

# Serdar OKUYUCU | CV

Antalya Bilim University, Döşemealtı, Antalya/TURKEY

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A PhD candidate equipped with strong theoretical background in electromagnetics and microwave theory, and hands-on experience in lasers, and antennas. Experienced in use of computer aided design and simulation tools at component and system levels.

## Education

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### Academic Background.....

- **Akdeniz University** **Antalya, Turkey**  
*PhD, Electrical and Electronics Engineering,*  
Completed course work and passed qualification exam as of July 2020. *Sept. 2018 –*
- **Yasar University** **İzmir, Turkey**  
*MSc, Electrical and Electronics Engineering,* *Sept. 2016 – Jan. 2018*  
**Dissertation:** Antenna design for 4G Mobile Phones  
In this thesis, I have studied on development of Main, Diversity, GPS, and WIFI antennas for a mobile phone terminal and investigation of SAR characteristics of the main antenna for various use cases.
- **Dokuz Eylül University** **İzmir, Turkey**  
*BSc, Electrical and Electronics Engineering,* *Sept 2009 – Jul 2015*  
Specialized in Telecommunications and Wireless Systems

## Work Experience

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- **Antalya Bilim University** **Antalya, Turkey**  
*Currently working as a research assistant with the EEE Department,* *November, 2017 – Present*  
Courses assisted include,
  - Electromagnetic Field Theory (2017-Fall, 2018-Fall, 2019-Fall)
  - Electromagnetic Wave Theory (2018-Spring, 2019-Spring, 2020 Spring)
  - Digital Systems (2017-Fall, 2018-Fall, 2019 Fall)
  - Physics I (2017-Fall, 2018-Fall)
  - Physics II (2018-Spring, 2019-Spring, 2020 Spring)
- **Yaşar University** **İzmir, Turkey**  
*Worked as a research assistant with the EEE Department,* *November, 2015 – October, 2017*  
Courses assisted include,
  - Electronics (2016-Spring, 2017-Spring)
  - Feedback Systems (2017-Spring)
  - Engineering Mathematics (2017-Spring)
  - Engineering Electromagnetics (2017-Fall)
  - Telecommunication (2016-Spring, 2017-Spring)
  - Physics (2017-Fall)

### Internships.....

- **Türksat A.Ş. (Communication Monitoring Center)** **Gölbaşı Campus/Ankara, Turkey**  
*Participated in pattern tests of SNG and ground antennas,* *August 12, 2013 – September 6, 2013*

Lineup tests of uplink earth station antennas,  
Cross pole tests of uplink antennas.

- **Türksat A.Ş. (R&D)**  
○ Worked on VxWorks operating system,

**Gazi Teknopark Campus/Ankara, Turkey**  
June 27, 2011 – July 22, 2011

## Projects.....

- **Tubitak 1001 Project (January 2020 - December 2022)**

I am currently working as a scholarship student in the project titled "Development and characterization of low ion-doped, diode-pumped, efficient and high-power Cr:LiCAF laser systems" at Antalya Bilim University.

- **Semiconductor Quantum Dot Laser (Spring, 2019)**

Construction of a single semi-conductor conical quantum dot model in COMSOL and calculation of eigenenergies and visualization of wave functions in MATLAB. Incorporation of resulting characteristics in the solution of the rate equations of a laser in MATLAB where quantum dots are employed as active medium.

(This project was implemented as part of the *Lasers and Photonics* course I took at Antalya Bilim University

- **MSc Dissertation: Antenna Design for 4G mobile Phones**

Design of Main, Diversity, GPS and WIFI antennas for a mobile phone and investigation of the SAR characteristics of the main antenna for various use cases.

A number of international conference papers and a patent were published as part of the study.

## Skills

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### Language.....

- **English**

Full professional proficiency

YDS Exam\* (April, 2015) Score: 91.25/100

YDS Exam\* (September, 2017) Score: 91.25/100

(\*YDS exam is an English language proficiency test administered by ÖSYM in Turkey)

- **German**

Limited Working Proficiency

Took German classes for 2 years in high school

- **Turkish**

Native Language

### Software.....

- **MATLAB**

Used MATLAB frequently in laboratory and project studies during undergraduate and graduate level studies.

