

TINGJUN CHEN

Assistant Professor of Electrical & Computer Engineering and Computer Science, Duke University
411 Wilkinson Building, 534 Research Drive, Durham, NC 27708
✉ tingjun.chen@duke.edu 🌐 <https://tingjunchen.com> ☎ +1 (919) 613-1581

RESEARCH INTERESTS

Next-generation wireless, optical, and mobile networks: Wireless communications and networking, edge cloud and computing, resource allocation and cross-layering, Internet-of-Things (IoT) systems, mobile and embedded systems, hardware-software co-design, research platforms and testbeds

EDUCATION

- 2014–2020 **Columbia University**, New York, NY
Ph.D. in Electrical Engineering
Dissertation: Algorithms and Experimentation for Future Wireless Networks: From Internet-of-Things to Full-Duplex. *ACM SIGMOBILE Doctoral Dissertation Award Runner-up, Columbia Engineering Morton B. Friedman Memorial Prize, Columbia University Eli Jury Award*
M.Phil. and *M.S.* in Electrical Engineering
Advisor: Prof. Gil Zussman
- 2010–2014 **Tsinghua University**, Beijing, China
B.Eng. in Electronic Engineering
Thesis: Power Control Policies for a Wireless Link with Energy Harvesting Transmitter and Receiver.
Tsinghua University Outstanding Undergraduate Thesis Award
Advisors: Prof. Zhisheng Niu and Prof. Sheng Zhou

PROFESSIONAL EXPERIENCE

- 2020–present **Duke University**, Durham, NC
Assistant Professor, Department of Electrical and Computer Engineering (08/2021–present)
Assistant Professor, Department of Computer Science (secondary appointment) (07/2022–present)
Adjunct Assistant Professor, Department of Electrical and Computer Engineering (10/2020–07/2021)
- 2020–present **WiLO Networks Inc.**, Santa Clara, CA
Co-Founder and Networks Lead
- 2020–2021 **Yale University**, New Haven, CT
Postdoctoral Associate, Department of Electrical Engineering
Hosts: Prof. Leandros Tassiulas and Prof. Lin Zhong
- Summer 2018 **Nokia Bell Labs**, Holmdel, NJ
Research Intern, Wireless Access Lab
Mentors: Dr. Jinfeng Du, Dr. Dmitry Chizhik, and Dr. Reinaldo A. Valenzuela
- 2014–2020 **Columbia University**, New York, NY
M.S./Ph.D Student, Wireless & Mobile Networking (WiMNet) Lab
Advisor: Prof. Gil Zussman

HONORS & AWARDS

- 2023 Highest Scoring Paper, *ECOC'23*
Top-Scored Paper, *IEEE/Optica OFC'23*
- 2021 IBM Academic Award
Google Research Scholar Award
ACM SIGMOBILE Doctoral Dissertation Award Runner-up

- Columbia Engineering Morton B. Friedman Memorial Prize
 Columbia University Eli Jury Award
 Advanced Practical Paper Competition Finalist, *IEEE MTT-S IMS'21*
- 2019 Facebook Fellowship, in *Networking and Connectivity*
 Student Research Competition (SRC) Winner – First Place, *ACM MobiCom'19*
 Best Paper Finalist, *ACM MobiHoc'19*
- 2018 The 6th Heidelberg Laureate Forum Young Researcher
 Columbia Engineering Oscar and Verna Byron Fellowship
 Creative Tech Award, *NYC Media Lab's Annual Summit*
 Columbia University Jacob Millman Award (Outstanding Teaching Assistant)
- 2017 Qualcomm Innovation Fellowship Finalist
- 2016 Best Paper Award, *ACM CoNEXT'16*
 Best Demo Award Honorable Mention, *NYC Media Lab's Annual Summit*
- 2015 Columbia University Edwin Howard Armstrong Memorial Award
- 2014 Wei Family Private Foundation Fellowship
 Tsinghua University Outstanding Undergraduate Thesis Award

PUBLICATIONS

* Advisees are listed in **bold**, Tingjun Chen is underlined.

Conference Proceedings

- [C1] D. Hunt, K. Angell, **Z. Qi**, T. Chen, and M. Pajic, "MadRadar: A Black-Box Physical Layer Attack Framework on mmWave Automotive FMCW Radars," in *Proc. ISOC Network and Distributed System Security Symposium (NDSS'24) (to appear)*, 2024.
- [C2] **Z. Gao**, Y. Chen, and T. Chen, "SWIRLS: Sniffing Wi-Fi Using Radios with Low Sampling Rates," in *Proc. ACM International Symposium on Theory, Algorithmic Foundations, and Protocol Design for Mobile Networks and Mobile Computing (MobiHoc'23)*, 2023.
- [C3] P. Promponas, T. Chen, and L. Tassiulas, "Optimizing Sectorized Wireless Networks: Model, Analysis, and Algorithm," in *Proc. ACM International Symposium on Theory, Algorithmic Foundations, and Protocol Design for Mobile Networks and Mobile Computing (MobiHoc'23)*, 2023.
- [C4] T. Mano, T. Ferreira de Lima, Y.-K. Huang, **Z. Wang**, W. Ishida, E. Ip, A. D'Amico, S. Okamoto, T. Inoue, H. Nishizawa, V. Curri, G. Zussman, D. Kilper, T. Chen, T. Wang, K. Asahi, and K. Takasugi, "First Field Demonstration of Automatic WDM Optical Path Provisioning over Alien Access Links for Data Center Exchange," in *Proc. European Conference on Optical Communication (ECOC'23), Paper Tu.B.5.2*, 2023.
Highest Scoring Paper
- [C5] A. Raj, **Z. Wang**, F. Slyne, T. Chen, D. Kilper, and M. Ruffini, "Self-Normalizing Neural Network, Enabling One Shot Transfer Learning for Modeling EDFA Wavelength Dependent Gain," in *Proc. European Conference on Optical Communication (ECOC'23), Paper Tu.C.5.6*, 2023.
- [C6] R. Raj, S. Xie, **Z. Wang**, T. Chen, and D. Kilper, "Machine Learning-based Raman Tilt Prediction in a ROADM Transmission System," in *Proc. European Conference on Optical Communication (ECOC'23), Paper P98*, 2023.
- [C7] **Z. Wang**, D. Kilper, and T. Chen, "Transfer Learning-based ROADM EDFA Wavelength Dependent Gain Prediction Using Minimized Data Collection," in *Proc. IEEE/Optica Optical Fiber Communication Conference (OFC'23), Paper Th2A.1*, 2023.

