, Colombia (PhD advisor Mauricio Pardo Gonzalez)	2019 – 2020
Gopika Premsankar, Aalto University (PhD advisor Mario Di Francesco)	Summer 2019
Jun Li, KTH, visiting student at Princeton University (PhD advisor Jiajia Chen)	2018 – 2019
Robert Margolies, Columbia University	2011 – 2013

M.S. students:

Achilles Dabrowski, Duke University	2022
Lucas Liu, Duke University	2021
Zida Liu, Duke University	2019 – 2020
Tianrui (Felix) Zhang, Duke University	2020
Nisarg Dabhi, Duke University	2018 – 2019
Litian Liu, Princeton University	2016 – 2017
Edward Chang, National Chiao Tung University, visiting student at Princeton University	2017
Gerald Stanje, University of Klagenfurt, visiting student at Columbia University	2011 – 2013
Haodan Huang, Columbia University	2011 – 2012
Zainab Noorbhaiwala, Columbia University	2010 – 2011
Sonal Shetkar, Columbia University	2010 – 2011
Tarun Sharma, Columbia University	2009 – 2010
Enlin Xu, Columbia University	2009 – 2010
Shashang Melkote, Columbia University	2009
Aimee Paung, Columbia University	2009
Ellen Shlossberg, Columbia University	2009
Dan Lynch, Royal Military College of Canada, visiting student at Defense R&D Canada	2006 – 2007

B.S. students:

Jeremy Suh, University of Virginia, visiting REU student at Duke University	Summer 2022
Ritvik Janamsetty, Duke University	2022 – present
Seijung Kim, Duke University	2021 – present
Sasamon Omoma, Duke University	2021 – present
Vineet Alaparthi, Duke University	2021 – 2022
Alex Xu, Duke University. **Spring 2022 Best ECE Independent Study Poster Award**	2021 – 2022
Jason Dong, Duke University	2022
Mary Jiang, Duke University	2021
Achilles Dabrowski, Duke University	2021
Aining Liu, Duke University	2021
Rohit Raguram, Duke University	2021
Ashley Kwon, Duke University	2020 – 2021

Emily Eisele, Widener University, visiting REU student at Duke University	Summer 2021
Maria Christenbury, Clemson University, visiting REU student at Duke University	Summer 2021
Megan Mott, UNC Chapel Hill, visiting REU student at Duke University	Summer 2021
Yunfan Zhang, Duke University	2019 – 2021
Mohammad Khatami, Duke University	2021
Brianna Butler, Duke University	2020 – 2021
Priya Rathinavelu, Duke University	2020 – 2021
Shreya Hurli, Duke University	2020 – 2021
Michael Glushakov, Duke University	2018 – 2020
Steven Li, Duke University	2020
Achintya Kumar, Duke University	2020
Hunter Gregory, Duke University	2020
Orion Hsu, Duke University	2020
Davis Booth, Duke University	2019 – 2020
Grace Patel, Duke University	Spring 2020
Daisy Ferleger, Duke University	Spring 2020
Bailey Heit, Duke University	Spring 2020
Bogyung Kim, Duke University	Spring 2020
Cyan DeVeaux, Duke University. **Stanford University Graduate and EDGE Fellowships**	2019 – 2020
Jason Zhou, Duke University	2019 – 2020
Joseph DeChicchis, Duke University	2019 – 2020
Camden Vassallo, Duke University	Fall 2019
Michael Zhang, Duke University	Fall 2019
Jovan Stojkovic, University of Belgrade, visiting REU student at Duke University	Summer 2019
Courtney Johnson, North Carolina A&T State University, visiting REU student at Duke University	Summer 2019
Charles Papandreou, Duke University	2019
Madeline Wilkinson, Duke University	Spring 2019
Kunaal Sharma, Duke University	Spring 2019
Surin Ahn, Princeton University. **Stanford University Graduate Fellowship**	2017 – 2018
Chege Gitau, Princeton University	2016 – 2017
Christian Bernstein, Berlin School of Economics and Law, IBM co-op term	2014
Ishaan Sayal, PEC University of Technology, visiting student at Columbia University	2013
Kanghwan Kim, Cooper Union, visiting student at Columbia University	2012 – 2013
Luis Pena, Columbia University	2012 – 2013
Mina Cong, Columbia University. **Electrical Engineering Department Research Award**	2011 – 2013
Albert Maldonado, University of Puerto Rico, visiting REU student at Columbia University	2012
Michael Zapas, Columbia University	2010 – 2011
Hari Subedi, University of Arizona, visiting REU student at Columbia University	2010
Mark Kelly, University of Ottawa, Defense R&D Canada co-op term	2006

