

# Oğuzhan Fatih Kar

## PERSONAL DETAILS

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

## EDUCATION

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### Ph.D. in Computer Science

*Swiss Federal Institute of Technology (EPFL), Lausanne, Switzerland*

*Advisor:* Amir Zamir

2019-Present

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

*Middle East Technical University (METU), Ankara, Turkey*

*Advisor:* Figen S. Oktem

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

2017-2019

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

*Middle East Technical University (METU), Ankara, Turkey*

2013-2017

## WORK EXPERIENCE

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### Research Engineer

*ASELSAN Research Center, Ankara, Turkey*

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

2017-2019

### Research Intern

*ASELSAN Research Center, Ankara, Turkey*

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

2016

### Research Intern

*TUBITAK SAGE, Ankara, Turkey*

- Implemented communication protocols between FPGA and ADC.

2015

## SKILLS

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

## AWARDS AND HONORS

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**EPFL CS Department:** EDIC Fellowship for the first year of Ph.D. studies (52k CHF)  
**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

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### Conference Publications

1. A. Zamir\*, A. Sax\*, T. Yeo, **O. F. Kar**, N. Cheerla, R. Suri, Z. Cao, J. Malik, L. Guibas, "Robust learning through cross-task consistency." Arxiv. 2020. (**Also in CVPR 2020 as oral presentation with best paper award nomination**)
2. **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**)
3. **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**)
4. 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**)
5. **O. F. Kar**, F. S. Oktem, "Fast computational spectral imaging using photon sieves." OSA Imaging and Applied Optics Congress. 2019. (**Oral presentation**)
6. **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**)
7. **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**)
8. **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**)
9. 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**)
10. **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**)
11. **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**)
12. **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**)

**13. 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**

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**Journal Reviewer:** Optics Express, Applied Optics

**Conference Reviewer:** ECCV 2020, EUSIPCO 2019

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