

DERYA SÖZEN



Satellite Communication and Remote Sensing M.Sc.
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Personal Info

Gender : Female
Date of Birth : February 9, 1987
Marital Status : Single
Nationality : Turkish Republic

To whom it may concern,

I studied Computer Engineering during my undergraduate education at Doğuş University (2004-2008). In those years, I started to have special tendency working on embedded systems (microprocessors, microcontrollers) and programming them in assembly. I worked on Intel MCS-51 family (model 8051), Motorola HC08 family (model GP32) and Texas Instrument's TMS320C6713 DSP kit. After my graduation, I started to have my M.Sc. degree in Physics. However, I realized that physics was not the right choice for my future plans as my background was in computer engineering. Then I switched to another program in Istanbul Technical University which is called "Satellite Communication and Remote Sensing".

As my undergraduate thesis, I designed an MP3 Player-only using TMS320C6713 digital signal processor programmed with Code Composer Studio and interfaced with LabVIEW software. However, I learned the discipline used while implementing a device from scratch. This experience provided me the understanding of the interaction between the software designed and the hardware it runs on. I also learned hybrid coding by combining C and assembly.

As my M.Sc. thesis, I am presently working on routing algorithms for Low-Earth Orbit satellite systems. My aim is to create simulations that run performance analysis for different routing algorithms to choose the best. I will use C# or Java for writing simulations, but it is not decided yet. It looks like a software-dominant network project, whereas, the effect of space environment to satellite communication is going to be researched as well, and from a scientific perspective. I am glad to say that this project gives me the opportunity to relate my computer engineering background with satellite communication and remote sensing topics.

Since 2005 every two year, I attend "Recent Advances in Space Technology" (RAST) conferences organized by the Turkish Air Force Academy that contributed to my knowledge in satellites. Doğuş University Astronomy Club was founded by me in my undergraduate years. I am still consulting students there and we became a founder member of Istanbul Astronomy Unions with the contribution of other astronomy clubs from other universities located in Istanbul.

My summer internships and job experiences enabled me to develop myself in two ways; technically and personally. The technical parts can be seen below in "Work and Internship Experiences" section. Personally, I became more experienced in analytical thinking, solution developing and public speaking. I worked as a part-time employee in IBM Turkey while I was having my M.Sc. degree. It was a project-based job with 5 months duration in System Management Integration team. After having this important experience there, I concluded that I prefer to stay in the academic world. Because I realize that I do not fit into corporate profile. I like learning new things and developing myself by researching. I also like to share my knowledge and have great enthusiasm for starting an academic career.

Thank you in advance for your kind consideration.

Sincerely,

Derya Sözen

My Education

- **2009 – 2011** → Istanbul Technical University, Satellite Communication and Remote Sensing M.Sc. 100% Ya-Sa Education Aware fellowship
- **Fall 2008** → Istanbul Technical University, Physics Engineering M.Sc. (Took Science Preparation classes) 100% Ya-Sa Education Aware fellowship
- **2004 – 2008** → Doğuş University, Computer Engineering (3.28 / 4.00) 15% IB fellowship & 25% Ya-Sa Education Aware fellowship
- **2002 – 2004** → Eyuboglu High School, International Baccalaureate Diploma, Science (32 / 45)
- **1999 – 2004** → Eyuboglu High School, Turkish High School Diploma (4.08 / 5.00)

