Assoc. Prof. Dr. Musa Hakan ASYALI

Dept. of Biostatistics, Epidemiology and Scientific Computing
King Faisal Specialist Hospital and Research Center
MBC-03 / P.O. Box 3354, Riyadh 11211
Saudi Arabia

Phone: 966 1-464-7272, Ext. 39211
Fax: 966 1-464 4542
asyali@ieee.org
asyali@kfshrc.edu.sa

Personal Information

Date of Birth: February 10, 1969
Place of Birth: Ankara
Marital Status: Married; Father of 2 daughters, Ahsen Nur and Ayse Nur

Education

Ph.D., Biomedical Engineering 6/98
University of Southern California (USC)
Thesis Title: *State and Respiratory Variability in Obstructive Sleep Apnea: A Modeling Perspective*

B.S., Electrical and Electronics Engineering 6/90
Bilkent University, Ankara, Turkey
Senior Project Title: *Analysis of Respiratory Motion of Human at Rest*

High School Diploma, Major: Advanced Mathematics and Biology 6/86
Ankara Fen Lisesi, Ankara, Turkey

Languages

Fluent in English and Turkish; Elementary German.

Research Interests

Biomedical signal and image processing; nonlinear physiological system identification; application of optimization techniques to biomedical problems; computational statistics.

Academic Honors and Prizes

Prof. Laurence Freedman young investigators award, the 2nd International Biometric Society Conference of the Eastern Mediterranean Region, Antalya, Turkey. 1/03

1st place in the Innovative Projects for Teaching Competition, University of Southern California Center for Excellence in Teaching with the project "Development of an Interactive Software Tool for Teaching Nerve Cell Physiology." 5/93

Scholarship/assistantship award for graduate study in the Ph.D. program of Biomedical Engineering Department of University of Southern California. 6/92

Scholarship/assistantship for graduate study in the MS program of Electrical and Electronics Engineering Department of Bilkent University. 6/90

Ranked 12th in the National University Entrance Exam (among about 1.5 million high school graduates) and awarded fellowship for BS studies by the Bilkent University. 6/86

3rd place, Turkish National Science Foundation Annual High School Scientific Project Competition, with the project titled "Effect of Pulsing Electromagnetic Field on the Development of Musca Domestica." 5/83

Ranked 9th in the National Science High School Entrance Exam (among about half a million secondary school graduates) and awarded fellowship for high school studies by the Turkish National Science Foundation. 6/83

Professional Achievements

Carried out a research project entitled "Measurement of Electromagnetic Field contamination/interference and Evaluation of Results," funded by Ege University Research Funding Council. 4/00-11/01

Carried out a research project entitled "Implementation of sample DSP algorithms on Texas TMS320-C6000 series DSP Evaluation Module," funded by Ege University Research Funding Council. 4/99-4/01

Carried out a research project entitled "Development of a Computer Assisted ECG Data Acquisition, Storage and Analysis System," funded by Ege University Research Funding Council. 11/98-11/99

Developed "PlotAna" a software tool with advanced GUI that displays and browses sleep data in a customizable format with spectral analysis capability. 1/97

Developed "LkerTool" a software tool with advanced GUI that makes nonlinear system identification from input/output data, using Laguerre kernel estimation technique. 9/96

Initiated, implemented, and managed Biomedical Engineering Department's WWW Server Project at the USC. 9/96-3/97

Developed "NCPSIM (Nerve Cell Physiology Simulator)" a software tool with advanced GUI that demonstrates various characteristics of nerve cells. 9/93

Developed "Smart Segmenter," a software tool that automatically finds and extracts certain segments of large (approximately 70MB in size) sleep data files. 3/93

Designed and implemented transducers to measure chest wall displacement and respiratory air flow, as a part of B.S. Senior Project: Analysis of Respiratory Motion of Human at Rest. 5/90

Job Experience

Scientist 10/01-Present
Biostatistics, Epidemiology and Scientific Computing Dept.
King Faisal Specialist Hospital & Research Center
MBC-03 / P.O. Box 3354, Riyadh 11211, Kingdom of Saudi Arabia
Undertook research activities mainly in the fields of physiological system modeling/identification, computational biostatistics, biomedical signal and image processing, and bioinformatics.

Associate Professor 8/01-10/01
Electrical and Electronics Eng. Dept., Ege University, 35100 Bornova, Izmir
Taught the main course material and supervised the lab hours for the following undergrad level courses: Circuit Theory, Signals and Systems, Analog Electronics. Also taught following graduate level courses: Digital Signal Processing, Digital Image Processing, Biomedical Signals and Instrumentation.

Deputy Director 5/00-12/00
Ege University Scientific and Technological Research and Application Center
Ege University, 35100 Bornova, Izmir
Worked as an administrator in this organization that aimed at establishing a bridge between research activities taking place at the university and industrial needs.

Job Experience (continued)

Assistant Professor 10/98-11/00
Electrical and Electronics Eng. Dept., Ege University, 35100 Bornova, Izmir
Taught the main course material and supervised the lab hours for the following undergrad level courses: Introduction to Computers and Programming with Visual Basic, Linear Algebra and Differential Equations, Circuit Theory, Signals and Systems.

Technical Support Engineer 7/97-12/97
MainNet (Internet Service Provider), 5753 Uplander Way, Culver City, CA 90230
Registered internet domain names, set up new PPP, E-mail, and WWW server (under MS IIS4) accounts. Carried out general system maintenance and backup operations. Provided clients with general software and hardware troubleshooting information.

Teaching and Research Assistant 1/93-6/98
Biomedical Engineering Department, USC
Supervised lab hours, graded homework and lab reports for various graduate and undergraduate level biomedical engineering courses. Participated in designing and administrating sleep experiments.

PC Service Engineer 6/95-1/96
Microcomputing Technical Support, USC
Maintained and serviced Pentium based PCs, Macintoshes, and Laser Printers. Obtained certificates on Apple Macintosh computer and laser printer service and maintenance.

UNIX Consultant 8/93-1/94
University Computing Services, USC
Answered UNIX related user questions over the phone. Provided on-site technical support on UNIX and several scientific application packages running under UNIX at the USC computer labs.

Teaching and Research Assistant 9/90-9/92
Electrical and Electronics Engineering Department, Bilkent University
Held recitation hours, supervised lab hours, graded homework and lab reports for various undergraduate level electrical engineering courses.