

MUSTAFA TANER ESKİL

◆ Işık Üniversitesi AMF-319, 34980, Şile/İstanbul
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EDUCATION

Michigan State University *East Lansing, MI*
PhD in Computer Science and Engineering *September 1999 - January 2005*
PhD Thesis – Distributed Routine Design over the Internet with Cooperating Modular Distributed Modeling Agents
Concentrations: Intelligent Design and Simulation, Artificial Intelligence, Knowledge-Based Systems, Internet-Based Distributed Design and Simulation, E-commerce and Protection of Proprietary Resources
Honors: Co-instructor for a high-enrollment freshman class during 2000-2005
Grade Point Average: 3.6/4.0

Boğaziçi University *İstanbul, Turkey*
MS in Systems and Control Engineering *September 1997 - July 1999*
MS Thesis – 2D and 3D Modeling of Cardiac Data Using Implicit Polynomials for Diagnostics
Concentrations: Image Processing, Pattern Recognition, Robotics
Grade Point Average: 3.8/4.0

Boğaziçi University *İstanbul, Turkey*
BS in Mechanical Engineering *September 1993 - July 1997*
Concentrations: Systems Control, Engineering Design
Grade Point Average: 3.1/4.0

PROFESSIONAL EXPERIENCE

Işık University Computer Engineering Department *İstanbul*
Associate Professor *April 2006 - Present*

Sabancı University Faculty of Engineering and Natural Sciences *İstanbul*
Post-Doctoral Fellow *April 2005 - April 2006*
Coordinated research activities in the Vision and Pattern Analysis Laboratory, a EU 6th framework center of excellence candidate.

Michigan State University Computer Science and Engineering Department *East Lansing, MI*
Research Assistant, Intelligent Systems Laboratory (ISL) *September 1999 - January 2005*
Co-Instructor – CSE 131 Technical Computing and Problem Solving (a gateway course into the MSU Engineering College with an enrollment of approximately 400 students per semester)

Boğaziçi University Industrial Engineering Department *İstanbul, Turkey*
Research Assistant, Pattern Recognition and Image Processing Laboratory (BUPAM) *January 1998 - July 1999*

PUBLICATIONS

Textbooks

Sticklen, J., Eskil, M. T.. *Technical Problem Solving with MATLAB v.7*, Oxford University Press, 2006

Theses

Eskil, M. T., “Distributed Routine Design over the Internet with Collaborating MDM Agents”, PhD Dissertation, Michigan State University, December 2005

Eskil, M.T., “2D and 3D Modeling of Cardiac Data Using Implicit Polynomials for Diagnostics”, MS Thesis, Boğaziçi University, July 1999

Journal Papers

M. T. Eskil, "Factored particle filtering with dependent and constrained partition dynamics for tracking deformable objects," *Mach. Vis. Appl.*, vol. 25, no. 7, pp. 1825-1840, 2014.

M.T. Eskil and K.S. Benli, "Facial expression recognition based on anatomy," *Comput. Vis. Image Underst.*, vol. 119, pp.1-14, Feb. 2014.

H.P. Abeysundera, K.S. Benli, and M.T. Eskil, "Nearest neighbor weighted average customization for modeling faces," *Mach. Vis. Appl.*, vol. 24, no. 7, pp. 1525-1537, 2013.

Eskil, M. T., Sticklen, J., "Integrating Vendors into Cooperative Design Practices," *CoDesign Journal*, vol. 5, no. 3, pp. 175-192, 2009.

Eskil, T., Sticklen, J., Radcliffe, C., "The Routine Design-Modular Distributed Modeling Platform for Distributed Routine Design and Simulation-Based Testing of Distributed Assemblies," *Artificial Intelligence in Engineering Design and Manufacturing*, vol. 22, no.1, pp. 1-18, Feb. 2008

Book Chapters

K.S. Benli, D. Ağdoğan, M. Özgüz, and M.T. Eskil, "Semi-automatic adaptation of high-polygon wireframe face models through inverse perspective projection" in *Computer and Information Sciences II.*, E. Gelenbe, R. Lent, and G. Sakellari, Ed. Springer London, 2012, pp. 315-321.

Conference Papers

Benli, K.S.; Eskil, M.T., "Extraction and Selection of Muscle Based Features for Facial Expression Recognition," *Pattern Recognition (ICPR), 2014 22nd International Conference on*, pp.1651-1656, 24-28 Aug. 2014, doi: 10.1109/ICPR.2014.14

Ağdoğan, D., Babacan, V.K., Eskil, M.T., "Raylı sistemlerde yüksek gerilim aksamının otomatik denetimi," *IEEE sinyal işleme ve iletişim uygulamaları kurultayı (SIU 2014)*, Trabzon, Nisan 2014

Benli, K.S., Eskil, M.T., "İfade tanıma için yüz anatomisine dayalı öznitelikler," *IEEE sinyal işleme ve iletişim uygulamaları kurultayı (SIU 2014)*, Trabzon, Nisan 2014

Abeysundera, P., Eskil, M.T., "Palm verification using sift majority voting", *Proc. of International Symposium on Computer and Information Sciences (ISCIS 2011)*, London, September 2011.

