

Oğuzhan Fatih Kar

PERSONAL DETAILS

<i>Mail</i>	oguzhan.kar@epfl.ch
<i>Website</i>	https://ofkar.github.io/
<i>Interests</i>	Computer vision, deep learning, inverse problems, computational imaging, compressive sensing, optimization

EDUCATION

Ph.D. in Computer Science

2019-Present

Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland

M.S. in Electrical and Electronics Engineering (CGPA: 3.93/4.00)

2017-2019

Middle East Technical University (METU), Ankara, Turkey

Advisor: Figen S. Oktem

Thesis: Computational spectral imaging techniques using diffractive lenses and compressive sensing

B.S. in Electrical and Electronics Engineering (CGPA: 3.90/4.00)

2013-2017

Middle East Technical University (METU), Ankara, Turkey

WORK EXPERIENCE

Research Engineer

2017-2019

ASELSAN Research Center, Ankara, Turkey

- Developed and implemented novel reconstruction techniques for computational imaging.
- Built optical setups for computational imaging.

Research Intern

2016

ASELSAN Research Center, Ankara, Turkey

- Developed and implemented non-uniformity correction algorithms for infrared imaging.

Research Intern

2015

TUBITAK SAGE, Ankara, Turkey

- Implemented communication protocols between FPGA and ADC.

SKILLS

<i>Languages</i>	Turkish (mother tongue) English (very fluent, TOEFL score: 106/120) French (beginner) German (beginner)
<i>Computer</i>	Python, PyTorch, MATLAB, C, C++, LaTeX, Linux, Bash, Javascript

AWARDS AND HONORS

TUBITAK (Scientific and Technical Research Council of Turkey): Full scholarship for M.S. studies

IEEE: Travel award for ICIP 2018

METU EEE Department: Dr. Bulent Kerim Altay award for 4.0/4.0 GPA in Fall 2015 semester

METU EEE Department: Best Poster Presentation award in GRAD STAR 2018 Departmental Poster Competition

METU EEE Department: Graduate courses performance award 2019

8 times listed in Dean's High Honor Roll, Middle East Technical University, 2013-2017

Ranked 228th in National University Entrance Exam 1st stage among 2 million students

Ranked 159th in National University Entrance Exam 2nd stage among 2 million students

PUBLICATIONS

Conference Publications

1. **O. F. Kar**, A. Gungor, H. E. Guven, "Real-time compressive video reconstruction for spatial multiplexing cameras." IEEE Global Conference on Signal and Information Processing (GLOBALSIP). 2019. (**Oral presentation**)
2. **O. F. Kar**, A. Gungor, H. E. Guven, "Learning based regularization for spatial multiplexing cameras." IEEE Global Conference on Signal and Information Processing (GLOBALSIP). 2019. (**Poster presentation**)
3. A. Gungor, **O. F. Kar**, "A transform learning based deconvolution technique with super-resolution and microscanning applications." IEEE International Conference on Image Processing (ICIP). 2019. (**Poster presentation**)
4. **O. F. Kar**, F. S. Oktem, "Fast computational spectral imaging using photon sieves." OSA Imaging and Applied Optics Congress. 2019. (**Oral presentation**)
5. **O. F. Kar**, A. Gungor, H. E. Guven, "Optimal number of measurement analysis for coded compressive focal plane array imager." IEEE Signal Processing and Communications Applications Conference (SIU). 2019. (**Oral presentation**) (**National conference**)
6. **O. F. Kar**, A. Gungor, H. E. Guven, "Compressive focal plane array imager reconstruction using learning based regularization." IEEE Signal Processing and Communications Applications Conference (SIU). 2019. (**Oral presentation**) (**National conference**)
7. **O. F. Kar**, A. Gungor, S. Ilbey, C. B. Top, H. E. Guven, "A performance analysis on the optimal number of measurements for coded compressive imaging." IEEE Global Conference on Signal and Information Processing (GLOBALSIP). 2018. (**Oral presentation**)
8. A. Gungor, **O. F. Kar**, H. E. Guven, "A matrix-free reconstruction method for compressive focal plane array imaging." IEEE International Conference on Image Processing (ICIP). 2018. (**Poster presentation**)
9. **O. F. Kar**, U. Kamaci, F. C. Akyon, F. S. Oktem, "Compressive photon-sieve spectral imaging." OSA Imaging and Applied Optics Congress. 2018. (**Oral presentation**)
10. **O. F. Kar**, A. Gungor, S. Ilbey, H. E. Guven, "An efficient parallel algorithm for single-pixel and FPA imaging." SPIE Defense and Commercial Sensing Conference. 2018. (**Oral presentation**)
11. **O. F. Kar**, A. Gungor, H. E. Guven, "An adaptive relaxed alternating direction method of multipliers for compressive focal plane array imaging." IEEE Signal Processing and Communications Applications Conference (SIU). 2018. (**Oral presentation**) (**National conference**)
12. **O. F. Kar**, U. Kamaci, F. C. Akyon, F. S. Oktem, "Effect of different sparsity priors on compressive photon-sieve spectral imaging." IEEE Signal Processing and Communications Applications Conference (SIU). 2018. (**Oral presentation**) (**National conference**)

Journal Publications

1. O. F. Kar, F. S. Oktem, "Compressive spectral imaging with diffractive lenses." Optics Letters, vol. 44, no. 18, pp. 4582-4585, 2019.

2. O. F. Kar, F. S. Oktem, "High-resolution computational spectral imaging with photon sieves." In preparation.

ACADEMIC ACTIVITIES

Journal Reviewer: Optics Express, Applied Optics

Conference Reviewer: EUSIPCO 2019

Member: IEEE (2017-2018), SPIE (2017-2018).