B.S. Honors and Graduation with Distinction projects:

Advisor: Duke University: Ashley Kwon, 2021; Joseph DeChicchis, 2020

Reader: Duke University: Cyan DeVeaux, 2020. Princeton University**:** Surin Ahn, 2018, Akash Levy, 2018

High school students:

Juan Blanco, Duke University. **DukeRep Outstanding Trainee Award**	Summer 2019
Kyle Ready, Princeton University	Summer 2018
Chang Sun, Columbia University	2011 – 2012
Shakhul Hai, Columbia University	Summer 2009

Programs for involving undergraduate students in research:

NSF REU Site for Meeting Grand Challenges of Engineering for the 21st Century, Duke University	2019, 2021
NSF Center for Integrated Access Networks REU Site, Columbia University	2010, 2012

Programs for involving high school students in research:

Duke Research in Engineering Program for high school students (DukeREP) 2019
Harlem Children Society High School Program 2009, 2011 – 2012

Other:

Mentoring: Duke University Code+ team, Augmented Reality for Duke Lemur Center project 2020

SELECTED INVITED TALKS

Conferences and Workshops

Intelligent Mobile Augmented Reality: Promise, Challenges, and Solutions:

- **Keynote speaker**, ACM Workshop on Embedded and Mobile Deep Learning *(ACM EMDL*), co-located with *ACM MobiSys'22*, Portland, OR, July 2022.

Towards Internet of Things-Supported Mobile Augmented Reality:

- *AWE USA*, Santa Clara, CA, Nov. 2021. **Top AR/VR industry conference**.

Towards Edge Computing-Supported Mobile Augmented Reality:

- *ABI Grace Hopper Celebration of Women in Computing*, Oct. 2020.
- *Princeton Edge Lab 10th Year Celebration*, Princeton, NJ, May 2019.
- *BioIT World Conference*, Boston, MA, Apr. 2019.

Towards Intelligence on the Edge: Restructuring Computing to Enable the Next Generation of the IoT:

- *IBM Back to School Seminar Series*, Durham, NC, June 2019.
- *Industrial Internet Consortium (IIC) Technology Working Group* meeting, Raleigh, NC, Feb. 2019.
- *IEEE Fog World Congress*, San Francisco, CA, Oct. 2018.
- *IEEE Sarnoff Symposium*, Newark, NJ, Sept. 2018.

Light, Motion, Fog: Networking Commonplace Objects with Energy Harvesting and Fog Computing:

- **Keynote speaker**, ACM Workshop on Energy Harvesting and Energy Neutral Systems *(ACM ENSsys*), co-located with *ACM SenSys'17*, Delft, Netherlands, Nov. 2017.

Fog Computing: Challenges and Solutions:

- *ABI Grace Hopper Celebration of Women in Computing*, Orlando, FL, Oct. 2017.

The OpenFog Reference Architecture: Unified Framework and a Roadmap:

- *Through the Fog Workshop*, University of Pisa, Pisa, Italy, Feb. 2017.

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.
- Ph.D. Forum, ACM Conference on Mobile Systems, Applications, and Services *(ACM MobiSys'11),* Bethesda, MD, June 2011.
- *IDTechEx Energy Harvesting and Storage USA'10 Conference*, Boston, MA, Nov. 2010.

Selected Academic and Industrial Seminars

Intelligent Mobile Augmented Reality: Promise, Challenges, and Solutions:

- *Rice University, Department of Computer Science*, Oct. 2022.
- *NSF AI Athena Institute*, Durham, NC, June 2022.

Distributed Mobile Augmented Reality Architectures:

- *Augmented Reality for Enterprise Alliance (AREA)*, Feb. 2022. AREA is a global non-profit organization dedicated to widespread adoption of interoperable AR-enabled enterprise systems. AREA members include Boeing, Lenovo, Magic Leap, Medtronic, NIST, Qualcomm, and Siemens.

Edge Computing-Supported Mobile Augmented Reality:

- *Missouri S&T University, Department of Computer Science*, Nov. 2020.

