

Cansu BÜYÜKHAN EREN

Research Assistant

Istanbul Aydın University,

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ACADEMIC RESUME

Istanbul Technical University, Maslak, Istanbul, Turkey

2017-Present

Satellite Communication and Remote Sensing, Communication Systems, Institute of Information (PHD)

Research Focus: Radar Signal Processing & Radar Imaging

Thesis Advisor: Prof. Dr. Mesut KARTAL

Istanbul Technical University, Maslak, Istanbul, Turkey

2014-2017

Biomedical Engineering, Faculty of Electronics & Communication Engineering, Institute of Science (MSc.)

Thesis Topic: Detection of Human Vital Signs Through Obstacle Using UWB GPR

Thesis Advisor: Prof. Dr. İnci ÇİLESİZ and Asst. Prof. Dr. Saeid KARAMZADEH

Boğaziçi University, Bebek, Istanbul, Turkey

Spring Term/ 2015-2016

Biomedical Engineering, Institute of Biomedical Engineering (Msc.) Special Student — Physiology Class

Istanbul Aydın University, Florya, Istanbul, Turkey

2009-2014

Electrical-Electronic Engineering, Faculty of Engineering (BSc.)

(Scholarship- Honours Degree)

Thesis Topic: Optimal Signal Processing Methods in GPR

Thesis Advisor: Asst. Prof. Dr. Saeid KARAMZADEH

Nuh Mehmet Küçükçalık Anatolian High School, Kayseri, Turkey

2004-2008

PUBLICATIONS

International Conferences

Buyukhan Cansu, Karamzadeh Saeid, Orhan Melek, Çalışkan Alper, Çilesiz İnci (2017). EXPERIMENTAL STUDY OF HUMAN RESPIRATORY DETECTION USING UWB GPR. 2017 4th International Conference on Electrical and Electronics Engineering (ICEEE 2017).

Buyukhan Cansu, Karamzadeh Saeid, Çalışkan Alper, Orhan Melek, Çilesiz İnci (2017). BACKGROUND SUBTRACTION TECHNIQUES TO DETECT HUMAN VITAL SIGNS USING UWB GPR. 5th International Conference on Advanced Technology and Sciences (ICAT 2017).

International Journal Papers

Karamzadeh Saeid, **Buyukhan Cansu**, Eskiçirak Umut, Akyol Tank (2014). OPTIMAL SIGNAL PROCESSING METHODS IN GPR. International Journal Of Electronics; Mechanical And Mechatronics (IJEMME).

PROJECTS

Researcher- Human Detection Under Collapsed Buildings After Earthquake using Ultra- Wideband Ground Penetrating Radar Kit, supported by: The Scientific and Technological Research Council of Turkey - **TÜBİTAK 1002 (2018- continues)**.

Summary: The aim of the ongoing project is the detection of vital signs such as human breathing & heart beat using Ultra-Wideband Radar system. In this research project, I mostly focus on clutter reduction techniques to eliminate the robust effect of collapsed buildings on the collected data and the signal localization techniques (Hilbert Huang Transform, Wavelet Transform etc.) to identify the human signature.

Researcher- Detection of Vital Signs Through the Obstacle via Radar, **Scientific Research Project, Istanbul Aydin University (Jan 2017 - Sep 2017)**.

Summary: In this research project, the detection of human vital signs are achieved by Ultra-Wideband Radar systems that operate at 1GHz-6.5GHz and 4.5GHz-9.5GHz, separately. During the research, three distinct bandwidths are tuned to analyze resolution and achievable maximum distance on collected data. Fast Fourier Transform and Hilbert Huang Transform are used for signal localization purposes.

INTERNSHIP

Acibadem Healthcare Group (2015): Most booming institution of Turkey, and attractive health tourism center for international patients. I was working in Acibadem Maslak Hospital, which is among the most popular hospitals in İstanbul with high-end medical equipment and experienced employees, as clinical engineer trainee. During my working period, I had great opportunity to examine the working cycle of hospital and also learned about modern medical devices that were used in Maslak. As a clinical engineer, I realized the importance of creating an effective bridge that connects doctors and medical companies to keep the hospital working in a harmony.

CLK ENERGY (2014): The largest electric distribution company in Turkey that provides electricity to cities such as İstanbul. In my internship, I learnt electrical terms in projects and observed the process of distribution.

REPKON(2013): One of the designer, manufacturer and provider of metal forming machines for global marketing. Their wide production lines contains wheels, gas pedals, drill pipes, kitchen sinks etc. As an Electrical-Electronics Engineering Trainee, I worked in electronic department and studied control systems and PLC.

COMPUTER SKILLS&LANGUAGES

<i>Application Software</i>	Microsoft Office
<i>Programming Languages</i>	C Programming, Matlab, Multisim, Autocad
<i>Systems</i>	Windows 10x, XP, Vista and 7

- Turkish(Native Language)
- English(Advanced)

TOEFL: 81

AREAS OF EXPERTISE

Radar Signal Processing, Ground Penetrating Radar (GPR), Signal & Image Processing

HOBBIES&INTERESTS

Space Science, Cooking, Reading