



CURRICULUM VITAE

Dr. Mehmet YAKUT

I. PERSONAL DETAILS

NAME	:	Mehmet YAKUT
ADDRESS	:	Sehit Ekrem Mh. Kucuk Sk. No:2 Basiskele, Kocaeli/Turkey
TELEPHONE	:	GSM: +90 (533) 3466519
E-MAIL	:	mehmet.yakut@gmail.com
WEB	:	https://mehmetyakut.com/
DATE of BIRTH & PLACE:	:	20th November 1966, Izmit/Turkey
MARITAL STATUS	:	Married & has two children
NATIONALITY	:	Turkish

II. RESEARCH INTERESTS

- ✓ Solar Tracking Control System development for Solar Energy Fields (hardware design, embedded software and remote management software) (2021-2024)
- ✓ Embroidery machine control and automation software development and system simulation (2020-2021).
- ✓ Mobile device based contact tracing system for COVID19 (2020-...). *“Patent application in progress ”*
- ✓ Single axis solar tracking system for solar energy fields - embedded system design and web interface (2020-...).
- ✓ Data embedding over the air sound transmission for terrestrial broadcasting and advertisement performance tracking system (2015-2018). *“Patented project”*
- ✓ Image processing based sensor technologies and applications using single board computer (2017-2018).
- ✓ Image and video compression (especially on fast algorithms for energy efficiency of mobile video devices).
- ✓ Vector quantization based video coding and motion compensation.
- ✓ Fast image/scene retrieval from compressed image database or compressed video.
- ✓ Wireless sensor networks (board level design and embedded software).

- ✓ Remotely Operated Underwater Vehicle (ROV) design and control (2010-2016).
- ✓ Mobile robots (board level system design and control strategies).
- ✓ Embedded system design and applications.

III. PROJECTS COMPLETED

- ✓ Smart home automation system (TEYDEB TUBITAK, 2012-2014).
- ✓ Small underwater ROV design for depth control techniques (TUBITAK, 2011-2012)
- ✓ Wireless patient monitoring system for heart attack risk group, TEYDEB TUBITAK (2011-2013).
- ✓ Wireless intelligent sensor fire alarm system for metropolitan security, TEYDEB TUBITAK (2009-2011).
- ✓ FPGA Based Multiple Output PWM Pulse Generator for Ultrasonic Cleaning Machines (Resonance frequency detection and tracking by 5Hz steps at 1200W power levels), TEYDEB TUBITAK (2007-2009).
- ✓ “Multifrequency microcontroller based ultrasonic cleaning machine prototype design” 28-40 KHz, 1200 W output power, SANTEZ - Ministry of Industry (2007-2009).
- ✓ MATE2016 ROV competition Turkey Championship and join the International MATE2016 ROV competition in NASA NBL with team Lucky Fin, USA.

IV. PUBLICATIONS:

- ✓ M. Yakut, N. Bandirmali Erturk, “An IoT-based approach for optimal relative positioning of solar panel arrays during backtracking”, Computer Standards & Interfaces The International Journal on the Development and Application of Standards for Computers, Software Quality, Data Communications, Interfaces and Measurement, Elsevier, Volume 80, March 2022.
- ✓ Gokhan Polat, Sitki Ozturk, and Mehmet Yakut, “Design and Implementation of 256-Point Radix-4 100 Gbit/s FFT Algorithm into FPGA for High-Speed Applications”, ETRI Journal, Volume 37, Number 4, August 2015.
- ✓ Mehmet Yakut, Nasser Kehtarnavaz, “Ice-hockey puck detection and tracking for video highlighting”, Signal Image and Video Processing Journal, Springer Verlag, 20.March.2015 London
- ✓ Mehmet YAKUT, “Fast image search on VQ compressed image database”, Turkish Journal of Electrical Engineering and Computer Sciences, 2016, Turkey
- ✓ Mehmet Ali Çavuşlu, Cihan Karakuzu, Suhap Şahin and Mehmet Yakut, “Neural network training based on FPGA with floating point number format and it’s performance”, Neural Computing & Applications Volume 20, Number 2, 195-202, July 2010, Springer.
- ✓ Ali Tangel, Mehmet Yakut, Engin Afacan, Ulvi Guvenc, Hasan Sengul, “An FPGA Based Multiple Output PWM Pulse Generator for Ultrasonic Cleaning Machines”, IEEE Applied Electronics 2010 International Conference pp.1-4, 2010.
- ✓ Kubilay Demir, Arif Dolma, Mehmet Yakut, “Residual Power and Traffic Density Balancing Routing Algorithm.” 10th Mediterranean Microwave Symposium Guzelyurt, Northern Cyprus (2010) pp351-354 2010

