Abdullah Gok | Curriculum Vitae

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5th year PhD candidate at Boston University. Passionate about research and applications of research, with strong technical, and interpersonal skills for working indivudially or in a team and successfully completing a research project.

Education

- **Boston University** — **Boston, MA**
  Electrical and Computer Engineering , PhD candidate — *2016–*
  Electrophysics
  CGPA 3.60/4.00
- **Bilkent University** — **Ankara, Turkey**
  Electrical and Electronic Engineering, Master of Science — *2013–2016*
  Plasmonic and Photonic Perfect Absorbers
  CGPA 4.00/4.00
- **Bilkent University** — **Ankara, Turkey**
  Electrical and Electronic Engineering, Undergraduate — *2008–2013*
  CGPA 3.62/4.00
- **High School** — **Antalya, Turkey**
  CGPA 96.71/100, — *2004–2008*

Awards and Achievements

- **Earned Graduate Student Scholarship** — **Ankara, Turkey**
  Turkish Science and Technology Academy — *2013*
- **6 High Honour Awards** — **Ankara, Turkey**
  Bilkent University — *2013*
  Electrical and Electronics Engineering
- **Earned Full Scholarship** — **Ankara, Turkey**
  Bilkent University — *2008*
  Electrical and Electronics Engineering
- **Ranked 4th among 2 000 000 students** — **Turkey**
  University Entrance Exam — *2008*
- **Graduation ranking first at High School** — **Antalya, Turkey**
  High School — *2008*
- **Bronze medal in National Mathematical Olympics** — **Turkey**
  Turkey National Mathematical Olympics — *2006*

Publications

- **Strain-Induced Lateral Heterostructures in Patterned Semiconductor Nanomembranes**
  Gok,A., and Paiella,R., MRS Conference, (2021)

- **Strain-Induced Lateral Heterostructures in Patterned Semiconductor Nanomembranes for Micro- and Optoelect**
  Gok,A., Wang,X., Yan,H., Chu,Y. S., Osgood Jr.,R., Lagally,M. G., and Paiella,R., ACS Applied Nanomaterials, (2021)

- **Directional light emission enhancement from LED-phosphor converters using dielectric Vogel spiral arrays.**
  Gorsky,S., Zang,R., Gok,A., Kidanemariam,K., Lenef,A., Raukas,M. and Dal Negro,L., APL Photonics 3, 126103 (2018).

- **Design of all-silicon photonic and plasmonic perfect absorbers and their applications**
  Gok, A., Master Thesis, 2016-06, Bilkent University,

- **Field Effect Tunable Perfect Absorbers with High Conductivity Silicon**
  MRS 2016, Boston

- **Temperature and Field Effect Tunable Multi-Featured Perfect Absorber with High Conductivity Silicon**
  SPIE Photonic West Conference, 2016 San Francisco.

- **All-silicon ultra- broadband infrared light absorbers.**
  Gorgulu, K., Gok, A., Yilmaz, M., Bıyıklı, N., Topallı, K. and Okyay, A. K. Scientific Reports 6, 38589 (2016).

- **High Conductivity Silicon Based Spectrally Selective Plasmonic Surfaces for Sensing in the Infrared Region**
  Gorgulu, K., Gok*, A., Yilmaz, M., Bıyıklı, N., Topallı, K. and Okyay, A. K., J. Optics 19, 025002 (2016).*

  *Abdullah and Kazim contributed equally

- **Practical multi-featured perfect absorber utilizing high conductivity silicon.**
  Gok, A., Yilmaz, M., Bıyıklı, N., Topallı, K. and Okyay, A. K., J. Optics 18, 035002 (2016).

Projects

- **Design, Analysis and Fabrication of Strain Tunable Surface Emitting Lasers.**
  Phd project with Prof. Roberto Paiella, Boston University, 2018-).

- **Numeric Modeling of Photonic Crystals to Improve the Extraction Efficiency of LEDs**
  Phd project with Prof. Luca Dal Negro and OSRAM Company, Boston University 2017-2018

- **Design, Analysis and Fabrication of Plasmonic and Photonic Perfect Absorbers**
  Master Project with Prof. Ali Kemal Okyay, Bilkent University, 2014-2016

- **Nanofabrication of Infrared Photonic Filters**
  Project with Prof. Ali Kemal Okyay and Turkish Academy of Science, 2016

- **Senior Project**
  Wireless Video Transmission using Viterbi Algorithm

  Course Projects: Socket Programming, Amplification of High Frequencies for People Having Hearing Problems, Calender Project: Developing Software using Java, Frequency Displayer Design using VHDL, InGaAs Photodetector Design in 2-2.5 um Spectrum, Plasmonic Waveguide Design and Analysis at

Telecommunication Band, Nano-fabrication of Solar Cells

Technical Skills

- **Computation**

  Lumerical FDTD, Device and Mode Solutions (Advanced),COMSOL Multiphysics (Advanced),Ansoft HFSS, Matlab (Advanced)
- **Programming Languages**

  Java, Assembler, C, C++, Phyton, Zemax, VHDL
- **Software Skills**

  Solidworks, Matlab(Advanced), LTspice, Simulink, Most MS Office products(Advanced)
- **Nanofabrication**

  Inductively Coupled Plasma, Electron Beam Lithography, Ellipsometry, Photolithography, Scanning Electron Microscopy, Thermal Evaporator, Sputtering, Fourier Transform Infrared Spectroscopy, Atomic Force Microscopy, E-beam Evaporator
- **General Skills**

  Good skills to build a set up (optical set up), can write organized and structured reports, good presentation skills, works well in a team.
- **Relevant Courses**

  Optoelectronics, Photonics: Engineering Optics, Electronic, Optical and Material Properties of Materials, Photonics Lab, Optical Fiber Waveguides, Nonlinear and Ultrafast Optics, Quantum Optics, Optoelectronic Device Design and Applications, Guided Wave Optics

  Electromagnetics: Electromagnetic Optics, Advance Electromagnetics,

  Semiconductors: Nano-engineering and Nano-devices, Semiconductor Device Fundamentals, Antenna Engineering

  Computation and Data Science: Machine Learning, Advance Data Structures, Stochastic Process, Computer Networks, Computational Methods in Material Science

  Signal Processing: Telecommunication Systems, Digital Signal Processing, Signals and Systems, Optical Signal Processing

  Nanofabrication: Fundamentals of Semiconductor Fabrication, Introduction to Micro and Nano-fabrication

Interests and extra-curricular activity

- I played table tennis in High School and became champion in regional table tennis championship in Turkey. I also played soccer many years and became captain in school soccer team. Chess is my another activity. I like thinking on methodologies on game and use my thoughts in game, especially in chess.
- I am also a hiker.I usually walk 2-3 hours in weekends. I like playing guitar, and reading poem. I write my own poems. So far I have 61 poems.