

HENRY SU WANG

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APPOINTMENTS

Princeton University, Electrical and Computer Engineering
Lecturer September 2025 - Present
Postdoctoral Research Associate January 2024 - Present
Advisors: Dr. Mung Chiang & Dr. H. Vincent Poor

EDUCATION

Purdue University, West Lafayette
Ph.D., Electrical and Computer Engineering August 2019 - December 2023
Advisor: Dr. Christopher G. Brinton
– Ph.D. thesis: “Network-aware Federated Learning
Across Highly Heterogeneous Edge/Fog Networks”
B.S.E.E. with Distinction, Electrical and Computer Engineering August 2014 - December 2018

JOURNAL PUBLICATIONS

Bold font denotes my author location.

- [J1] **S. Wang**, Y. Ruan, Y. Tu, S. Wagle, C. Brinton, C. Joe-Wong, “Network-Aware Optimization of Distributed Learning for Fog Computing”, *IEEE/ACM Transactions on Networking*. May 2021.
- [J2] **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”, *IEEE Transactions on Network and Service Management*. October 2022.
- [J3] C. Zhang, **S. Wang**, V. Aggarwal, B. Peleato, “Coded Caching with Heterogeneous User Profiles”, *IEEE Transactions on Information Theory*. June 2022.
- [J4] S. Hosseinalipour, **S. Wang**, N. Michelusi, V. Aggarwal, C. Brinton, D. Love, M. Chiang, “Parallel Successive Learning for Online Distributed Model Training over Heterogeneous Wireless Networks”, *IEEE/ACM Transactions on Networking*. September 2022.
- [J5] **S. Wang**, S. Hosseinalipour, V. Aggarwal, C. Brinton, D. Love, W. Su, M. Chiang, “Towards Cooperative Federated Learning over Heterogeneous Edge/Fog Networks”, *IEEE Communications Magazine*. April 2023.
- [J6] S. Gesing, C. Stirm, G. Klimeck, L. Zentner, **S. Wang**, et al. “Hubzero: Community Engagement in Numbers for Four Science Gateways Supporting Open Science”, *Computing at Science and Engineering*. May 2023.
- [J7] **S. Wang**, S. Hosseinalipour, C. Brinton, “Multi-Source to Multi-Target Decentralized Federated Domain Adaptation”, *IEEE Transactions on Cognitive Communications and Networking*. January 2024.
- [J8] **S. Wang**, R. Morabito, S. Hosseinalipour, M. Chiang, C. Brinton, “Device Sampling and Resource Optimization for Federated Learning in Cooperative Edge Networks”, *IEEE/ACM Transactions on Networking*. July 2024.
- [J9] **S. Wang**, R. Sahay, A. Piaseczny, C. Brinton, “Mitigating Evasion Attacks in Federated Learning-Based Signal Classifiers”, *IEEE Transactions on Network Science and Engineering*. May 2025.

- [J10] L. Yuan, D. Han, **S. Wang**, D. Upadhyay, C. Brinton, “Communication-Efficient Multimodal Federated Learning: Joint Modality and Client Selection”, *IEEE Transactions on Mobile Computing*. March 2026.
- [J11] **S. Wang**, M. Chiang, H.V. Poor, “Optimizing Server Placement for Vertical Federated Learning in Dynamic Edge/Fog Networks”, *IEEE/ACM Transactions on Networking*. June 2026.
- [J12] S. Zeng, H. Zhang, **S. Wang**, B. Di, H. Zhang, D. Niyato, Z. Han, H.V. Poor, L. Song, “Holographic Beamforming for Semantic Communications”, *IEEE Transactions on Wireless Communications*. June 2026.

CONFERENCE PUBLICATIONS

- [C1] **S. Wang**, M. Lee, S. Hosseinalipour, R. Morabito, M. Chiang, C. Brinton, “Device Sampling for Heterogeneous Federated Learning: Theory, Algorithms, and Implementation”, *IEEE International Conference on Computer Communications (INFOCOM)*. May 2021. [19.9% acceptance rate.]
- [C2] **S. Wang**, B. Peleato, “Coded Caching with Heterogeneous User Profiles”, *IEEE International Symposium on Information Theory (ISIT)*. July 2019.
- [C3] M. Zelinski, N. Hicks, **S. Wang**, K. Douglas, P. Bermel, H. Diefes-Dux, K. Madhavan. “Instructor outcomes of teaching a STEM MOOC”, In *Frontiers in Education Conference (FIE)*. October 2017.
- [C4] S. Gesing, C. Stirm, G. Klimeck, L. Zentner, **S. Wang**, et al. “Open Science via HUBzero: Exploring Five Science Gateways Supporting and Growing their Open Science Communities”, In *Hawaii International Conference on System Sciences (HICSS)*. January 2022.
- [C5] **S. Wang**, R. Sahay, C. Brinton, “How Potent are Evasion Attacks for Poisoning Federated Learning-Based Signal Classifiers?”, *IEEE International Conference on Communications (ICC)*. May 2023.