- [C8] Y.-K. Huang, **Z. Wang**, E. Ip, **Z. Qi**, G. Zussman, D. Kilper, K. Asahi, H. Kageshima, Y. Aono, and **T. Chen**, “Field Trial of Coexistence and Simultaneous Switching of Real-Time Fiber Sensing and 400 GbE Supporting DCI and 5G Mobile Services,” in *Proc. IEEE/Optica Optical Fiber Communication Conference (OFC’23)*, Paper W3H.4, 2023.
Top-Scored Paper
- [C9] **Z. Wang**, E. Akinrintoyo, D. Kilper, and **T. Chen**, “Optical Signal Spectrum Prediction Using Machine Learning and In-Line Channel Monitors in a Multi-Span ROADM System,” in *Proc. European Conference on Optical Communication (ECOC’22)*, Paper We3B.5, 2022.
- [C10] B. Lantz, J. Yu, A. Bhardwaj, A. A. Díaz-Montiel, A. Quraishy, S. Santaniello, **T. Chen**, R. Fujieda, A. Mukhopadhyay, G. Zussman, M. Ruffini, and D. Kilper, “SDN-Controlled Dynamic Front-Haul Provisioning, Emulated on Hardware and Virtual COSMOS Optical x-Haul Testbeds,” in *Proc. IEEE/OSA Optical Fiber Communication Conference (OFC’21)*, Paper M2B.8, 2021.
- [C11] X. Gu, A. Paidimarri, B. Sadhu, C. Baks, S. Lukashov, M. Yeck, Y. Kwark, **T. Chen**, G. Zussman, I. Seskar, and A. Valdes-Garcia, “Development of a Compact 28 GHz Software-Defined Phased Array for a City-Scale Wireless Research Testbed,” in *Proc. IEEE MTT-S International Microwave Symposium (IMS’21)*, 2021.
Advanced Practical Paper Competition Finalist
- [C12] A. Nagulu, S. Garikapati, I. Kadota, M. Essawy, **T. Chen**, A. Natarajan, G. Zussman and H. Krishnaswamy, “Full-Duplex Receiver with Wideband Multi-Domain FIR Cancellation based on Stacked-Capacitor, N -path Switched-Capacitor Delay Lines Achieving $>+54$ dB SIC across 80 MHz BW and $>+15$ dBm TX Power Handling,” in *Proc. IEEE International Solid-State Circuits Conference (ISSCC’21)*, 2021.
- [C13] D. Raychaudhuri, I. Seskar, G. Zussman, T. Korakis, D. Kilper, **T. Chen**, J. Kolodziejcki, M. Sherman, Z. Kostic, X. Gu, H. Krishnaswamy, S. Maheshwari, P. Skrimponis, and C. Gutterman, “Challenge: COSMOS: A City-Scale Programmable Testbed for Experimentation with Advanced Wireless,” in *Proc. ACM International Conference on Mobile Computing and Networking (MobiCom’20)*, 2020.
- [C14] S. Garikapati, A. Gaonkar, **T. Chen**, A. Nagulu, G. Zussman, and H. Krishnaswamy, “Performance Comparison of Frequency-Domain and Time-Domain RF Self-Interference Cancellation in Full-Duplex Wireless System,” in *Proc. Asilomar Conference on Signals, Systems, and Computers (Asilomar’20)* (invited), 2020.
- [C15] A. Nagulu, A. Gaonkar, S. Ahasan, **T. Chen**, G. Zussman, and H. Krishnaswamy, “A Full-Duplex Receiver Leveraging Multiphase Switched-Capacitor-Delay based Multi-Domain FIR Filter Cancellers,” in *Proc. IEEE Radio Frequency Integrated Circuits Symposium (RFIC’20)*, 2020.
- [C16] A. Minakhmetov, C. Gutterman, **T. Chen**, J. Yu, C. Ware, L. Iannone, D. Kilper, and G. Zussman, “Experiments on Cloud-RAN Wireless Handover using Optical Switching in a Dense Urban Testbed,” in *Proc. IEEE/OSA Optical Fiber Communication Conference (OFC’20)*, Paper Th2A.25, 2020.
- [C17] J. Yu, C. Gutterman, A. Minakhmetov, M. Sherman, **T. Chen**, S. Zhu, G. Zussman, I. Seskar, and D. Kilper, “Dual Use SDN Controller for Management and Experimentation in a Field Deployed Testbed,” in *Proc. IEEE/OSA Optical Fiber Communication Conference (OFC’20)*, Paper T3J.3, 2020.
- [C18] A. Nagulu, **T. Chen**, G. Zussman, and H. Krishnaswamy, “Non-Magnetic 180 nm SOI Circulator with Multi-Watt Power Handling based on Switched Capacitor Clock Boosting,” in *Proc. IEEE International Solid-State Circuits Conference (ISSCC’20)*, 2020.
- [C19] **T. Chen**, M. Baraani Dastjerdi, J. Zhou, H. Krishnaswamy, and G. Zussman, “Wideband Full-Duplex Wireless via Frequency-Domain Equalization: Design and Experimentation,” in *Proc. ACM International Conference on Mobile Computing and Networking (MobiCom’19)*, 2019.
- [C20] **T. Chen**, M. Baraani Dastjerdi, H. Krishnaswamy, and G. Zussman, “Wideband Full-Duplex Phased Array with Joint Transmit and Receive Beamforming: Optimization and Rate Gains,” in *Proc. ACM International Symposium on Mobile Ad Hoc Networking and Computing (MobiHoc’19)*, 2019.
Best Paper Finalist