- ✓ Mehmet Yakut, Ali Tangel, Ulvi Güvenç, “FPGA based frequency detection algorithm for piezoelectric transducers” 7th International Workshop on Piezoelectric Transducers (IWPMA-2010) p.75 2010
- ✓ Ulvi Guvenc, Mehmet Yakut, Ali Tangel “Ultrasonik Temizlik Sistemlerinde Rezonans Frekans Tespiti için Yinelemeli Frekans Bandı tarama Tekniği” Gömülü Sistemler ve Uygulamaları Sempozyumu, GÖMSİS 2010, s.21-24, 2010
- ✓ Kubilay Demir, Arif Dolma, Mehmet Yakut “Ağ Geçidinde Oluşturulan Tekrarlı Yer Belirleme Yöntemi” 5. URSİ Bilimsel Kongresi 486- 490 2010
- ✓ Kubilay Demir, Arif Dolma, Mehmet Yakut “Artakalan Enerji ve Trafik Yoğunluğu Dengelemeli Yönlendirme Algoritması” 5. URSİ Bilimsel Kongresi 490-494 2010
- ✓ Mehmet Yakut, Ali Tangel, Cemile Tangel “A Microcontroller Based Generator Design For Ultrasonic Cleaning Machines”, Journal Of Electrical & Electronics Engineering, Istanbul University, Vol 9 p853-860, 2009
- ✓ Mehmet Yakut, Neval Reisoglu ”Fast video vector quantization”, 23rd International Symposium on Computer and Information Sciences, ISCIS08, Istanbul Page(s):1-4, 27-29 Oct. 2008
- ✓ Hakan Kırıcı, Serhat Yılmaz, Mehmet Yakut “İnsansız sualtı araçları”, Mayıs Endüstri Otomasyon dergisi, s 24-28 2008
- ✓ Mehmet Yakut, Cemile Tangel, Ali Tangel, “Ultrasonik Temizleme Makineleri İçin Mikrodenetleyici Tabanlı Üreteç Tasarımı” Eleco2008, Bursa
- ✓ Cemile Tangel, Mehmet Yakut, Ali Tangel, „Ultrasonik Frekansların Yüzey Temizlemede Kullanımı Ve Süreç Optimizasyonu“ URSI 2008,Akdeniz Universitesi, Antalya s 20-22 Ekim 2008
- ✓ Semih Şenol, Mehmet Yakut, Murat Sönmez. İsmet Kandilli, “Sektör zamanlarına göre zamanaşımaları kaydeden hafızalı sayaç tasarımı” 4. Otomasyon sempozyumu, 19 Mayıs Üniversitesi, Samsun 2007
- ✓ Ozer Senyildiz, Mehmet Yakut, “A Microcontroller Controlled Smart Power Wheelchair”, International Symposium on INnovations in Intelligent SysTems and Applications, June 20-23, 2007 İstanbul , Turkey
- ✓ Sonmez, M; Kandilli, I; Yakut, M, “Tracking control based on neural network for robot manipulator”, Artificial Intelligence And Neural Networks, 3949: 49-57 2006
- ✓ Murat Sönmez, İsmet Kandilli, Mehmet Yakut , “Fuzzy Logic-Based Tuning Controller for HVDC”, ISIE 2006 International Symposium on Industrial Electronics , Montreal Canada, 9-13/07/2006
- ✓ M. Sırma, A. Tangel, M. Yakut, “Wireless Smart and Digital Fire Alarm and Control Panel”, Tehoss 2006, Kadir Has University 2006, Istanbul
- ✓ M. Sırma, M. Yakut, A. Tangel, A. Kavak, İ. Ertürk, “Simulation of Flooding Communication Protocol using Omnet++” URSI 2006, Hacettepe University, Ankara
- ✓ M. Sırma, M. Yakut, A. Tangel, A. Kavak, İ. Ertürk, “Kablosuz Algılayıcılar ve Ağlarının Tıbbi Bakımlarda Kullanılması” URSI 2006, Hacettepe University, Ankara
- ✓ K. Çakılcı, M. Yakut, İ. Kandilli, “Digital image processing and lazer scanning based manufacturing fault detection ”, III Automation Symposium, Pamukkale University 2005, Denizli, Turkey