Özgüz, M., Eskil, M.T., "Numerical integration methods for simulation of mass-spring-damper systems", *Proc. of International Symposium on Computer and Information Sciences (ISCIS 2011)*, London, September 2011.

Benli, K. S., Duzagac, R., Eskil, M. T., "Driver recognition using Gaussian mixture models and decision fusion techniques", *Lecture Notes in Computer Science, ISICA 2008*, Dec 2008, Vol. 5370, pp. 803-811

Eskil, T., Sticklen J., "Design and simulation of distributed assemblies – The hybrid vehicle example", *Proc. of International Symposium on Tools and Methods of Competitive Engineering*, April 2008

Eskil, T., Erdoğan, H., Erçil, A., Özyağcı, A. N., Rodoper, M., "Decision fusion techniques for in-car driver recognition," *Proc. of IEEE Signal Processing and Communications Applications*, 2006, pp. 1- 4

Erdoğan, H., Özyağcı, A. N., Eskil, T., Rodoper, M., Erçil, A., Abut, H., "Experiments on Decision Fusion for Driver Recognition," *Proc. of Biennial on DSP for in-Vehicle and Mobile Systems*, Sesimbra, Portugal, September 2-3, 2005, M1-5

Sticklen, J., Amey, M., Eskil, T., Urban-Lurain, M., Hinds, T., "Multi-section Freshman Classes with Labs: Lecture as Intro vs. Lecture as Wrap-up," *Proc. of ASEE Annual Conference and Exposition*, 2005

Urban-Lurain, M., Amey, M., Sticklen, J., Eskil, T., "Curricular Integration of Computational Tools by Evolutionary Steps," *Proc. of ASEE*, 2004

Sticklen, J., Amey, M., Eskil, T., Hinds, T., Urban-Lurain, T., "Application of Object-Centered Scaffolding to Introductory MatLab," *Proc. of American Society of Engineering Education Annual Conference & Exposition*, 2004

Eskil, T., Sticklen, J., Radcliffe, C., "Modular Distributed Modeling," *Proc. of 4th International Collaborative Technology Symposium, Soc. for Modeling and Simulation International*, No. D3-202, Orlando, FL, January 19–23, 2003

Eskil, M. T., Akarun, L., Erçil, A., "Üç Boyutlu Örtük Polinomların Kullanımıyla Hastalıklı-Sağlıklı Kalp Sınıflandırması," *Proc. of IEEE Signal Processing and Communications Applications*, May 1999

Eskil, M.T., Efe, M.O., Kaynak, O., "T-Norm Adaptation in Fuzzy Logic Systems Using Genetic Algorithms," *Proc. of IEEE International Symposium on Industrial Electronics (ISIE'99)*, Bled, Slovenia, 12-16 July, 1999, Vol. 1, pp.398-402, 1999

Technical Reports

Kolmos, A., Kuru, S., Hansen, H., Eskil, T., Podesta, L., Fink, F., Graaff, E., Wolff, J. U., Soyulu, A., TREE (Teaching and Research in Engineering Education) Erasmus Thematics Network Project SIG B5 Report, 2007

Eskil, T., Koçaş, C., Erçil, A., "Machine Vision Applications in Turkish Industry – Market Share and Preconceptions," EU 6th Framework SPICE Project, Sabancı University Vision and Pattern Analysis Laboratory, 2006

RESEARCH PROJECTS

Expression Recognition Based on Facial Anatomy, Tübitak 1001 Project 109E061, 2009-2012

Condition Monitoring of the Overhead High-Voltage Equipment in Rail Transport, Işık University Scientific Research Project 12A301, 2012-2014

Driver Fatigue Recognition using Pattern Recognition Techniques, Işık University Scientific Research Project 07A301, 2007-2009

TREE, Teaching and Research in Engineering Education, Erasmus Thematic Network (TN) Project Special Interest Group (SIG-B5), Partners: Aalborg University, Işık University, Vitus Bering University College, University of Rome 'La Sapienza', Delft University of Technology, 2005-2007

Research fellow, EU 6th Framework SPICE (Signal, Image Processing and Pattern Recognition for Intelligent Automation Center) Project, 2005-2006

Research fellow, proposal, development and coordination of the DPT Drive-Safe Driver Behavior Modeling Project, Project Leader: Sabancı University, Participants: Ford, Renault, Tofaş, Istanbul Technical University, ITU-OTAM, Koç University, American Hospital, 2005-2006