- [C21] J. Yu, T. Chen, C. Gutterman, S. Zhu, G. Zussman, I. Seskar, and D. Kilper, "COSMOS: Optical Architecture and Prototyping," in *Proc. IEEE/OSA Optical Fiber Communication Conference (OFC'19)*, Paper M3G.3 (invited), 2019.
- [C22] A. Nagulu, T. Chen, G. Zussman, and H. Krishnaswamy, "A Full-Duplex Radio using a CMOS Integrable Circulator Achieving +95 dB Overall SIC," in *Proc. IEEE AP-S Symposium on Antennas and Propagation and CNC/USNC-URSI Joint Meeting (AP-S/URSI'19)* (invited), 2019.
- [C23] T. Chen, J. Diakonikolas, J. Ghaderi, and G. Zussman, "Fairness and Delay in Heterogeneous Half- and Full-Duplex Wireless Networks," in *Proc. Asilomar Conference on Signals, Systems, and Computers (Asilomar'18)* (invited), 2018.
- [C24] T. Chen, J. Diakonikolas, J. Ghaderi, and G. Zussman, "Hybrid Scheduling in Heterogeneous Half- and Full-Duplex Wireless Networks," in *Proc. IEEE International Conference on Computer Communications (INFOCOM'18)*, 2018.
- [C25] M. Baraani Dastjerdi, N. Reiskarimian, T. Chen, G. Zussman, and H. Krishnaswamy, "Full-Duplex Circulator-Receiver Phased Array Employing Self-Interference Cancellation via Beamforming," in *Proc. IEEE Radio Frequency Integrated Circuits Symposium (RFIC'18)*, 2018.
- [C26] M. Baraani Dastjerdi, T. Chen, N. Reiskarimian, G. Zussman, and H. Krishnaswamy, "Self-Interference Cancellation via Beamforming in an Integrated Full Duplex Circulator-Receiver Phased Array," in *Proc. IEEE International Conference on Signal Processing and Communications (SPCOM'18)* (invited), 2018.
- [C27] T. Chen, J. Ghaderi, D. Rubenstein, and G. Zussman, "Maximizing Broadcast Throughput under Ultra-Low-Power Constraints," in *Proc. ACM International Conference on emerging Networking EXperiments and Technologies (CoNEXT'16)*, 2016.
Best Paper Award
- [C28] H. Krishnaswamy, G. Zussman, J. Zhou, J. Marasevic, T. Dinc, N. Reiskarimian, and T. Chen, "Full-Duplex in a Hand-held Device - From Fundamental Physics to Complex Integrated Circuits, Systems and Networks: An Overview of the Columbia FlexICoN project," in *Proc. Asilomar Conference on Signals, Systems, and Computers (Asilomar'16)* (invited), 2016.
- [C29] R. Margolies, G. Grebla, T. Chen, D. Rubenstein, and G. Zussman, "Panda: Neighbor Discovery on a Power Harvesting Budget," in *Proc. IEEE International Conference on Computer Communications (INFOCOM'16)*, 2016.
- [C30] T. Chen, S. Zhou, W. Chen, and Z. Niu, "Power Control Policies for a Wireless Link with Energy Harvesting Transmitter and Receiver," in *Proc. IEEE International Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks (WiOpt'14)*, 2014.

Journals

- [J1] Z. Wang, Y.-K. Huang, E. Ip, Z. Qi, G. Zussman, D. Kilper, K. Asahi, H. Kageshima, Y. Aono, and T. Chen, "Field Trial of Coexistence and Simultaneous Switching of Real-Time Fiber Sensing and Coherent 400 GbE in a Dense Urban Environment," *IEEE/Optica Journal of Lightwave Technology (JLT)* (to appear), 2023.
Invited Paper to the JLT Special Issue on Top-Scored Papers from IEEE/Optica OFC'23
- [J2] T. Chen, P. Maddala, P. Skrimponis, J. Kolodziejcki, A. Adhikari, H. Hu, Z. Gao, A. Paidimarri, A. Valdes-Garcia, S. Rangan, G. Zussman, and I. Seskar, "Programmable and Open-Access Millimeter-Wave Radios in the COSMOS Testbed: Design, Deployment, and Experimentation," *Computer Networks (COMNET)* (invited), vol. 234, pp. 109922, Oct. 2023.
- [J3] Z. Wang, D. Kilper, and T. Chen, "Open EDFA Gain Spectrum Dataset and Its Applications in Data-driven EDFA Gain Modeling," *IEEE/Optica Journal of Optical Communications and Networking (JOCN)*, vol. 15, no. 9, pp. 588–599, Sept. 2023.
- [J4] E. Akinrintoyo, Z. Wang, B. Lantz, T. Chen, and D. Kilper, "Reconfigurable Topology Testbeds: A New Approach to Optical System Experiments," *Optical Fiber Technology, Special Issue on Novel Optical Networking Architectures and Open Interfaces for 5G and Future 6G Networks (OFT)* (invited), vol. 76, pp. 103243, Mar. 2023.