Towards Intelligence on the Edge: Restructuring Computing to Enable the Next Generation of the IoT:

- *Duke University Pratt School of Engineering TEER Talk*, Mar. 2019.

Life on the Edge: Connecting Everyday Objects with Energy Harvesting and Fog Computing:

- *University of Toronto Department of Electrical and Computer Engineering,* Apr. 2018.
- *University of Toronto Department of Computer Science,* Apr. 2018.
- *University of Virginia School of Engineering and Applied Science,* Mar. 2018.
- *University of Minnesota Twin Cities Department of Computer Science and Engineering,* Mar. 2018.
- *Cornell University Department of Electrical and Computer Engineering,* Mar. 2018.
- *Cornell Tech,* Mar. 2018.
- *Northeastern University Department of Electrical and Computer Engineering,* Mar. 2018.
- *University of Pennsylvania Department of Electrical and Systems Engineering,* Mar. 2018.
- *University of Victoria Department of Computer Science,* Mar. 2018.
- *Yale University Departments of Electrical Engineering and Computer Science,* Mar. 2018.
- *University of Wisconsin at Madison, Electrical and Computer Engineering Department*, Feb. 2018.
- *Duke University Pratt School of Engineering,* Feb. 2018.
- *George Washington University Department of Electrical Engineering*, Feb. 2018.

The Most Interesting Part of Cloud Computing: Fog Computing Enabling the Next Generation of the Internet of Things:

- *BAE Systems Tech Talk*, Burlington, MA, Sept. 2017.

In and Out of the Fog: Working with Industry to Define New Computing Architectures:

- *Princeton University Postdoctoral Council Seminar Series*, June 2017.

Towards Networking Commonplace Objects:

- *UC Santa Barbara Department of Electrical and Computer Engineering*, Mar. 2017.
- *Princeton University Department of Electrical Engineering EDGE Lab,* June 2016.
- *Carnegie Mellon University Department of Electrical and Computer Engineering,* June 2016.
- *Fujitsu Laboratories of America*, Sunnyvale, CA, May 2016.

Energy Harvesting Active Networked Tags for Ubiquitous Object Networking:

- *Imperial College London Department of Electrical Engineering*, July 2013.
- *Microsoft Research,* Seattle, WA, Mar. 2013.
  Talk video available at http://research.microsoft.com/apps/video/default.aspx?id=188869
- *Qualcomm*, Systems Engineering Group Seminar Series, San Diego, CA, Feb. 2013.
- *AT&T*, Technology Security Group, New York, NY, Jan. 2013.
- *IEEE Ottawa Signal Processing Society*, Ottawa, ON, Canada, Nov. 2012.
- *Walt Disney Research Zurich*, Zurich, Switzerland, Mar. 2012.
- *Defense R&D Canada*, Network Information Operations Group Seminar Series, Ottawa, ON, Canada, May 2011.
- *Telcordia Technologies Applied Research*, Piscataway, NJ, Dec. 2010.

Wormhole Attack Detection in Wireless Ad Hoc Networks:

- *University of British Columbia Department of Electrical Engineering*, Feb. 2007.

Panel Presentations

[WoWMoM20] AR/VR/XR over Wireless Networks: Challenges and Opportunities, IEEE WoWMoM, Sept. 2020.

[FWC17a] Fog to the Rescue: Restructuring Computing to Take Advantage of Fog, IEEE Fog World Congress (*IEEE FWC'17*), Santa Clara, CA, Nov. 2017.

[FWC17b] Elements of an Open, Interoperable Architecture in Fog, IEEE Fog World Congress (*IEEE FWC'17*), Santa Clara, CA, Oct. 2017.

Panel video available at: https://ieeetv.ieee.org/conference-highlights/elements-of-an-open-interoperable-architecture-for-fog-fog-world-congress-2017

[NYCMeetup17] Fog Computing and the Internet of Things, *IoT Central NYC Meetup*, New York City, NY, Apr. 2017.

Talk video available at: https://youtu.be/f8wBfOkfa6M?t=24m6s

Invited Lectures

[Duke19] Edge Computing: New Frontier in Distributed Systems and Networking, Duke University CS514 Computer Networks/Distributed Systems, Nov. 2019.

[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.

Podcasts

[SERadio18] On Edge Computing, *Software Engineering Radio Podcast*, Aug. 2018

Podcast audio available at: http://www.se-radio.net/2018/08/se-radio-episode-335-maria-gorlatova-on-edge-computing/

[Embedded17] When Toasters Attack, *Embedded.fm Podcast*, Dec. 2017.

