EZGİ ÖZYILKAN

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RESEARCH INTERESTS

Information Theory | Deep Learning | Source Coding/Compression | Statistical Modeling

EDUCATION

NYU Tandon School of Engineering September 2021 - Present
Ph.D. Electrical and Computer Engineering. Current GPA: 4.0. *New York, NY*

· Advised by Prof. Elza Erkip.

Imperial College London September 2017 - June 2021
M.Eng. Electrical Electronics Engineering (Integrated Master's). *London, UK*

· Achieved First Class Honors with an overall score of 77.83 (equivalent to GPA of 4.0).
· M.Eng. thesis topic: *Deep Stereo Image Compression with Decoder Side Information using Wyner Common Information*
- Advised by Prof. Deniz Gündüz.

Lycée de Galatasaray September 2012 - June 2017
Anatolian High School Diploma and French Baccalauréat. *İstanbul, Turkey*

· Ranked 173/∼1.000.000 in the National Examination to be qualified for this public high school.
· Achieved High Honors (mention très bien).

PUBLICATIONS

Ezgi Ozyilkan, Johannes Ballé, Elza Erkip, "Learned Wyner–Ziv Compressors Recover Binning", to appear in *IEEE International Symposium on Information Theory* (ISIT), Taipei, June 2023.

Ezgi Ozyilkan*, Mateen Ulhaq*, Hyomin Choi, Fabien Racapé, "Learned Disentangled Latent Representations for Scalable Image Coding for Humans and Machines", *IEEE Data Compression Conference* (DCC), Utah, March 2023.

Nitish Mital*, Ezgi Ozyilkan*, Ali Garjani*, Deniz Gündüz, "Neural Distributed Image Compression with Cross-Attention Feature Alignment", *IEEE/CVF Winter Conference on Applications of Computer Vision* (WACV), Hawaii, January 2023.
-GitHub: https://github.com/ipc-lab/NDIC-CAM

Nitish Mital*, Ezgi Ozyilkan*, Ali Garjani*, Deniz Gündüz, "Neural Distributed Image Compression using Common Information", *IEEE Data Compression Conference* (DCC), Utah, March 2022.
- Video: https://www.youtube.com/watch?v=xtK06jh35Jw
- GitHub: https://github.com/ipc-lab/NDIC

RESEARCH AND EXPERIENCE

Interdigital AI Lab June 2022 - August 2022
Graduate R&I Intern. Hosts: Hyomin Choi, Fabien Racapé *Los Altos, CA*

· Worked on deep-learning-based image compression, focusing on scalability.

IPC Lab, Imperial College London April 2020 - September 2020
Undergraduate Research Assistant. Advisor: Deniz Gündüz *London, UK*

· Worked on deep-learning-based joint source-channel coding.

Morgan Stanley June 2019 - August 2019
Business and Data Analyst. *London, UK*

TEACHING

ECE Department, NYU Tandon School of Engineering January 2022 - December 2022
Graduate (Head) Teaching Assistant. *New York, NY*

· Probability and Stochastic Processes (Fall 2022)
· Deep Learning (Spring 2022)

EEE Department, Imperial College London October 2019 - March 2021
Undergraduate Teaching Assistant. *London, UK*

· Communication Systems I (Spring 2021), Deep Learning (Spring 2021)
· Mathematics for Engineering (Spring 2020, Autumn 2020, Spring 2021)

HONORS AND AWARDS

NYU Tandon School of Engineering	Future Leader Ph.D. Fellowship, 2021-2023
Imperial College London	2021 Ivor Tupper Prize for Excellence in Signal Processing
Imperial College London	Research Bursary Award for 6 Months
Imperial College London	Dean's List, 2020 and 2021

TALKS AND POSTERS

1. UC Berkeley Simons Institute Workshop on Information-Theoretic Methods for Trustworthy Machine Learning, "Learned Wyner–Ziv Compressors Recover Binning", Berkeley CA, May 2023. Invited.
2. IEEE Data Compression Conference (DCC), "Learned Disentangled Latent Representations for Scalable Image Coding for Humans and Machines", Salt Lake City UT, March 2023. Contributed talk.
3. IEEE/CVF Winter Conference on Applications of Computer Vision (WACV), "Neural Distributed Image Compression with Cross-Attention Feature Alignment", Waikoloa HI, January 2023. Contributed talk.
4. North American School of Information Theory (NASIT), "Neural Distributed Source Coding", Los Angeles CA, August 2022.
5. IEEE Data Compression Conference (DCC), "Neural Distributed Image Compression using Common Information", Salt Lake City UT, March 2022. Contributed talk.

SKILLS

Software	LaTeX, Python, JAX, PyTorch, MATLAB
Languages	English (fluent), French (advanced), Turkish (native)

REFERENCES

Elza Erkip (PhD Advisor)
Institute Professor
NYU Tandon School of Engineering
Electrical and Computer Engineering
✉ elza@nyu.edu

Deniz Gündüz (Integrated Master Advisor)
Professor in Information Processing
Imperial College London
Electrical and Electronic Engineering
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