- [J5] T. Chen, J. Yu, A. Minakhmetov, C. Gutterman, M. Sherman, S. Zhu, S. Santaniello, A. Biswas, I. Seskar, G. Zussman, and D. Kilper, "A Software-Defined Programmable Testbed for Beyond-5G Optical-Wireless Experimentation at City-Scale," *IEEE Network, Special Issue on Next-Generation Optical Access Networks to Support Super-Broadband Services and 5G/6G Mobile Networks*, vol. 36, no. 2, pp. 90–99, Apr. 2022.
- [J6] M. Kohli, T. Chen, M. Baraani Dastjerdi, J. Welles, I. Seskar, H. Krishnaswamy, and G. Zussman, "Open-Access Full-Duplex Wireless in the ORBIT and COSMOS Testbeds," *Computer Networks, Special Issue on Advances in Experimental Wireless Platforms and Systems (COMNET) (invited)*, vol. 9, pp. 108420, Nov. 2021.
- [J7] T. Chen, M. Baraani Dastjerdi, H. Krishnaswamy, and G. Zussman, "Wideband Full-Duplex Phased Array with Joint Transmit and Receive Beamforming: Optimization and Rate Gains," *IEEE/ACM Transactions on Networking (TON)*, vol. 29, no. 4, pp. 1591–1604, Aug. 2021.
- [J8] T. Chen, S. Garikapati, A. Nagulu, A. Gaonkar, M. Kohli, I. Kadota, H. Krishnaswamy, and G. Zussman, "A Survey and Quantitative Evaluation of Integrated Circuit-based Antenna Interfaces and Self-Interference Cancellers for Full-Duplex," *IEEE Open Journal of the Communications Society, Special Issue on Full-Duplex Transceivers for Future Networks: Theory and Techniques (OJ-COMS)*, vol. 2, pp. 1753–1776, Jul. 2021.
- [J9] J. Du, D. Chizhik, R. A. Valenzuela, R. Feick, G. Castro, M. Rodriguez, T. Chen, M. Kohli, and G. Zussman, "Directional Measurements in Urban Street Canyons from Macro Rooftop Sites at 28 GHz for 90% Outdoor Coverage," *IEEE Transactions on Antennas and Propagation (TAP)*, vol. 69, no. 6, pp. 3459–3469, Jun. 2021.
- [J10] A. Nagulu, A. Gaonkar, S. Ahasan, S. Garikapati, T. Chen, G. Zussman, and H. Krishnaswamy, "A Full-Duplex Receiver with True-Time-Delay Cancelers based on Switched-Capacitor-Networks Operating Beyond the Delay-Bandwidth Limit," *IEEE Journal of Solid-State Circuits (JSSC)*, vol. 56, no. 5, pp. 1398–1411, May 2021.
- [J11] A. Nagulu, T. Chen, G. Zussman, and H. Krishnaswamy, "Multi-Watt, 1 GHz CMOS Circulator based on Switched-Capacitor Clock Boosting," *IEEE Journal of Solid-State Circuits (JSSC)*, vol. 55, no. 12, pp. 3308–3321, Dec. 2020.
- [J12] T. Chen, J. Diakonikolas, J. Ghaderi, and G. Zussman, "Hybrid Scheduling in Heterogeneous Half- and Full-Duplex Wireless Networks," *IEEE/ACM Transactions on Networking (TON)*, vol. 28, no. 2, pp. 764–777, Apr. 2020.
- [J13] N. Reiskarimian, T. Dinc, J. Zhou, T. Chen, M. Baraani Dastjerdi, J. Diakonikolas, G. Zussman, and H. Krishnaswamy, "A One-Way Ramp to a Two-Way Highway: Integrated Magnetic-Free Non-Reciprocal Antenna Interfaces for Full Duplex Wireless," *IEEE Microwave Magazine (invited)*, vol. 20, no. 2, pp. 56–75, Feb. 2019.
- [J14] T. Chen, J. Ghaderi, D. Rubenstein, and G. Zussman, "Maximizing Broadcast Throughput under Ultra-Low-Power Constraints," *IEEE/ACM Transactions on Networking (TON)*, vol. 26, no. 2, pp. 779–792, Apr. 2018.
- [J15] J. Zhou, N. Reiskarimian, J. Marasevic, T. Dinc, T. Chen, G. Zussman, and H. Krishnaswamy, "Integrated Full Duplex Radios," *IEEE Communications Magazine (invited)*, vol. 55, no. 4, pp. 142–151, Apr. 2017.
- [J16] R. Margolies, G. Grebla, T. Chen, D. Rubenstein, and G. Zussman, "Panda: Neighbor Discovery on a Power Harvesting Budget," *IEEE Journal on Selected Areas in Communications, Series on Green Communications and Networking (JSAC)*, vol. 34, no. 12, pp. 3606–3619, Dec. 2016.
- [J17] S. Zhou, T. Chen, W. Chen, and Z. Niu, "Outage Minimization for a Fading Wireless Link with Energy Harvesting Transmitter and Receiver," *IEEE Journal on Selected Areas in Communications, Special Issue on Wireless Communications Powered by Energy Harvesting and Wireless Energy Transfer (JSAC)*, vol. 33, no. 3, pp. 496–511, Mar. 2015.

Book Chapters

- [B1] M. Baraani Dastjerdi, T. Chen, G. Zussman, and H. Krishnaswamy, "Multiple-Input Multiple-Output Array Systems," invited book chapter in *In-Band Full-Duplex Technologies and Applications* (ed: K. Kolodziej), Artech House, 2021.

- [B2] J. Zhou, T. Chen, Y. Cao, G. Zussman, and H. Krishnaswamy, “Frequency-Domain RF Cancellation,” invited book chapter in *In-Band Full-Duplex Technologies and Applications* (ed: K. Kolodziej), Artech House, 2021.
- [B3] T. Chen, J. Zhou, G. Zussman, and H. Krishnaswamy, “Integrated Full-Duplex Radios: System Concepts, Implementations, and Experimentation,” invited book chapter in *Full-Duplex Communications for Future Wireless Networks* (eds: H. Alves, T. Riihonen, H. Suraweera), Springer, 2020.

Patents

- [Pa1] D. Rubenstein, G. Zussman, J. Ghaderi, R. Margolies, T. Chen, G. Grebla, “Systems and Methods for Throughput Enhancement Among Ultra-Low Power Wireless Network Devices,” U.S. Patent US 10,200,956 B2, Feb. 2019.

Dissertation

- [D1] T. Chen, “Algorithms and Experimentation for Future Wireless Networks: From Internet-of-Things to Full-Duplex,” Ph.D. Thesis, Columbia University, Oct. 2020.
ACM SIGMOBILE Doctoral Dissertation Award Runner-up
Columbia Engineering Morton B. Friedman Memorial Prize
Columbia University Eli Jury Award

Workshop Proceedings

- [W1] R. Raj, S. Xie, Z. Wang, T. Chen, and D. Kilper “Digital Twin Modeling of Cascaded Amplifiers in the COSMOS Testbed,” in *Proc. IEEE ANTS’23 Workshop on Standards Driven Research*, 2023.
- [W2] Z. Qi, Z. Gao, C.-H. Tung, and T. Chen, “Programmable Millimeter-wave MIMO Radios with Real-Time Baseband Processing,” in *Proc. ACM MobiCom’23 Workshop on Wireless Network Testbeds, Experimental Evaluation & Characterization (WiNTECH’23)*, 2023.
- [W3] T. Chen, P. Maddala, P. Skrimponis, J. Kolodziejski, X. Gu, A. Paidimarri, S. Rangan, G. Zussman, and I. Seskar, “Programmable and Open-Access Millimeter-Wave Radios in the PAWR COSMOS Testbed,” in *Proc. ACM MobiCom’21 Workshop on Wireless Network Testbeds, Experimental Evaluation & Characterization (WiNTECH’21)*, 2021.
- [W4] M. Kohli, T. Chen, M. Baraani Dastjerdi, J. Welles, I. Seskar, H. Krishnaswamy, and G. Zussman, “Open-Access Full-Duplex Wireless in the ORBIT and COSMOS Testbeds,” in *Proc. ACM MobiCom’20 Workshop on Wireless Network Testbeds, Experimental Evaluation & Characterization (WiNTECH’20) (invited)*, 2020.
- [W5] T. Chen, M. Kohli, T. Dai, A. D. Estigarribia, D. Chizhik, J. Du, R. Feick, R. A. Valenzuela, and G. Zussman, “28 GHz Channel Measurements in the COSMOS Testbed Deployment Area,” in *Proc. ACM MobiCom’19 Workshop on Millimeter-Wave Networks and Sensing Systems (mmNets’19)*, 2019.
- [W6] T. Chen, J. Welles, M. Kohli, M. Baraani Dastjerdi, J. Kolodziejski, M. Sherman, I. Seskar, H. Krishnaswamy, and G. Zussman, “Experimentation with Full-Duplex Wireless in the COSMOS Testbed,” in *Proc. IEEE ICNP’19 Workshop on Midscale Education and Research Infrastructure and Tools (MERIT’19)*, 2019.
- [W7] C. Gutterman, A. Minakhmetov, J. Yu, M. Sherman, T. Chen, S. Zhu, I. Seskar, D. Raychaudhuri, D. Kilper, and G. Zussman, “Programmable Optical x-Haul Network in the COSMOS Testbed,” in *Proc. IEEE ICNP’19 Workshop on Midscale Education and Research Infrastructure and Tools (MERIT’19)*, 2019.
- [W8] A. Nagulu, T. Chen, G. Zussman, and H. Krishnaswamy, “A Single Antenna Full-Duplex Radio Using a Non-Magnetic, CMOS Circulator with In-built Isolation Tuning,” in *Proc. IEEE ICC’19 Workshop on Full-Duplex Communications for Future Wireless Networks (invited)*, 2019.
- [W9] T. Chen, J. Ghaderi, D. Rubenstein, and G. Zussman, “Performance Evaluation of Energy-Constrained Broadcast (EconCast) in Wireless Networks,” in *Proc. IEEE WCNC’17 Workshop on Energy Harvesting and Remotely Powered Wireless Communications for the IoT (invited)*, 2017.

