Anıl Kamber

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9736 Engineers Ln
La Jolla, CA 92092

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website: anilkamber.github.io

Education

University of California, San Diego
September 2024 - Present
Ph.D., Electrical and Computer Engineering
Advisor: Rahul Parhi

Boğaziçi University
GPA : **3.90/4.0** (6th out of 88)
B.Sc., Electrical and Electronics Engineering
October 2020 - June 2024

İzmir Fen Lisesi

Research Experience

Graduate Research Assistant
January 2025 - Present
Sparsity @UC San Diego
La Jolla, CA

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

sparsity.ucsd.edu

Researcher
October 2024 - January 2025
KUIS AI Center
Istanbul, Turkiye

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

ai.ku.edu.tr

Undergraduate Researcher
September 2023 - June 2024
Volumetric Analysis and Visualization Group
Istanbul, Turkiye

- 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/people

Undergraduate Researcher
January 2022 - January 2024
Boğaziçi Nanonetworking Research Group
Istanbul, Turkiye

- 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　　　　　　　　　　　　　　　　　July 2023 - August 2023
ASELSAN　　　　　　　　　　　　　　　　　　　　　　　　　　*Ankara, Turkiye*

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

aselsan.com/en

Other Experience

Graduate Teaching Assistant　　　　　　　　　　September 2025 - December 2025
University of California, San Diego　　　　　　　　　　　　　　　　*La Jolla, CA*

- ECE 251C - Filter Banks and Wavelets.

Embedded Systems Engineer　　　　　　　　　August 2022 - September 2022
FINRIX　　　　　　　　　　　　　　　　　　　　　　　　　*Istanbul, Turkiye*

- 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]　**Kamber, Anıl** and R. Parhi, "Sharpness of minima in deep matrix factorization: Exact expressions," *arXiv preprint arXiv:2509.25783*, 2025.

[2]　**Kamber, Anıl** and R. Parhi, "Hessian spectrum is constant across minimizers in regularized deep scalar factorization," in *OPT 2025: Optimization for Machine Learning*.

[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 Departmental 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 Turkiye), 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.