Work and Internship Experiences

- **IBM Global Services, Turkey – System Management Integration / Part Time**
I was responsible of creating i5, Oracle, AIX, MSSQL, Exchange, ITCAM for WebSphere and Linux systems' performance and capacity reports. I also updated UNIX monitoring agents installed on customers' servers. Checking system availabilities and controlling any data corruptions on DB2 Data Warehouse was part of my job, too. (April 13 - September 3, 2009)
- **Doğuş University Faculty of Arts and Sciences Physics Department Student Assistantship**
Helping Physics students in laboratory with their mechanic and electrical experiments, marking their reports and helping documentation/research of department. (October 2007 to June 2008)
- **Türkiye İş Bankası A.Ş. Software Development Department** (June 14 - July 19, 2006)
Second Summer Internship, based on software; specifically JAVA SWT
- **Technical Guidance – Antalya / TURKEY** (March 16 - April 01, 2006)
Work with a scientist team from National Astronomical Observatory of Japan (NAOJ) for the March 29, 2006 Total Solar Eclipse
- **BBA Beymen IT Department** (August 02 - September 01, 2005)
First Summer Internship, based on hardware & network systems, and helpdesk topics

Language

- Strong verbal and written communication skills in English (bilingual, TOEFL IBT 103)
- Turkish (primitive language)
- Few communication skills in French (elementary) and Spanish (elementary).

Computer Skills

Windows, Windows Server 2003, Linux, AutoCAD, MS Office, LabView, CCS, MPLAB, PSpice, Microsoft Visual Studio, Eclipse (+BIRT), Rational Software Architect, Access, SQL, C, C++, JAVA, JSP, SOAP, XML, HTML, CSS, External and Internal PC Hardware, Network Infrastructure

M.Sc. Thesis Project

Routing Algorithms for Low-Earth Orbit Satellite Systems and Performance Analysis with C# Simulation (March 2010 -)
Supervisor: Prof. Dr. Mesut Kartal

Undergraduate Thesis Project

MP3 Player-only implementation using TMS320C6713 digital signal processor programmed with Code Composer Studio and interfaced with LabVIEW Software (September 2007 to August 2008)
Supervisor: Prof. Dr. İ. Cem Gökner

Memberships

- IEEE Student Member with ID#80597899 (Turkey Section)
My societies: Aerospace and Electronics Systems Society, Woman in Engineering
- Istanbul Astronomy Union – since 2008 (Founding Member)

Presented Seminars

- University of Dođuř, Physics Department Activities Astrophysics Seminar (March 25, 2005)
My presentation was based on an early publication of mine: Which truths I can learn about Sun's evolution by analyzing EH Lib's light curve. (Physics, Extended Essay)
- Culture Engineering (International Theory of Knowledge Conference 2003 Istanbul, TURKEY)
My presentation was about; Chaos and Coincidence "Physics laws are based on concrete facts. Then how is it possible that chaos and coincidence take place in the definition of universe?"

Attended Activities, Seminars and Conferences

- RAST 2005 Istanbul, TURKEY (Recent Advances in Space Technologies) (June 09-11, 2005)
- RAST 2007 Istanbul, TURKEY (Recent Advances in Space Technologies) (June 14-16, 2007)
- RAST 2009 Istanbul, TURKEY (Recent Advances in Space Technologies) (June 11-13, 2009)
- ATHENS 2004 Olympic Torch Relay / Istanbul
I was chosen as a torch runner by SAMSUNG because of my success in the Assos Project. I carried the Olympic torch on July 6, 2004 in Zeytinburnu, Istanbul as the runner number, 20.
- Izmir Space Camp by scholarship attendance (July 7-14, 2003)
- International Expo 2002 Science Competition – ASSOS Project (September, 2002)
<http://www.geocities.com/turkdesaassos>
My duty in the project was designing and publishing the web site, and all kinds of technical support needed by the team.
- Middle-East Technical University Science Camp (February, 2002)
I got scholarship for this activity due to my architecture project "House of Future".

Rewards

- International Expo 2002 Science Competition – ASSOS Project First Place – Golden Medal
 - Government Superior Service Medal given by Ministry of Tourism on behalf of Turkey's presentation in the international arena.
 - Ümraniye District Education Directorate, Achievement Plate
 - Quality Schools, Achievement Plate

Interests

Amateur Astrophotography * Swimming * Reading books/articles * Movies/Music and archiving

References

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