

Shah Rahman

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Education

- M.S., Electrical and Computer Engineering, University of California—Irvine, USA, June 2016
 - EECS Department Fellowship for 2014-2015
- B.S., Electrical and Electronics Engineering, Istanbul Şehir University, June 2014
 - Valedictorian in the graduating class of 2014, Graduated with High Honors
 - International Student Scholarship (tuition & fees waiver + stipend and accommodation, for four years)

Work Experience

- Lecturer, Antalya International University, October 2016 - present

Courses taught:

- Physics I (PHYS 101) - Fall 2016 and Spring 2017
- Signals and Systems (EE 232) - Spring 2017
- Introduction to Telecommunications (EE 332) - Spring 2017
- University of California—Irvine, USA, Advanced Photonics Devices and Systems Laboratory (APDSL)
 - Teaching Assistant and Graduate Student Researcher, September 2014 - June 2016
 - Research Intern, Summer 2013
- Istanbul Şehir University, Istanbul, Turkey
 - Teaching Assistant, 2013-2014
 - Research Intern, Summer 2012
- Teaching Assistantships
 - Network Analysis I, University of California—Irvine, Winter and Spring 2016
 - Electronics I (Semiconductor Physics and Devices), University of California—Irvine, Fall 2015
 - Introduction to FPGA Programming, Istanbul Şehir University, Spring 2014
 - Fundamentals of Electric Circuits, Istanbul Şehir University, Fall 2013

Teaching Interests

- Signal processing and communication systems
- General physics
 - Mechanics, optics, electromagnetics, electrostatics, and electrodynamics
- Circuit analysis and circuit fundamentals

Research Interests

- Optics, nanophotonics
 - Optical tweezers, space-time-wavelength mapping, dispersion and time-stretch

Publications

1. **Shah Rahman**, "Real-Time Optical Tweezing," UC Irvine: Electrical and Computer Engineering. Retrieved from: <http://escholarship.org/uc/item/8ch68160> (June 2016)
2. **Shah Rahman**, Rasul Torun, Qiancheng Zhao, and Ozdal Boyraz, "Electronic control of optical tweezers using space-time-wavelength mapping," J. Opt. Soc. Am. B 33, 313-319 (March 2016)
3. **Shah Rahman**, Parinaz Sadri-Moshkenani, Rasul Torun, and Ozdal Boyraz, "Space-Time-Wavelength Mapping Based Electronically Controlled Two Dimensional Optical Tweezing". Conference on Lasers and Electro-optics (CLEO), Applications of Ultrashort Pulses (June 6, 2016)
4. **Shah Rahman**, Rasul Torun, Qiancheng Zhao, Tuva Atasever and Ozdal Boyraz, "Electronically-controlled optical tweezing using space-time-wavelength mapping". Proc. SPIE 9581, Laser Beam Shaping XVI, 95810E (August 25, 2015)
5. Qiancheng Zhao, Yuewang Huang, Rasul Torun, **Shah Rahman**, Tuva C. Atasever and Ozdal Boyraz, "Numerical investigation of silicon nitride trench waveguide". Proc. SPIE 9586, Photonic Fiber and Crystal Devices: Advances in Materials and Innovations in Device Applications IX, 95860O (August 26, 2015)

Selected Projects

- Real-time optical tweezing using space-time-wavelength mapping
 - Electronically controlled optical tweezing by time-domain modulation of a dispersed laser beam to control spatial intensity profile, hence manipulating the 2D force profile as desired
- Communication system design of a mini-satellite (CanSat)
 - Established communication between a ground antenna and transceivers on a mini-satellite at 700 m altitude.
 - Led a team of seven through development and execution of the project. Competed in annual CanSat competition in Texas, USA (June 2014)