PUBLICATIONS UNDER *REVISION*/REVIEW:

\hat{J} denotes journal papers, and \hat{C} denotes conference papers

- [\hat{J} 1] D.T.A. Nguyen, **S. Wang**, D.T. Nguyen, A. Nedić, H.V. Poor, “Decentralized Federated Learning with Gradient Tracking over Time-Varying Directed Networks”, Under **Major Revision** at *IEEE/ACM Transactions on Networking* since *December 2025*.
- [\hat{J} 2] **S. Wang**, M. Chiang, H.V. Poor, “Towards Serverless Semi-Decentralized Federated Learning with Heterogeneous Optimizers”, Under **Review** at *IEEE Transactions on Networking* since *June 2026*.
- [\hat{C} 1] E. Chen, **S. Wang**, D.J. Han, S.Q. Wang, K. Chan, C. Brinton, “Routing Without Training: Controllable-Ratio LLM Offloading via Reliability Gating”, Under **Review** at *Neural Information Processing Systems* since *April 2026*.

WORKING PAPERS

\tilde{J} denotes journal papers, \tilde{C} denotes conference papers, * denotes direct mentee

- [\tilde{J} 1] **S. Wang**, S. Zeng, B. Peleato, M. Chiang, H.V. Poor, “Distributed Airy Beamforming via Federated Network Unrolling”, To be submitted to *IEEE Transactions on Wireless Communications*.
- [\tilde{C} 1] N. Novello, **S. Wang**, D. Gunduz, A.M. Tonello, M. Chiang, H.V. Poor, “Federated Unlearning for Text-to-Image Diffusion Models”, To be submitted to *IEEE International Conference on Computer Communications (INFOCOM)*.

- [C̃2] N. Hu*, **S. Wang**, M. Chiang, H.V. Poor, “Coupled Noise Structures and Data Distributions in Federated Learning”, To be submitted to IEEE International Conference on Computer Communications (INFOCOM).
- [C̃3] D. Zhang*, H. Habib*, **S. Wang**, S. Zeng, M. Chiang, H.V. Poor, “Towards Large-Scale RF Fingerprinting: TinyML on Low-Cost, Mass-Market MCUs”, To be submitted to IEEE International Conference on Communications (ICC).

TEACHING EXPERIENCE

EGR 153 , Princeton University Foundations of Engineering: Electricity, Magnetism, and Photonics <i>Lecturer</i>	2026 <i>Princeton, NJ, USA</i>
EGR 151 , Princeton University Foundations of Engineering: Mechanics, Energy, and Waves <i>Lecturer</i>	2025 <i>Princeton, NJ, USA</i>
Introduction to Data Science I and II , Purdue University <i>Teaching Assistant</i>	2023 <i>Online</i>
Independent Study , ISTC <i>Expert Mentor</i>	2022-2023, 2024-2025 <i>Online</i>
ECE Senior Design , Purdue University <i>General Teaching Assistant</i>	2019-2020 <i>West Lafayette, IN, USA</i>
ENGR 131/132 , Purdue University <i>Teaching Assistant</i>	2015-2016 <i>West Lafayette, IN, USA</i>

RESEARCH MENTORSHIP

Hasan Alsaedi - Princeton Undergraduate	[2026-]
Nigel Hu - Princeton Undergraduate	[2026-]
Jannath Jamal - Princeton Undergraduate	[2026-]
Leonardo Lopez - Princeton Undergraduate	[2026-]
Devin Zhang - Princeton Undergraduate	[2026-]
Evan Chen - Ph.D. Student at Purdue University	[2026-]
Yanzhi Wang - Ph.D. Student at Peking University	[2026-]
Nicola Novello - Ph.D. Student at University of Klagenfurt, Austria	[2026-]
Shiyong Zhu - Ph.D. Student at City University of Hong Kong	[2024-2025]
(Ella) Duong Thuy Anh Nguyen - Ph.D. Student at Arizona State University	[2024-2026]
Adam Piascenzy - Purdue Undergraduate/Ph.D. Student	[2022-2025]

PRESENTATIONS

Invited Talks

- “Network-Aware Federated Learning: Fundamentals and Emergent Topics”, Invited Talk, EURECOM, Sophia-Antipolis, France. February 2026. <https://www.eurecom.fr/en/seminar/142544>

- “Network-Aware Federated Learning: Fundamentals and Emergent Topics”, Invited Talk, Universidad Carlos III de Madrid, Leganes, Spain. January 2026. <https://gts.tsc.uc3m.es/gts-seminars/>
- “Network-Aware Federated Learning: Fundamentals and Emergent Topics”, ICT Research Center for 6G Wireless Standardization - Joint Workshop on 6G Wireless Communications, Princeton University, Princeton NJ. February 2026.

