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# ENES SENEL

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## EDUCATION

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### TECHNICAL UNIVERSITY OF MUNICH, COMPUTER SCIENCE, M.S.

2016 - ONGOING, MUNICH

DAAD/TEV Masters Scholarship

**Research Interests:** Computational Neuroscience, Medical Imaging and Robotics

Expected Graduation Date: 2018, October

### OZYGİN UNIVERSITY, COMPUTER SCIENCE, B.S.

2012 - 2016, ISTANBUL

GPA: 3.82 / 4.00 Department & Faculty ranking: 1st

100% Tuition Scholarship & Academic Merit Stipend

**Thesis:** A Standalone Application for a 2D Ultrasound Guided Medical Robotic System

**Supervisors:** Assoc. Prof. Dr. Erhan Oztog, Assist. Prof. Dr. Ozkan Bebek

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## RESEARCH EXPERIENCE

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### RESEARCH INTERN, UNIVERSITÄT OSNABRUCK

FEBRUARY 2016, OSNABRUCK, GERMANY

Advisor: Prof. Peter König

- Experimented different graph clustering and iteration methods for brain parcellation
- Combined distance and connectivity information for better clustering of the brain

### UNDERGRADUATE RESEARCH ASSISTANT, OZYGİN UNIVERSITY

2014 - 2016, ISTANBUL

Advisor: Assist. Prof. Ozkan Bebek

- Developing a Medical Robotics System for Image Guided Needle Operations, supported by Scientific and Technological Research Council of Turkey
- Developed real-time needle tip localisation and tracking algorithms using C++ with OpenCV library.
- Created an end-user software with Qt to be able to use the algorithms in operations

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## WORK EXPERIENCE AND INTERNSHIPS

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### HiWi (STUDENT ASSISTANT), TECHNICAL UNIVERSITY OF MUNICH

DECEMBER 2017 - MARCH 2018, MUNICH

- Working at the Computer Aided Medical Procedures & Augmented Reality Chair
- Analysis and evaluation of the multi camera pose estimation data
- Conducted user studies to evaluate the quality difference between different calibration approaches

**SOFTWARE DEVELOPMENT INTERN, MEKANSAL ISLER**

SUMMER 2015, ISTANBUL

- Mekansal Isler is a startup in Istanbul, specialising in location based data applications
- Developed a geofencing application for iOS devices
- Implemented a hot spot analysis tool for geospatial data using PostGIS and Python
- The applications I developed required learning and applying some statistical methods

**TEACHING ASSISTANT, GAME WORKSHOP AT OZYEGIN UNIVERSITY**

JULY 2013 &amp; JULY 2014, ISTANBUL

- Participated as a teaching assistant in the workshop which aims to teach high school students programming using Processing language and environment

**PUBLICATIONS**

- **Visual Tracking of Multiple Moving Targets in 2D Ultrasound Guided Robotic Percutaneous Interventions**, Mert Kaya, *Enes Senel*, Awais Ahmad, Ozkan Bebek, Accepted for publication in the **International Conference on Robotics and Automation (ICRA 2017)**, Singapore.
- **Visual Tracking of Biopsy Needles in 2D Ultrasound Images**, Mert Kaya, *Enes Senel*, Awais Ahmad, Ozkan Bebek, In Proceedings of the **International Conference on Robotics and Automation (ICRA 2016)**, Stockholm, May 16-21, 2016.
- **Real Time Needle Tip Localisation in 2D Ultrasound Images for Robotic Biopsies**, Mert Kaya, *Enes Senel*, Awais Ahmad, Orcun Orhan, Ozkan Bebek, In Proceedings of the 17th **International Conference on Advanced Robotics (ICAR 2015)**, Istanbul, July 27-31, 2015.

**SKILLS**

Programming	Other
C++, Java, Python, Swift	MATLAB, Git, SVN, OpenCV, OpenGL,
Familiar with: F#, PHP, Javascript	OWLAPI, Jena, Qt, SciPy, NumPy

**SCHOLARSHIPS, EVENTS, AWARDS, CERTIFICATES**

- DAAD/TEV Masters Scholarship, 2016-Ongoing
- Partial Scholarship for Interdisciplinary College 2017, Germany
- Ozyegin University 100% Tuition Scholarship & Merit Scholarship Stipend, 2012 - 2016
- TUBITAK Academic Research Scholarship, 2014 - 2016
- Ozyegin University Abroad Internship Scholarship, 2016
- Ismail Ari Computer Science and Engineering Summer School, Bogazici University, 2015