- ✓ K. Çakılcı, M. Yakut, İ. Kandilli, “Product surface quality determination using image processing techniques”, Signal and Image processing Applications, SIU 2006, Antalya, Turkey
- ✓ Mehmet YAKUT, Ali TANGEL, Kadir BAŞ, “Fpga Based 3-D Snake_like robot control sequence generator”, Electric, Electronics and Computer Engineering Symposium, Eleco 2006, Bursa Turkey
- ✓ Mehmet AYAR, Ali TANGEL, Mehmet YAKUT, “TIQ Based Flash Adc Auto-Calibrator Design”, Electric, Electronics and Computer Engineering Symposium, Eleco 2006, Bursa Turkey
- ✓ Tuncay Aksungurlu, Mehmet Yakut, “Smart sensor network design and implementation using RS485 RS485”, International Symposium on INnovations in Intelligent SysTems and Applications 2006, Yildiz Technical University İstanbul, 31/05/2006
- ✓ Mehmet Yakut, Kadir Baş, “Serial Port Updated Multiple PWM generation using FPGA”, International Symposium on INnovations in Intelligent SysTems and Applications 2006, Yildiz Technical University İstanbul, 31/05/2006
- ✓ Serkan Erboral, Göker Kuzucu, Mehmet Yakut, “Anten Örüntüsünün Mikroadım Tekniği Kullanılarak Mikrodenetleyici Kontrolünde Çıkarılması”, International Symposium on INnovations in Intelligent SysTems and Applications 2006, Yildiz Technical University İstanbul, 31/05/2006
- ✓ Murat Sönmez, İsmet Kandilli, Mehmet Yakut, “Dinamik Sistem: Robot sistemin uyarlanır sinirsel bulanık ağ tabanlı modellenmesi”, International Symposium on INnovations in Intelligent SysTems and Applications 2006, Yildiz Technical University İstanbul, 31/05/2006
- ✓ Murat Sonmez, Mehmet Yakut, “A Robotic system based on artificial neural network”, Mechatronics & Robotics 2004 IEEE
- ✓ YAKUT M., “Multiscale image representation using switched codebook predictive vector quantizer”, ISCIS XVII International symposium of Computer and Information Sciences Orlando Florida USA, 28-30 October 2002
- ✓ YAKUT M, “Vector quantization using nonrectangular blocks” , ISCIS XVI International symposium of Computer and Information Sciences Antalya, Turkey, 5-7 November 2001
- ✓ Metin AYDOGAN, Mehmet YAKUT, “Car Identity Label Recognition System”, International Symposium on INnovations in Intelligent SysTems and Applications, June, 2004

V. EDUCATIONAL AND PROFESSIONAL BACKGROUND

2016- up to now	Retired, continues as a consulting manager
2009-2016	Assistant Professor, Electronics & Communications Eng. Department in Kocaeli University
2008-2009	Researcher, UT Dallas Johnson School of Engineering, Signal & Image Processing Lab, USA
2003-2008	Assistant Professor, Electronics & Communications Eng. Department in Kocaeli University

- 2002** Ph.D. (Thesis: Vector quantization based image compression using nonrectangular blocks)
- 1992** M.Sc. (Thesis: Closed Loop Control (PID) of three Stepping Motors using High Performance Microcontrollers)
- 1987-2003** Research Assistant & Lecturer, Electronics & Communications Eng. Department in Kocaeli University
- 1987** B.Sc. in Electronics & Communications Engineering