

Fourth-Year Ph.D. Candidate, School of Computer and Communication Sciences, EPFL [📍](#)

Research Interests

Information theory; applications of probability to **compression, communication** and **learning**

Education

EPFL , <i>Ph.D. in Computer and Communication Sciences</i> Advisor: Prof. Emre Telatar, CGPA: 5.90/6	<i>Lausanne, Switzerland</i> Sep. 2022–present
MIT , <i>Visiting Student in Electrical Engg. and Computer Science</i> Host: Prof. Gregory Wornell	<i>Cambridge, USA</i> Oct. 2025–Feb. 2026
Indian Institute of Technology Bombay , <i>B.Tech. in Electrical Engineering</i> With Honors in Electrical Engineering and Minor in Mathematics, CGPA: 9.60/10	<i>Mumbai, India</i> Jul. 2018–May 2022

Industry Experience

Texas Instruments (India) , <i>Internship, System Engineer</i> Used digital pre-distortion techniques to reduce effect of non-linearities in RF transmitter amplifiers	<i>Bangalore, India</i> May 2021–Jul. 2021
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Selected Publications

see [📄/publications](#) or [👤](#) for full list (* denotes equal contribution)

Refereed conference proceedings

- **A. G.**, S. Shamai, and E. Telatar, “On entropy-constrained Gaussian channel capacity via the moment problem,” in *IEEE International Symposium on Information Theory (ISIT)*, 2025 [📄](#)
- A. V. Makkuva*, M. Bondaschi*, **A. G.**, A. Nagle, M. Jaggi, H. Kim, and M. Gastpar, “Attention with Markov: A curious case of single-layer transformers,” in *International Conference on Learning Representations (ICLR)*, 2025 [📄](#) [Spotlight (top 5%)]
- A. Nagle*, **A. G.***, M. Bondaschi, M. Gastpar, A. V. Makkuva, and H. Kim, “Fundamental limits of prompt compression: A rate-distortion framework for black-box language models,” in *Annual Conference on Neural Information Processing Systems (NeurIPS)*, 2024 [📄](#) [Also **oral** (top 4 of 58) at ICML TF2M 2024]

Awards and Academic Achievements

- EPFL Doc.Mobility grant to fund visit to MIT [2025–26]
- Grade 6/6 (95%+) in seven graduate-level courses at EPFL [2022–present]
- IITB Institute Academic Prize (rank 2 in EE dept.) and Undergraduate Research Award (radar signal processing) [2020–21]
- AP grades (top 2%) in Digital Communications, Data Analysis at IITB [2021, 2019]
- Urvish Medh Memorial Prize for being the highest-ranked student in the EE department at IITB [2018]
- All-India Ranks of 43 in JEE (Advanced), 55 in JEE (Main) and 35 in KVPY (for admission to IITs and IISc) [2018]

Skills

- Programming languages and tools: Python (NumPy, SciPy, PyTorch), Jupyter, MATLAB, C++, \LaTeX , Git
- Languages: English, Malayalam, Hindi (fluent); French (B1)

Teaching, Mentoring and Service

- Reviewer for journal: IEEE Transactions on Information Theory [2025–present]
- Reviewer for conferences and workshops: ICLR (2026), NeurIPS (2025), ISIT (2024–26), ICML NCW (2023) [2023–present]
- Teaching Assistant for digital communications and information theory courses at EPFL (5 times) [2022–present]
- RAMP Mentor for EPFL PhD applicants, EPIC buddy for admitted PhD students at EPFL [2023–present]
- Summer of Science mentor at IITB for signal processing, coding theory, information theory, probability [2020–24]
- Teaching Assistant for undergraduate calculus and electromagnetism courses at IITB (4 times) [2019–22]
- Institute Student Mentor for first-year undergraduates at IITB [2021–22]
- Class Representative for the 2018–22 B.Tech. in EE batch at IITB [2018–19]