Podcast audio available at: http://embedded.fm/episodes/225

UNIVERSITY SERVICE

Departmental committees:

Faculty Search Committee, Mechanical Eng. and Material Science Dept., Duke University	2021 – 2022
Faculty Search Committee, Electrical and Computer Engineering Dept., Duke University	2021 – 2022
Graduate Studies Committee, Electrical and Computer Engineering Dept., Duke University	2021 – 2022
Academic Dishonesty Panel: Software. Electrical and Computer Engineering Dept., Duke University	Fall 2021
Undergraduate Studies Committee, Electrical and Computer Engineering Dept., Duke University	2019 – 2021
Faculty Search Committee, Computer Science Dept., Duke University	2018 – 2019

PhD thesis committees, Electrical and Computer Engineering Department, Duke University:

Suya Wu, 2022 – present. Adviser V. Tarokh. Preliminary exam Aug. 2022.
Jinyuan Jia, 2021 – present. Adviser N. Gong. Preliminary exam Oct. 2021. Defense July 2022.
Ang Li, 2019 – present. Adviser Y. Chen. Preliminary exam Apr. 2021. Defense May 2022.
Haibei Zhu, 2021. Adviser M. Cummings. Defense June 2021.
Dan Sun, 2019 – present. Adviser B. Lee. Preliminary exam Apr. 2021.
Lucy Chikwetu, 2019 – present. Adviser J. Dunn. Preliminary exam Apr. 2021.
Enmao Diao, 2021 – present. Adviser V. Tarokh. Preliminary exam Apr. 2021.
Jiachen Mao, 2018 – 2020. Adviser Y. Chen. Preliminary exam Feb. 2020. Defense July 2020.
Rana Elnaggar, 2018 – 2020. Adviser K. Chakrabarty. Preliminary exam Jan. 2019. Defense Aug. 2020.
Kent Nixon, 2018 – 2019. Adviser Y. Chen. Preliminary exam Mar. 2019. Defense: Dec. 2019.
Yuhao Li, 2019. Adviser B. Lee. Preliminary exam May 2019.
Fan Chen, 2018 – 2019. Adviser Y. Chen. Preliminary exam Nov. 2019.

PhD thesis committees, Computer Science Department, Duke University:

Xiao Zhang, 2019 – present. Advisers B. Maggs, X. Yang. Preliminary exam May 2021.
Shengbao Zheng, 2018 – 2020. Adviser X. Yang. Preliminary exam Dec. 2018. Defense Mar. 2020.

Nisarg Raval, 2018 – 2019. Adviser A. Machanavajjhala. Defense Mar. 2019.

Qualifying exams, Electrical and Computer Engineering Department, Duke University:
Yuhao Wu, Apr. 2022. Adviser Y. Chen
Jingwei Sun, Apr. 2022. Adviser Y. Chen
Chen-Chia Chang, Apr. 2022. Adviser H. Li
Zhenzhou (Tom) Qi, Apr. 2022. Adviser T. Chen
Pingcheng Jian, Apr. 2022. Adviser M. Zavlanos
Shiyi Jiang, Apr. 2021. Adviser K. Chakrabarty
Tunhou Zhang, Apr. 2021. Adviser Y. Chen
Anne French, Apr. 2021. Adviser M. Cummings
Shiyu Li, Apr. 2020. Adviser Y. Chen
Ang Li, Oct. 2019. Adviser Y. Chen
Dan Sun, Apr. 2019. Adviser B. Lee
Lucy Chikwetu, Feb. 2019. Adviser D. Sorin
Fan Chen, Oct. 2018. Adviser Y. Chen
Jiachen Mao, Oct. 2018. Adviser Y. Chen

Qualifying exams, Computer Science Department, Duke University:
Yuege Chen, May 2019. Adviser X. Yang
Xiao Zhang, May 2019. Adviser B. Maggs

Other, Electrical and Computer Engineering Department, Duke University:

Faculty retreat panel speaker	2021
B.S. independent study poster competition judge	2018 – 2020
M.S. final exam poster session committee	2018

Other:

Duke Bass Connections proposals reviewer	2021
GEM middle school girls' Summer Workshop faculty speaker	2019

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. Patented 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

Project Management (New York University 2015), Proposal Writing (Princeton University 2016), Product Management (New York General Assembly 2014), Micro-MBA (IBM 2014).
Certifications: Project Management Professional PMI PMP, 2016 – 2019.