- [W10] J. Marasevic, T. Chen, J. Zhou, N. Reiskarimian, H. Krishnaswamy, and G. Zussman, “Full-Duplex Wireless: Algorithms and Rate Improvement Bounds for Integrated Circuit Implementations,” in *Proc. ACM MobiCom’16 Workshop on Hot Topics in Wireless (HotWireless’16) (invited)*, 2016.

Demonstrations and Posters

- [DP1] M. Kohli, T. Chen, J. Welles, M. Baraani Dastjerdi, J. Kolodziejcki, M. Sherman, I. Seskar, H. Krishnaswamy, and G. Zussman, “Demo: Remote Experimentation with Open-Access Full-Duplex Wireless in the COS-MOS Testbed,” in *Proc. ACM International Conference on Mobile Computing and Networking (MobiCom’20)*, 2020.
- [DP2] T. Chen, M. Baraani Dastjerdi, J. Welles, J. Zhou, H. Krishnaswamy, and G. Zussman, “Poster: Enabling Wideband Full-Duplex Wireless Frequency-Domain Equalization,” in *Proc. ACM International Conference on Mobile Computing and Networking (MobiCom’19)*, 2019.
ACM MobiCom Student Research Competition (SRC) Winner - First Place
- [DP3] T. Chen, M. Baraani Dastjerdi, G. Farkash, J. Zhou, H. Krishnaswamy, and G. Zussman, “Demo Abstract: Open-Access Full-Duplex Wireless in the ORBIT Testbed,” in *Proc. IEEE International Conference on Computer Communications (INFOCOM’18)*, 2018.
- [DP4] T. Chen, J. Zhou, M. Baraani Dastjerdi, J. Diakonikolas, H. Krishnaswamy, and G. Zussman, “Demo Abstract: Full-Duplex with a Compact Frequency Domain Equalization-based RF Canceller,” in *Proc. IEEE International Conference on Computer Communications (INFOCOM’17)*, 2017.
- [DP5] T. Chen, G. Chen, S. Jain, R. Margolies, G. Grebla, D. Rubenstein, and G. Zussman, “Demo Abstract: Power-Aware Neighbor Discovery for Energy Harvesting Things,” in *Proc. ACM Conference on Embedded Networked Sensor Systems (SenSys’16)*, 2016.
- [DP6] T. Chen, J. Zhou, N. Grimwood, R. Fogel, J. Marasevic, H. Krishnaswamy, and G. Zussman, “Demo: Full-Duplex Wireless based on a Small-Form-Factor Analog Self-Interference Canceller,” in *Proc. ACM International Symposium on Mobile Ad Hoc Networking and Computing (MobiHoc’16)*, 2016.

Technical Reports

- [TR1] H. Nishizawa, T. Mano, T. Ferreira de Lima, Y.-K. Huang, Z. Wang, W. Ishida, M. Kawashima, E. Ip, A. D’Amico, S. Okamoto, T. Inoue, K. Anazawa, V. Curri, G. Zussman, D. Kilper, T. Chen, T. Wang, K. Asahi, and K. Takasugi, “Fast WDM Provisioning with Minimal Probing: The First Field Experiments for DC Exchanges,” *arXiv:2309.07359 [eess.SY]*, Sept. 2023.
- [TR2] P. Promponas, T. Chen, and L. Tassiulas, “Optimizing Sectorized Wireless Networks: Model, Analysis, and Algorithm,” *arXiv: 2308.10970 [cs.NI]*, Aug. 2023.
- [TR3] Z. Wang, D. Kilper, and T. Chen, “An Open EDFA Gain Spectrum Dataset and Its Applications in Data-driven EDFA Gain Modeling,” *Optica Open Preprint: 105602*, Apr. 2023.

MENTORING & ADVISING

Postdocs

- Fall 2023– Dr. Xiao Zhang, Duke University
 Fall 2023– Dr. Hao Yang (co-hosted with Yiran Chen), Duke University

Ph.D. Students

- Fall 2023– Wei Cheng (co-advised with Yiran Chen), Duke University
 Spring 2023– Chung-Hsuan Tung, Duke University
 Fall 2022– Jialin Liu (co-advised with Yiran Chen), Duke University, *ECE Diversity Fellowship*
 Spring 2022– Zhihui Gao (co-advised with Yiran Chen), Duke University, *ACM MobiHoc’23 Student Travel Grant*
 Fall 2021– Zhenzhou Qi, Duke University, *IEEE/Optica OFC’23 Top-Scored Paper, ACM SIGMOBILE Student Community Grant Award*
 Fall 2021– Zehao Wang, Duke University, *ECOC’23 Highest Scoring Paper, IEEE/Optica OFC’23 Top-Scored Paper, ACM SIGMOBILE Student Community Grant Award, ACM MobiCom’21 Student Travel Grant*

