

Anıl Kamber

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La Jolla, CA 92092

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Education

University of California, San Diego
Ph.D., Electrical and Computer Engineering

September 2024 - Present

Boğaziçi University
B.Sc., Electrical and Electronics Engineering

GPA : 3.90/4.0 (6th out of 88)
October 2020 - June 2024

İzmir Fen Lisesi

Research Experience

Graduate Research Assistant
Sparsity @UC San Diego

January 2025 - Present
La Jolla, CA

- Exploring the mysteries of deep networks.
- **Supervisor:** Rahul Parhi.

sparsity.ucsd.edu

Researcher
KUIS AI Center

October 2024 - January 2025
Istanbul, Türkiye

- I investigated the global identifiability of underdetermined polytopic matrix factorization.
- **Supervisor:** Alper T. Erdoğan.

ai.ku.edu.tr

Undergraduate Researcher
Volumetric Analysis and Visualization Group

September 2023 - June 2024
Istanbul, Türkiye

- My senior design project (bachelor's thesis) entitled *Blind Source Separation in Neuroscience* won the *Cenker Oden Senior Design Project Award*, which is the best undergraduate research award.
- **Supervisor:** Alper T. Erdoğan, Burak Acar.

vavlab.boun.edu.tr

Undergraduate Researcher
Boğaziçi Nanonetworking Research Group

January 2022 - January 2024
Istanbul, Türkiye

- I derived the channel response of molecular communication via diffusion in a three-dimensional half-space bounded by an infinite reflecting surface.
- As a result, my paper entitled *Half-Space Modeling with Reflecting Surface in Molecular Communication* was published in *IEEE Transactions on Molecular, Biological and Multi-Scale Communications*.
- **Supervisor:** Ali Emre Pusane, H. Birkan Yılmaz, Tuna Tuğcu.

Algorithm Engineer Intern
ASELSAN

July 2023 - August 2023
Ankara, Türkiye

- I investigated integral transforms that can be employed during the preprocessing stage of machine learning models for automatic radar-signal classification.

aselsan.com/en

Other Experience

Embedded Systems Engineer
FINRIX

August 2022 - September 2022
Istanbul, Türkiye

- I designed a prototype data extractor on an FPGA that captures the desired part of stock market data, which flows as a 32-bit stream aligned to a synchronous clock. (VHDL, C, C++)

finrix.io/

Publications and Preprints

- [1] **A. Kamber** and R. Parhi, *Sharpness of minima in deep matrix factorization: Exact expressions*, 2025. arXiv: 2509.25783.
- [2] **A. Kamber** and R. Parhi, "Hessian spectrum is constant across minimizers in regularized deep scalar factorization," in *OPT 2025: Optimization for Machine Learning (NeurIPS 2025 Workshop)*, 2025.
- [3] **Kamber, Anıl**, H. B. Yilmaz, A. E. Pusane, and T. Tugcu, "Half-space modeling with reflecting surface in molecular communication," *IEEE Transactions on Molecular, Biological, and Multi-Scale Communications*, 2024.

Honors and Scholarships

- *Electrical and Computer Engineering Department Fellowship*, UC San Diego, September 2024 - June 2025.
- *Cenker Oden Senior Design Project Award*, June 2024.
- *2205 - Undergraduate Scholarship Program*, TUBITAK (Scientific and Technological Research Council of Türkiye), September 2022 - January 2024.
- *2247-C - Intern Researcher Scholarship Program*, TUBITAK, October 2022 - April 2023.
- Turkish National University Entrance Exam (YKS), **446th** place among 2.6 million participants, June 2019.
- Turkish National High School Entrance Exam (TEOG), *placed in the top 0.03 % among 1.6 million participants*, June 2015.