SELECTED ADDITIONAL PROFESSIONAL ACTIVITIES

Organizer: Academic Panel, OpenFog Consortium Member Meeting, 2017, N^2 Women Meeting, IEEE SECON 2010, EE/CS Networking Seminar Series, Columbia University, 2010, N^2 Women Meeting, ACM MobiCom 2009, EnHANTs Summer Students Workshop, Columbia University, 2009.

Session chair:

ACM/IEEE IPSN	2022
CPS-IoT Week IEEE Workshop on Fog Computing and the IoT	2019
ABI Grace Hopper Celebration of Women in Computing	2016

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

External reviewer, conferences: IEEE ISMAR 2022, ACM CHI 2022, IEEE ISMAR 2021, IEEE INFOCOM 2009 – 2014, ACM SIGMETRICS 2011 – 2013, IEEE DCOSS 2012, IEEE GLOBECOM 2011, IEEE/IFIP WONS 2011, IEEE WiOpt 2009, IEEE MILCOM 2008.

Mentor, ACM MobiHoc N2Women Workshop 2021
Judge, ACM Student Poster Competition, ABI Grace Hopper Celebration of Women in Computing 2016

Panelist, technology:

Practical deployment advice for edge computing, IoT Solutions World Congress Digital Summit	2021
Panel moderator: Fog and Edge from the Practitioners' Point of View, IEEE Fog World Congress	2017
Academic panel, OpenFog Consortium Seattle Member Meeting	2017
IEEE Women in Engineering International Leadership Conference (IEEE WIE ILC)	2017
Expert panel, OpenFog Consortium Fog Forum Denver	2017
Expert panel, OpenFog Consortium Fog Forum Atlanta	2017
Expert panel, Wireless Energy Transfer and Scavenging Techniques Workshop	2012

Panelist, student and career guidance:

PhD student orientation faculty panel, Duke University Pratt School of Engineering	2021
Academic Job Search: Finding the Opportunities and Applying, Duke University	2020
Academic Job Search: The Interview Process, Duke University	2019
Challenges and Solutions to Address the Gender Gap in STEM, Duke University	2019
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:

DARPA ISAT Workshop: Wearable Supportive Personalized self-Regulation (WSPR)	2022
National Academy of Engineering's **US Frontiers of Engineering (NAE US FOE) Symposium**	2021
University of Washington Industry-academia Summit on Mixed Reality Security, Privacy, and Safety	2019
XR Access Symposium on Accessibility in Augmented and Virtual Reality	2019
Facebook Connectivity Lab Research Workshop	2018
Microsoft Research Faculty Summit: Systems	2018
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

SELECTED MEDIA COVERAGE

[MITHorizon21b] Edge Computing and Other Technologies: An Overview of Edge Computing's Impact on Other Technology Fields, *MIT Horizon*, Edge Computing Series, Dec. 2021

[MITHorizon21a] The Advantages and Opportunities of Edge Computing, *MIT Horizon*, Edge Computing Series, Nov. 2021

[NetworkWorld18] Augmented Reality, Fog, and Vision: Duke Professor Outlines the Importance of Smart Architectures, *Network World*, Oct. 2018
www.networkworld.com/article/3309446/cloud-computing/augmented-reality-fog-and-vision-duke-professor-outlines-importance-of-smart-architectures.html

[NewYorker17] If Donald Trump Were Actually a Battery, *The New Yorker*, May 2017
www.newyorker.com/tech/elements/if-donald-trump-were-actually-a-battery

[ECD17] OpenFog Reference Architecture: Baseline for Interoperability in the Industrial IoT Cloud-to-Things Continuum, *Embedded Computing Design*, March 2017
www.embedded-computing.com/embedded-computing-design/the-openfog-reference-architecture-a-baseline-for-interoperability-in-the-iiot-cloud-to-things-continuum

[MITTech14] The Internet of You, *MIT Technology Review Business Report*, May 2014
www.technologyreview.com/news/527386/the-internet-of-you/

[MITTech13] Human Motions Will Power the Internet of Things, Say Energy Harvesting Engineers, *MIT Technology Review Physics ArXiv Blog*, July 2013
www.technologyreview.com/view/516816/human-motion-will-power-the-internet-of-things-say-energy-harvesting-engineers/