M.S. Students

Spring 2023– Yiming Li, Duke University
Spring 2022 Achilles Dabrowski, Duke University (→ Microsoft)
2021–2022 Saravanan Govindarajan, Columbia University, *EE M.S. Research Award* (→ Meta)
Fall 2019 Guanxuan Li, Columbia University (→ Facebook)
Fall 2019 Shounak Roy, Columbia University (→ TSMC America)
Spring 2019 Shanglin Guo, Columbia University (→ Analog Devices)
2018–2019 Siao-Ting Wang, Columbia University (→ Amazon)
2017–2018 Guy Farkash, Columbia University, *EE M.S. Research Award* (→ Knaq)
2016–2017 Steven Alfano, Columbia University, *EE M.S. Research Award* (→ Wolverine Trading)
2015–2016 Rel Fogel, Columbia University (→ Front Gate Tickets)

Undergraduate Students

Fall 2023– Aahan Mehta, Duke University
Spring 2023– Zeyu (Michael) Li, Duke University
Summer 2023 Tongxi Li, Tsinghua University
Summer 2023 Sichao Ma, Tsinghua University
Summer 2023 Walter Kalowsky, Penn State University (REU Student)
Summer 2023 Yixin Liang, Zhejiang University, China
Spring 2023 Olivia Fan, Duke University
Fall 2022 Louise Tang, Duke University
Spring 2022 Xuliang Deng, Duke University and International Christian University, Japan (→ M.S. program at CMU)
2020–2023 Kaya Celebi, Duke University (→ Morgan Stanley)
2021–2022 Leoni Lu, Columbia University (→ Qualcomm)
2021–2022 Perry Flamer, Columbia University, *EE Student Excellence Award*
Spring 2020 Shaokai Lin, Columbia University (→ Ph.D. program at UC Berkeley EECS)
2019–2021 Angel D. Estigarribia, Columbia University, *EE Undergrad Research Award* (→ Qualcomm)
2019–2020 Tianyi Dai, Columbia University (→ Qualcomm)
2018–2019 Kimberly Santiago, Columbia University (→ LinkedIn)
2018–2019 Jackson Welles, Columbia University, *EE Undergrad Research Award* (→ Latch)
2017–2019 Jenny Li, Columbia University (→ Google)
Fall 2017 Rodda John, Columbia University (→ Ramp)
Fall 2017 Lianghua Xu, Columbia University (→ Facebook)
Summer 2017 Jinhui Song, Tsinghua University, China (→ Ph.D. program at UIUC ECE)
Summer 2017 Fan Yi, Shanghai Jiao Tong University, China (→ Ph.D. program at Princeton CS)
Summer 2017 Aishwarya Rajen, Anna University, India (→ M.S. program at UT Austin → Intel)
Spring 2016 Gregory Chen, Columbia University (→ Bloomberg LP)
2015–2016 Nicole Grimwood, Columbia University, *EE Undergrad Research Award* (→ M.S. program at Stanford EE → Cohere Technologies)
2015–2016 Saahil Jain, Columbia University (→ Microsoft → M.S. program at Stanford CS)
2015–2016 James Thompson, Columbia University (→ Lockheed Martin)
Summer 2015 Alexandre Simoes, Universidade de Sao Paulo, Brazil (→ M.S. program at Stanford → Ph.D. program at U. Chicago)

High School Students

Summer 2023 Runxi Wan, Tenafly High School
Summer 2023 Nayan Patel, Cary Academy
Summer 2022 Runxi Wan, Tenafly High School
Summer 2022 Denglei Wang, Ranney School (→ undergraduate program at UT Austin)
Summer 2019 Shiraz Bendor, Cresskill High School (→ undergraduate program at U. Michigan)

TEACHING

Instructor, Duke University, Durham, NC

- Fall 2023 ECE 495/CompSci 390 Full-stack IoT Systems
Enrollment: 9, Student Ratings: Course N/A, Instructor N/A
- Spring 2023 ECE 590/CompSci 590 Next-generation Wireless and Mobile Networks
Enrollment: 10, Student Ratings: Course 4.3/5.0, Instructor 4.7/5.0
- Fall 2022 ECE 556/CompSci 515 Wireless Networking and Mobile Computing
Enrollment: 7, Student Ratings: Course 4.6/5.0, Instructor 4.9/5.0
- Spring 2022 ECE 590/CompSci 590 Next-generation Wireless and Mobile Networks
Enrollment: 14, Student Ratings: Course 4.6/5.0, Instructor 4.7/5.0

Teaching Assistant, Columbia University, New York, NY

- Summer 2019 CSEE 4119 Computer Networks
- Summer 2018 CSEE 4119 Computer Networks
- Spring 2018 ELEN 6889 Large Data Stream Processing
- Fall 2017 ELEN 6950 Wireless & Mobile Networking I
- Summer 2017 CSEE 4119 Computer Networks
- Spring 2017 CSEE 4119 Computer Networks
- Fall 2016 ELEN 6950 Wireless & Mobile Networking I
- Spring 2016 ELEN 6951 Wireless & Mobile Networking II
- Spring 2015 ELEN 4703 Wireless Communications

PROFESSIONAL SERVICE

Organizing Committee

- 2021 General Chair, IEEE GlobeCom Testbeds4Wireless Workshop
- 2019 General Chair, IEEE DySPAN Workshop on mmWave Communications and Networks
Local Arrangements Chair, ACM SenSys/BuildSys

Technical Program Committee

- 2024 ACM MobiCom, IEEE INFOCOM, IEEE DySPAN
- 2023 ACM MobiCom, ACM MobiSys, ACM MobiHoc, IEEE INFOCOM, ACM/IEEE IPSN, ACM CoNEXT Posters
- 2022 ACM Buildsys, ACM SenSys Posters/Demos, IEEE WiOpt, IEEE MASS, IEEE ICC
- 2021 ACM MobiCom Posters/SRC, ACM BuildSys Posters/Demos, IEEE WiOpt, ACM SIGCOMM Workshop on 5G Measurements, Modeling, and Use Cases (5G-MeMU)
- 2019 IEEE Future Networking Workshop for 5G and Beyond Testbed and Trials
- 2016 ACM MobiCom S3 Workshop

National Funding Agency Service

- 2022 Chile National Research and Development Agency (ANID): external reviewer
- 2021 U.S.-Israel Binational Science Foundation (BSF): external reviewer
Chile National Research and Development Agency (ANID): external reviewer
City University of New York (CUNY) Research Foundation: external reviewer