Contributed Talks

- “Emergent Forms of Heterogeneity at the Intersection of Federated Learning and Edge/Fog Networks”, NextG Seminar Series, Princeton University, Princeton, NJ. December 2025.
- “Multi-source to Multi-target Decentralized Federated Domain Adaptation”, ML Reading Group, Purdue University, West Lafayette, IN. October 2023.
- “Device Sampling for Heterogeneous Federated Learning: Theory, Algorithms, and Implementation”, IEEE INFOCOM, Toronto, Canada (Virtual). May 2021.
- “Coded caching with heterogeneous user profiles”, IEEE ISIT, Paris, France. July 2019 .

Posters

- “Serverless Semi-Decentralized Federated Learning with Heterogeneous Optimizers”, Princeton NextG Symposium, April 2026.
- “Optimizing Server Placement for Vertical Federated Learning in Dynamic Edge/Fog Networks”, Princeton NextG Symposium, April 2025.
- “Envisioning Multi-Source to Multi-Target Federated Domain Adaptation for Naval Defense Scenario”, Workshop for Naval Applications of Machine Learning (NAML), February 2024.

ACADEMIC AND PROFESSIONAL SERVICE

Technical Program Committee

- IEEE Globecom *2026*
- ACM MobiSys Workshop on Networked AI Systems *2024, 2025, 2026*

Session Chair

- Conference on Information Sciences and Systems (CISS); Control and Prediction *2024*

Peer Reviewer

- Magazines: IEEE Communications Magazine, IEEE Wireless Communications Magazine, IEEE Internet-of-Things Magazine
- IEEE Transactions & Equivalents: TON, TSP, JSAC, TMC, TWC, TCOM, TNSE, TNSM, TGCN, TMLCN, TKDD, TCOMP
- Top Conferences: INFOCOM, SIGMETRICS, NeurIPS, ICML, ICLR, MOBIHOC, AAAI, AIS-TATS
- Flagship Conferences: ISIT, ICC, GLOBECOM
- Other Journals and Conferences: JATS, IOTJ

PROFESSIONAL AND HONORARY SOCIETY AFFILIATIONS

IEEE

- Member 2024-Present
- Student Member 2017-2023

ACM

- Member 2024-Present

Tau Beta Pi (Indiana Alpha Chapter) 2016-Present

Eta Kappa Nu (Beta Chapter) 2017-Present

HONORS AND AWARDS

- Princeton Engineering Council - Excellence in Teaching Award
<https://ecouncil.princeton.edu/teaching-awards/teaching-award-winners/> Fall 2025
- Semifinalist at 3MT Thesis Competition March 2023
- Travel Grant for ISIT 2019 July 2019
- 2x Eli Shay Scholarship in ECE May 2018 & May 2017
- Mortar Board Leadership Conference January 2016
- Arthur H. Tiechenor Jr Scholarship August 2014

OTHER PROFESSIONAL EXPERIENCE

- Graduate Research Assistant** 2019-2023
 Nanohub.org & Purdue University; School of Electrical and Computer Engineering West Lafayette, IN, USA
- Project Engineer** 2019
 TTI - Techtronic Industries Anderson, SC, USA
- Electrical Engineering Intern** 2016, 2017
 Lutron Electronics Coopersburg, PA, USA; Boynton Beach, FL, USA

NON-RESEARCH MENTORSHIP

- Dingyang Shang, Cassie Lin - Purdue Undergraduate [2020-2021]
- Max Menninga - John Hersey High School [2022-2023]
- Nick Villarín, Luke Regalado, Christian Polly, Jay Patel - Bartlett STEM Academy [2022-2023]
- Larry Gonzalez, Malakai Mortensen, James Chung, Ian Catena - Bartlett STEM Academy [2022-2023]
- Jai Sharma, Hunter Vassar - Woodstock High School [2024-2025]
- Ryan Chien, Joseph Cintora, Lance Sevilla, Manav Shah - Bartlett STEM Academy [2024-2025]
- Mendez Kevin, Jairo Morales, Gio Ortiz-Cardoso, Chris Gutierrez, Javier Mora - Cristo Rey Jesuit High School [2024-2025]
- Rebecca Jacob - Bartlett STEM Academy [2024-2025]
- Jacob Cioch, Jaydon Figueroa, Mason Magnanao, Odalyz Valdez - Bartlett STEM Academy [2024-2025]