

# EZGİ ÖZYILKAN

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## RESEARCH INTERESTS

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Information Theory

Deep Learning

Source Coding/Compression

Privacy/Secrecy

## EDUCATION

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### NYU Tandon School of Engineering

September 2021 - Present

*Ph.D. Electrical and Computer Engineering. Current GPA: 4.0.*

*New York, NY*

- Specializing in Information Theory and Deep Learning.
  - Advisor: Elza Erkip
- Relevant modules: *Information Theory, Foundations of Deep Learning, Probability and Stochastic Processes, Data Structure & Algorithms*

### 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***
  - Advisor: Deniz Gündüz
- Relevant modules: *Optimization, Coding Theory, Statistics, Computer Vision & Pattern Recognition*

### Lycée de Galatasaray

September 2012 - June 2017

*Anatolian High School Diploma.*

*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).

## PUBLICATION

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Nitish Mital\*, Ezgi Ozyilkan\*, Ali Garjani\*, Deniz Gündüz, “Neural Distributed Image Compression with Cross-Attention Feature Alignment”, in submission.

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

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### Interdigital AI Lab

June 2021 - Present

*Graduate R&I Intern.* Hosts: Hyomin Choi, Fabien Racapé

*Los Altos, CA*

- Working on deep-learning-based compression, focusing on video coding for machines.

### IPC Lab, Imperial College London

April 2020 - September 2020

*Undergraduate Research Assistant.* Advisor: Deniz Gündüz

*London, UK*

- Worked full-time at the ***Information Processing and Communications Lab.***
- Worked on deep joint transmission-recognition for multi-view cameras at the wireless edge, focusing on joint source-channel coding.
  - Preprint: <https://arxiv.org/abs/2011.01902>
  - Presentation: [https://ezgimez.github.io/GM\\_JSCC\\_Ozyilkan.pdf](https://ezgimez.github.io/GM_JSCC_Ozyilkan.pdf)

**Morgan Stanley**  
*Business and Data Analyst.*

June 2019 - August 2019  
*London, UK*

- Analysed the ‘change management data’ within specific departments and failure codes to seek any correlation with blackouts and brownouts and to understand overall trends within the firm.
- Reported the results to the upper management teams in London and in Budapest.

## TEACHING

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**ECE Department, NYU Tandon School of Engineering**  
*Graduate (Head) Teaching Assistant.*

January 2022 - May 2022  
*New York, NY*

- Deep Learning (ECE-GY 7123)
  - Delivered weekly programming lectures, helped organizing the course material and contributed to grading for a class size of ~200 students.

**EEE Department, Imperial College London**  
*Undergraduate Teaching Assistant.*

October 2019 - March 2021  
*London, UK*

- Communication Systems I (Spring 2021), Deep Learning (Spring 2021)
- Mathematics for Engineering (Spring 2020, Autumn 2020, Spring 2021)
- Introduction to Computer Architecture (Autumn 2019), COMMS lab experiment (Spring 2020)
  - Helped answering students’ questions and guided them through their coursework.

## HONORS AND AWARDS

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**NYU Tandon School of Engineering**  
**Imperial College London**  
**Imperial College London**  
**Imperial College London**  
**Imperial College London**

Future Leader Ph.D. Fellowship, 2021-2023  
2021 Ivor Tupper Prize for Excellence in Signal Processing  
Dean’s List, 2021  
Dean’s List, 2020  
Research Bursary Award for 6 Months

## SKILLS

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<b>Software</b>	L <sup>A</sup> T <sub>E</sub> X, Python, PyTorch, MATLAB
<b>Languages</b>	English (fluent), French (advanced), Turkish (native)

## SOCIETIES

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**Institute of Electrical and Electronics Engineers**  
*Student Member.*

August 2020 - Present

**Women in Electrical Engineering, Imperial College London**  
*Member.*

October 2017 - June 2021

**Philosophy Society of Imperial College London**  
*Vice-Chair.*

September 2018 - May 2019

**Fellwanderers, the hiking society of Imperial College London**  
*Treasurer.*

September 2018 - May 2019

## REFERENCES

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**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  
✉ d.gunduz@imperial.ac.uk