Panelist

- 2023 Optical Fiber Communication Conference (**OFC'23**), *Network Operator Summit No.1 (NOS1) Panel*, "What's the value of optical network automation and how can optics help"
- 2022 NSF CISE Midscale Experimental Research Infrastructure Forum (**MERIF'22**), *Research Results Panel* and *New Testbed Ideas Panel*

- 2022 ACM MobiCom S3 Workshop, “*How One Can Overcome Challenges of Conducting Research During A Global Pandemic?*”
- 2021 ACM CoNEXT Student Workshop, “*How to Overcome the Common Hurdles in An Early Stage?*”
- 2020 ACM MobiSys, “*Academic Job Search during Recession*”
- 2020 ACM MobiCom S3 Workshop, “*PhD Hacks*”

Journal Reviewer

- 2023 IEEE/ACM Transactions on Networking, Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies, IEEE Transactions on Vehicular Technology
- 2022 Journal of the ACM, IEEE Open Journal of Circuits and Systems, IEEE/ACM Transactions on Networking, IEEE Transactions on Mobile Computing, IEEE Transactions on Vehicular Technology, Elsevier Computer Networks
- 2021 IEEE/ACM Transactions on Networking, IEEE Transactions on Mobile Computing, IEEE Internet of Things Journal, IEEE Open Journal of the Communications Society, IEEE Communications Letters
- 2015–2020 IEEE/ACM Transactions on Networking, ACM Transactions on Embedded Computing Systems, ACM Transactions on Sensor Networks, IEEE Transactions on Wireless Communications, IEEE Transactions on Communications, IEEE Communications Magazine, IEEE Wireless Communications Magazine, IEEE Microwave Magazine, IEEE Communications Letters, Elsevier Computer Networks, Elsevier Physical Communication

Conference Reviewer

- 2015–2021 USENIX NSDI, ACM MobiCom, ACM MobiHoc, ACM SIGMETRICS, IFIP WD, IEEE ICC, IEEE VTC

School & Department Services

- 2023 Faculty Advisor, Duke Engineering Future Faculty of Innovation and Excellence (DEFINE) Program
- 2023–2024 Faculty Search Committee, Electrical and Computer Engineering Department, Duke University
- 2023–2024 ECE Seminar Committee, Electrical and Computer Engineering Department, Duke University
- 2022–2023 Faculty Search Committee, Electrical and Computer Engineering Department, Duke University
- 2016–2020 Electrical Engineering Student Ambassadors, Columbia University

Outreach & Education

- 2023 High school outreach with Inspiring Minds at Hillside High School in Durham, NC
- 2022 Judge for the ENVISION By WiSTEM (Women in STEM) Competition
- 2021 Judge for the Alpha Hacks Hackathon, Judge for the ENVISION By WiSTEM (Women in STEM) Competition
- 2020 Kids Week at Intrepid: Full STEAM Ahead
- 2019 Columbia Inside Engineering Labs program, Columbia Girls’ Science Day, Class visit for underrepresented high school seniors at CE2 (Columbia Engineering Experience), COSMOS Summer Research Experiences for Teachers (RET) program, Demo and poster at the Silicon Harlem Annual Tech Conference
- 2018 COSMOS Summer Research Experiences for Teachers (RET) program, Demo and poster at the Silicon Harlem Annual Tech Conference, Science Expo at The School at Columbia University
- 2015 High school outreach at the Manhattan Center for Science and Mathematics in East Harlem

UNIVERSITY SERVICE

Ph.D. Thesis Committee

- 2023 Jingchi Zhang (Advisors: Yiran Chen and Helen Li), Duke University, Apr. 2023
 Jiyao Hu (Advisor: Xiaowei Yang), Duke University, Mar. 2023
- 2022 Xiaoyu Cao (Advisor: Neil Gong), Duke University, Mar. 2022
 Chengyu Wang (Advisor: David Brady), Duke University, Mar. 2022

Ph.D. Preliminary Exam Committee

- 2023 Qilin Zheng (Advisor: Helen Li), Duke University, May 2023
 Hongbin Liu (Advisor: Neil Gong), Duke University, Apr. 2023
 Minxue Tang (Advisor: Helen Li), Duke University, Apr. 2023
- 2022 Jianyi Zhang (Advisor: Yiran Chen), Duke University, Apr. 2022
 Jingchi Zhang (Advisors: Yiran Chen and Helen Li), Duke University, Apr. 2022
 Ying Chen (Advisor: Maria Gorlatova), Duke University, Apr. 2022

Ph.D. Qualifying Exams Committee

- 2023 Yuqi Jia (Advisor: Neil Gong), Duke University, Nov. 2023
 Zhengyuan Jiang (Advisor: Neil Gong), Duke University, Nov. 2023
 Yuepeng Hu (Advisor: Neil Gong), Duke University, Nov. 2023
- 2022 David Hunt (Advisor: Miroslav Pajic), Duke University, Dec. 2022
 Jingwei Sun (Advisor: Yiran Chen), Duke University, Apr. 2022
 Hongbin Liu (Advisor: Neil Gong), Duke University, Apr. 2022
 Minxue Tang (Advisor: Helen Li), Duke University, Apr. 2022
 Zhihui Gao (Advisor: Yiran Chen), Duke University, Apr. 2022
- 2021 Xiaoyu Cao (Advisor: Neil Gong), Duke University, Nov. 2021

M.S. Thesis Committee

- 2023 Xiangru Chen (Advisor: Yiran Chen), Duke University, Apr. 2023

TALKS, DEMOS, AND ADDITIONAL PRESENTATIONS

- 2023 “Cross-layering for Seamless Connectivity in Wireless Networks: Full-duplex, Beamforming, and mmWave”, *SRC JUMP 2.0 CUBiC Center e-Workshop* (online).
 “Efficient ML-based EDFA Gain Models for Optical Network Provisioning”, *Network Operator Summit No.1 (NOS1) Panel at IEEE/Optica OFC’23*, “What’s the value of optical network automation and how can optics help”.
- 2022 “Next-Generation Optical-Wireless and Edge-Cloud Networks”, *IBM-Duke University Day, Duke University*.
 “The COSMOS Testbed – A Platform for Advanced Wireless, mmWave, and Optical Experimentation”, *Department of Electrical and Computer Engineering, North Carolina State University, Raleigh, NC*.
 “The COSMOS Testbed – A Platform for Advanced Wireless, Optical, and Edge Cloud Experimentation”, *ACM SIGMOBILE Community Engagement Program Seminar* (online).
 “COSMOS Testbed: Programmable Optical x-Haul Networking”, *IEEE Workshop on Future Networks Testbed Requirements, Challenges, and Opportunities* (online).
 “The COSMOS Testbed – A Platform for Advanced Wireless, Optical, and Edge Cloud Experimentation”, *Duke Computer Science Colloquium* (online).
- 2020 “The COSMOS Testbed – A Platform for Advanced Wireless, mmWave, and Optical Experimentation”, *Microsoft Research Seminar, Redmond, WA (invited online talk)*.