- **C Programming Language**

Took two courses on basic and advanced programming in C programming language. Had the chance to gain practice by means of applications made in some undergraduate and graduate level courses.

- **COMSOL**

Used for the characterization of semi-conductor quantum dots as part of *Lasers and Photonics* course I took during my masters study.

- **CST**

Made the implementations of mobile of antenna design as part of my MSc dissertation.

- **HFSS**  
Used frequently during the antenna courses took for MSc.
- **AWR**  
Used for design of RF amplifiers and oscillators as part of RF electronics course
- **SQL, PHP, HTML, CSS**  
Made extensive use in final year project for the development of a web tool that carries out user interaction, database access, data manipulation and report generation.
- **LaTeX, Microsoft Office Tools**
- **Statistical Package for the Social Sciences (SPSS)**  
The PHP implementations of the statistical tests developed in the final year project were subjected to a correct operation test by means of the comparison of results obtained from SPSS.

## Publications

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### Articles.....

- **Statistical Approaches for the Analysis of Dependency Among Neurons Under Noise**  
Deniz Genççağa, Sevgi Şengül Ayan, Hajar Farnoudkia, Serdar Okuyucu  
Journal: Entropy, 22(4), 387  
Publication date: April, 2020

### Patents.....

- **Mobil Aygıt Antenleri için Empedans ve Işıma Örüntüsü Ölçüm Yöntemi (Impedance and Radiation Pattern Measurement Method for Mobile Terminal Antennas)**  
Serdar Okuyucu, Alp Deniz Özer  
Description: The invention relates to passive measurement methods of mobile device antennas.  
Patent Office: Turkey  
Patent Issued on: Nov. 21, 2018 (under review)  
Patent number: 2018/14665

### International Conferences.....

- **Parametric SAR Study for 4G Cellular Phone Applications**  
Serdar Okuyucu, Korkut Yegin, Mustafa Secmen and Basak Ozbakis,  
22nd International Microwave and Radar Conference MIKON  
May 15-17 2018, Poznan, Poland
- **A Numerical Parametric Study of SAR from a Dual-Band PIFA Based Antenna for Mobile Communication**  
Serdar Okuyucu, Mustafa Secmen, Korkut Yegin and Basak Ozbakis  
ELECO - International Conference on Electrical and Electronics Engineering  
November 30 - December 2, 2017 - Bursa, Turkey
- **Compact Printed Log Periodic Dipole Antenna with Second Order Semi-Circle Iteration**  
Mehmet Can Özgönül, Mustafa Secmen, Serdar Okuyucu  
25th Telecommunication Forum (TELFOR 2017)  
21-22 November 2017, Belgrade, Serbia
- **An Image Processing Algorithm for Detection of Cracks in Civil Engineering Materials Under**

**Loading Test**

Serdar Okuyucu, Eren Gödek  
International Advanced Technologies Symposium  
October 19-21, 2017 - Elazığ, Turkey

- **Crack Development Analysis of Engineered Cement Composites by Digital Image Correlation under Bending Load**  
Eren Gödek, Serdar Okuyucu, Tarık Yıldırım, Muhammer Keskinates, Kamile Tosun Felekoğlu, Burak Felekoğlu  
International Advanced Technologies Symposium  
October 19-21, 2017 - Elazığ, Turkey
- **A Dual Circularly Polarized Omnidirectional Receiver Antenna for Satellite Communication**  
Serdar Okuyucu, Ceyhan Turkmen, and Mustafa Secmen  
Progress in Electromagnetic Research Symposium (PIERS)  
May 22-25, 2017 - St. Petersburg, Russia
- **Multi-band Frequency Tunable LTE Antenna for Mobile Phone Applications**  
Basak Ozbakis, Serdar Okuyucu, Mustafa Secmen, and Korkut Yegin  
Progress in Electromagnetic Research Symposium (PIERS)  
May 22-25, 2017, St. Petersburg, Russia