Research fellow, Computer Vision Techniques in Integrated Furniture Manufacturing, Tübitak, Vistek Ltd., 1997-2000

Research fellow, MISAG 166 – Euclidean and Affine Invariant Object Recognition and Automated Tolerance Inspection using Implicit Polynomials, Tübitak, 1997-2000

REFeree EXPERIENCE AND CONFERENCE ORGANIZATIONS

Tübitak Technology and Innovation Funding Program (TEYDEB) evaluator and reviewer

International Symposium on Computer and Information Sciences (ISCIS) program committee member

Signal Processing and Communication Applications Conference (SIU 2006) organization committee member, special sessions organizer, publication board member

COURSES TAUGHT

CSE 100 – Introduction to Programming

CSE 131 – Technical Computing and Problem Solving (Michigan State University)

CSE 200 – Programming Workshop

CSE 202 – Data Structures and Algorithms

CSE 311 - Internet and Web Programming

CSE 312 - Analysis of Algorithms

CSE 332 - Operating Systems

CSE 380 – Special Project in Computer Engineering

CSE 450 – Computer Graphics

CSE 460 – Artificial Intelligence

CSE 567 – Advanced Image Processing

CSE 595 - Deep Learning

COURSES DESIGNED

Technical Problem Solving and Computing (Michigan State University, with Dr. Jon Sticklen, 2000-2005): Designed an introductory level programming course through a scaffolding approach. Scaffolding is an instruction technique in which students are given probes that lead them to discover incremental information building upon their prior knowledge. In this scheme the organization of the course was changed so that arrays and functions are introduced as natural extensions of scalars and algebraic operations, respectively. Students consistently evaluated this approach as an effective learning style.

Introduction to Programming (Işık University, 2007-2008): Redesigned this introductory level programming course using the scaffolding approach. Designed and conducted student evaluation surveys for assessment of scaffolding approach in learning.

Special Project in Computer Engineering (Işık University, 2007-2008): Designed a junior level course as a test bed for Project Based Learning (PBL) in Işık University Computer Engineering Department. In accordance with the PBL approach, students were organized in teams and each team was assigned a modular piece of a complex and real-world project. The instructor takes the role of a 'facilitator' in the course, intervening only when students stray from scientific methods. Students are encouraged to define the problem, search for resources to learn the problem domain, devise and propose a solution approach, and do implementation and testing of the project deliverable. Learning in this approach is self-directed, through research and discussions with teammates and other teams.

CURRICULUM DESIGN

Redesign of undergraduate computer engineering program according to ABET terminology and methodology, Işık University, 2008 (with Dr. Selahattin Kuru)

PhD program in computer engineering, Işık University, 2007 (with Dr. Selahattin Kuru)

SUNY- Işık University joint dual diploma program in software engineering, 2007 (with Dr. Selahattin Kuru)

THESES SUPERVISED / IN PROGRESS

PhD

Tuğba Erkoç, "Object recognition with competitive convolutional neural networks," PhD Thesis, Işık University, in progress.

Kristin S. Benli, "Facial expression recognition based on facial anatomy," PhD Thesis, Işık University, 2013

MS

Kadir Erdem Demir, "Sound Localization and Tracking," MS Thesis, Işık University, 2016

Nuri Gökay Titrek, "Fabric Defect Detection in Frequency Domain Using Fourier Analysis," MS Thesis, Işık University, 2016

Didem Ağdoğan, "Anatomical Modeling of Facial Muscles," MS Thesis, Işık University, 2015

Tuğba Erkoç, "Anatomy Based Animation of Facial Expressions," MS Thesis, Işık University, 2013

Uranchimeg Olzvoi, "Detecting Facial Features Automatically," MS Thesis, Işık University, 2013

H. Pasindu Abeysundera, "Semi-Automatic Customization for Modeling Human Face," MS Thesis, Işık University, 2011

Kristin S. Benli, "Driver Recognition and Verification using Pattern Recognition Techniques," MS Thesis, Işık University, 2007

Erhan Doğrukartal, "Neural Network Based Face Detection," MS Thesis, Işık University, 2010

AWARDS

Işık University Computer Engineering Department Best Instructor Award, 2007, 2008 (voted by students)

Işık University Best Advisor Award, 2008 (voted by students)

OTHER

Işık University Pattern Intelligence Laboratory (PILAB) founder and coordinator (2007-present)

REFERENCES

Prof. Ercan Solak, ercan@isikun.edu.tr, (+90) 216 528-7120

Prof. Yorgo I Stefanopoulos, istef@isikun.edu.tr, (+90) 216 528-7012

Prof. Selahattin Kuru, kuru@isikun.edu.tr, (+90) 216 528-7140

Prof. Jon Sticklen, sticklen@msu.edu, (+1) 517 353-3711