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### Education

- 2015–2019 **Bachelor of Science**, *Cornell University*, Ithaca, NY, GPA: 4.077  
Electrical and Computer Engineering
- 2019–2025 **PhD**, *Cornell University*, Ithaca, NY  
Electrical and Computer Engineering

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### Publications

- 2023 **A. Mahmood** and A. B. Wagner, “Lossy Compression With Universal Distortion,” *IEEE Transactions on Information Theory*, vol. 69, no. 6, pp. 3552–3573, June 2023.
- 2023 **A. Mahmood** and A. B. Wagner, “Minimax Rate-Distortion,” *IEEE Transactions on Information Theory*, vol. 69, no. 12, pp. 7712–7737, Dec. 2023.
- 2023 **A. Mahmood** and A. B. Wagner, “Timid/Bold Coding for Channels with Cost Constraints,” *2023 IEEE International Symposium on Information Theory (ISIT)*, Taipei, Taiwan, 2023, pp. 1442–1447.
- 2024 **A. Mahmood** and A. B. Wagner, “Channel Coding with Mean and Variance Cost Constraints,” *2024 IEEE International Symposium on Information Theory (ISIT)*, Athens, Greece, 2024, pp. 510–515.
- 2024 **A. Mahmood** and A. B. Wagner, “Improved Channel Coding Performance Through Cost Variability,” submitted to *IEEE Transactions on Communications*, Sept. 12, 2024. [Online]. Available: <https://arxiv.org/abs/2407.05260>.
- 2025 **A. Mahmood** and A. B. Wagner, “Channel Coding for Gaussian Channels with Mean and Variance Constraints,” submitted to *IEEE Transactions on Information Theory*, Feb. 6, 2025. [Online]. Available: <https://arxiv.org/abs/2501.10953>.

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### Academic Positions

- 2024 **Graduate Teaching Assistant**, *Cornell University*, ECE 5670: Digital Communication System Design
- 2022 **Graduate Teaching Assistant**, *Cornell University*, ECE 2720: Data Science for Engineers
- 2019 **Undergraduate Teaching Assistant**, *Cornell University*, ECE 3100: Probability and Inference for Random Signals and Systems
- 2018 **Undergraduate Teaching Assistant**, *Cornell University*, ECE 2300: Digital Logic & Computer Organization

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### Awards and Honors

- 2025 Winner of the 2025 Cornell ECE Outstanding Thesis Research Award
- 2022 IEEE Information Theory Society Student Paper Award Finalist
- 2019 Graduated *Summa Cum Laude*
- 2018 Frank and Rosa Rhodes Scholarship recipient
- 2018 Nominated for the Outstanding Undergraduate Teaching Assistant Award

[Cambridge International Qualifications \(Certificates\)](#)

2015 **GCE A Levels:**

- Top in the World in A Level Physics
- Top in the World in A Level Further Mathematics
- Top in the World in A Level Chemistry
- Top in Lahore in A Level Mathematics
- First Place in Pakistan for Best Across Four Cambridge International A Levels

2013 **GCE O Levels:**

- Top in the World in Additional Mathematics
- First Place in Pakistan for Best Across Seven Cambridge International O Levels