AHMET AKMAN

Education

Université Paris-Saclay 2024 – 2025*

Master of Science (M2) in Computational Neurosciences and Neuroengineering

Paris, France

Middle East Technical University

2020 – **2024** *Ankara*, *Turkey*

Bachelor of Science in Electrical and Electronics Engineering Specialized in Signal Processing

[CGPA: 3.45/4.0]

English Preparatory School

2019 - 2020

Antalya Anatolian High School

2015 - 2019

Science and Math Division

Antalya, Turkey

Experience

METU OGAM (Center for Image Analysis)

February 2022 - August 2024

Undergraduate Researcher

Ankara, Turkey

- Have been working on event-based vision and neuromorphic schemes under the supervision of Prof.Dr.Aydın Alatan
- Developed the SotA method in event-based video frame interpolation and published it at a major conference.
- Worked on event-based high speed feature tracking problem.

Max Planck Institute for Dynamics and Self-Organization

July 2023 - September 2023

Research Intern

Göttingen, Germany

• Have been working on self-sustaining only-excitatory neuronal network dynamics under the supervision of Dr. Johannes Zierenberg and Jonas Dehning in the Prof. Viola Priesemann's group. (Ongoing project.*)

HAVELSAN October 2023 – August 2024

Candidate Engineer

Ankara, Turkey

• Worked in autonomous and swarm systems team as a computer vision specialist.

ESEN System Integration

July 2022 - August 2022

Intern

Ankara, Turkey

- Worked on development of deep-learning based EO-EO, EO-IR image registration system.
- Implemented 5 state-of-the-art paper in Python and PyTorch and tested them with airborne-spaceborne data.

Simple Robotics and Electronics

June 2017 - October 2017

Volunteer Summer Intern

Antalya, Turkey

- Developed various IOT applications using Arduino and Raspberry Pi platforms.
- Developed small competitive mini sumo-line follower robots.
- Gained 3D printing, pcb design and prototyping experience.

Publications

Conference Paper 2023

Kilic, O. S., **Akman, A.**, & Alatan, A. A. (2023). E-VFIA: Event-Based Video Frame Interpolation with Attention. <u>IEEE</u> Presented in-person at ICRA 2023.

Conference Paper

2023

Akman, A., Kilic, O. S., & Alatan, A. A. (2023). MAEVI: Motion Aware Event-Based Video Frame Interpolation. <u>ArXiv</u> ArXiv Preprint.

References

Professor Dr. A. Aydın Alatan

Faculty of METU EEE, Founding director of METU OGAM

Contact: alatan@metu.edu.tr +903122102351

Post-doc at Max Planck Institute for Dynamics and Self-Organization

Contact: zierenberg@ds.mpg.de +495515176475

Dr. Johannes Zierenberg

Languages

Turkish: Native - English: C1, IELTS Academic Score: 7.5 (10/2023) - French and German: Beginner

Honors and Awards

First Place | METU Aerospace Engineering Department-Boeing

November 2021

• As METU Göksat Space Team we have taken first place in the METU VTOL competition sponsored by Boeing. The objective was to design-build and fly a VTOL aircraft to accomplish various payload missions.

Second Place and Best Presentation | Havelsan-T3 Foundation

September 2021

• As METU Göksat Space Team, we have taken the second place and the best presentation award amongst 112 teams in the Swarm UAV competition held by Havelsan in the scope of 2021 Teknofest technology competitions. Teams were expected to demonstrate developed swarm systems' robustness using multiple quadcopters (Crazyflies) indoor.

Third Place | $Pixery\ Hackathon\ IEEE\ METU$

January 2020

Our team has taken the third place in 48 hours Pixery Hackathon IEEE METU. Our project aims to help visually
impaired people for walking. We used computer vision, machine learning and android technologies to construct our
prototype.

First Place | Akdeniz University

May 2019

• The research project about real-time artificial intelligence process on UAV. The project won the first place in the technology category in the Akdeniz University Prof.Dr.Fuat Sezgin 3rd Inter-High School Mathematics and Science Project Competition.

Second Place | TÜBİTAK

March 2018

• The research project won the second place in the coding category in the TUBITAK Inter-High School Research Projects Competition. Project name: Developing Cube Satellites on Femto Class Intended Fundamental Space Research.

First Place | National Ministy of Education-TÜBİTAK

May 2017

• 11. International MEB Robotics Competition in Design and Run (like Hackathon) Category

Leadership / Extracurricular

METU Göksat Space Team

January 2020 - November 2021

Team Leader

Techical Student Team

- Leader of METU Göksat Space Team which attended national and international aerospace-based student competitions. Responsible for organization and running of the four different subteam which are electronics/software, organization/sponsorship, mechanical, aerospace and integration subteams.
- Electronics/Software Subsystem Designer. Designed electrical subsystem of a mini UAV. Designed electronics and PCB's for avionics of three different model satellites. Developed embedded software for model satellites. Taken responsibility for the simulation of the swarm drones.
- In 2021 the team has attended four competitions which are (Teknofest) Model Satellite competition organized by Turksat, (Teknofest) International UAV competition organized by Tubitak and Turkish Aerospace [got 5th place amongst 269 competitors], (Teknofest) Swarm UAV competition organized by Havelsan and VTOL UAV competition organized by METU AEE Department in cooperation with Boeing.

Technical Skills

Programming Languages: Python, MATLAB, C, Julia, ARM Assembly

Technologies/Frameworks: OpenCV, PyTorch, Git, Conda, NumPy/CuPy, Matplotlib, SciPy, Intel LAVA, Brian2 Simulink, Linux, LabView, Verilog HDL, Qt, Eagle CAD, Fusion360 CAD, Siemens NX CAD, HTML/CSS, LATEX

Interests