- “Cross-Layering in Future Wireless Networks: From Compact Full-Duplex Radios to City-Scale Experimentation”,
- Yale University, Department of Electrical Engineering and Yale Institute for Network Science (YINS)
 - University of Michigan, Department of Electrical and Computer Engineering
 - Carnegie Mellon University, Department of Electrical and Computer Engineering
 - University of Minnesota Twin Cities, Department of Electrical and Computer Engineering
 - Duke University, Department of Electrical and Computer Engineering
 - Cornell Tech and Cornell University, School of Electrical and Computer Engineering
 - Columbia University, Data Science Institute Sense, Collect, and Move Data Seminar
- 2019 “Experimentation with the City-Scale Programmable COSMOS Testbed”,
- ACM SenSys’19 Tutorial, New York, NY (tutorial and demo)
 - ACM MobiCom’19 Tutorial, Los Cabos, Mexico (tutorial and demo)
- “The COSMOS Education Toolkit and Open-Access Full-Duplex Wireless in the COSMOS Testbed”, *6th Silicon Harlem Annual Tech Conference*, New York, NY (**invited demo**).
- “Algorithms and Experimentation for Future Wireless Networks: From Full-Duplex to Optical x-Haul”, *Facebook Annual Fellow Summit*, Menlo Park, CA (**invited poster**).
- “The COSMOS Wireless Testbed and Experimentation with Compact Full-Duplex Wireless”, *Optical Telecommunications Research Group, Telecom Paris*, Paris, France (opt-telecom seminar).
- “COSMOS – A Platform for Advanced Wireless Research (PAWR)”, *ACM MobiHoc’19 Workshop on the Frontiers of Networks*, Catania, Italy (**invited talk**).
- “Algorithms and Experimentation for Future Wireless Networks: From Full-Duplex to Optical x-Haul”, *Facebook Networking and Communications Faculty Summit*, Fremont, CA (**invited talk**).
- “Real-Time Full-Duplex Wireless using an Integrated CMOS Circulator”, *IEEE MTT-S IMS’19*, Boston, MA (demo).
- “The COSMOS Wireless Testbed: Experimenting with Next-Generation Wireless Technologies and Applications in Real-World City-Scale Environments”, *Department of Electronic Engineering, Tsinghua University*, Beijing, China (**invited talk**).
- “The COSMOS Wireless Testbed and Experimentation with Compact Full-Duplex Wireless”, *Institute of Interdisciplinary Information Sciences, Tsinghua University*, Beijing, China (**invited talk**).
- “Open-Access Full-Duplex Wireless in the ORBIT/COSMOS Testbed”, *COSMOS Experimenters Workshop, Rutgers University*, North Brunswick, NJ (tutorial and demo).
- “The COSMOS Wireless Testbed and Experimentation with Compact Full-Duplex Wireless”, *Department of Computer Science and Engineering, University of California at Riverside*, Riverside, CA.
- “Real-Time Full-Duplex Wireless using an Integrated CMOS Circulator”, *Columbia Data Science Day, Columbia University*, New York, NY (demo).
- 2018 “Fully-Integrated Non-Magnetic 180nm SOI Circulator”, *DARPA MTO RF Showcase, Johns Hopkins University Applied Physics Lab*, Laurel, MD (demo).
- “Open-Access Full-Duplex Wireless in the ORBIT Testbed”, *5th Silicon Harlem Annual Tech Conference*, New York, NY (**invited demo**).
- “Maximizing Broadcast Throughput under Ultra-Low-Power Constraints”, *6th Heidelberg Laureate Forum*, Heidelberg, Germany (poster-flash and poster).
- “Maximizing Broadcast Throughput under Ultra-Low-Power Constraints”, *Department of Electrical and Computer Engineering, Technical University of Munich*, Munich, Germany (**invited talk**).
- “Open-Access Full-Duplex Wireless in the ORBIT Testbed”, *NYC Media Lab’s Annual Summit, The New School*, New York, NY (demo). *Creative Tech Award in Engineering*

- “Maximizing Broadcast Throughput under Ultra-Low-Power Constraints”, *Institute of Interdisciplinary Information Sciences, Tsinghua University*, Beijing, China (**invited talk**).
- “Full-Duplex Wireless in Hand-Held Devices: From Circuits to Networks”, *Department of Electronic Engineering, Tsinghua University*, Beijing, China (**invited talk**).
- “The COSMOS Wireless Testbed and Experimentation with Compact Full-Duplex Wireless”, *Nokia Bell Labs*, Crawford Hill, NJ (**invited talk**).
- “Fully-Integrated Non-Magnetic 180nm SOI Circulator”, *IEEE RFIC'18*, Philadelphia, PA (demo).
- “Open-Access Full-Duplex Wireless in the ORBIT Testbed”, *CATT Annual Research Review*, NYU, Brooklyn, NY (**invited demo and poster**).
- “Open-Access Full-Duplex Wireless in the ORBIT Testbed”, *Columbia Data Science Day, Columbia University*, New York, NY (demo).
- 2017 “Full-Duplex Wireless: A Two-Way Road to 5G”, *National Instruments NIWeek Academic Forum*, Austin, TX (poster).
- “Full-Duplex MIMO Wireless: From IC Design to Networking”, *Qualcomm Innovation Fellowship Final's Day*, San Diego, CA (talk and poster).
- “Full-Duplex Wireless: A Two-Way Road to 5G”, *Columbia Data Science Day, Columbia University*, New York, NY (demo).
- “Full-duplex Wireless: Algorithms, Rate Improvement Bounds, and System Implementations”, *WINLAB Workshop on Advanced Wireless Experimentation*, Rutgers University, North Brunswick, NJ (**invited talk**).
- 2016 “Double-Talk: Full-Duplex Wireless for Next-Generation Communications”, *NYC Media Lab's Annual Summit, Columbia University*, New York, NY (demo). **Best Demo Award Honorable Mention**
- “A Self-Interference-Cancelling Full-Duplex Enabling Next-Generation Wireless Communications”, *Columbia Data Science Day, Columbia University*, New York, NY (demo).