

Prof. ALİ TANGEL

Personal Information

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Education Information

Doctorate, Pennsylvania State University University College Park Campus, United States Of America 1994 - 1999

Post Graduate, Hacettepe Üniversitesi, Kimya ve Kimyasal İşleme Teknolojileri, Elektrik-Elektronik Mühendisliği (YI) (Tezli), Turkey 1989 - 1991

Under Graduate, Gazi Üniversitesi, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, Turkey 1982 - 1986

Foreign Languages

English, C1 Advanced

Research Areas

Electrical and Electronics Engineering, Electronic, Printed Circuits, Thin Film, Thick Film and Hybrid ICs, Electronic Circuits, MEMS, Semiconducting Materials and Devices, Engineering and Technology

Academic Titles / Tasks

Professor, Kocaeli Üniversitesi, Mühendislik Fakültesi, Elektronik Ve Haberleşme Mühendisliği Bölümü, 2017 - Continues
Associate Professor, Kocaeli Üniversitesi, Mühendislik Fakültesi, Elektronik Ve Haberleşme Mühendisliği Bölümü, 2011 - 2017

Assistant Professor, Kocaeli Üniversitesi, Mühendislik Fakültesi, Elektronik Ve Haberleşme Mühendisliği Bölümü, 1999 - 2011

Research Assistant, Kocaeli Üniversitesi, Mühendislik Fakültesi, Elektronik Ve Haberleşme Mühendisliği Bölümü, 1993 - 1999

Research Assistant, Gazi Üniversitesi, Mühendislik-Mimarlık Fakültesi, 1987 - 1993

Professional Experience

Head of Department, Kocaeli Üniversitesi, Mühendislik Fakültesi, Elektronik-Haberleşme Mühendisliği, 2018 - Continues

Courses

Elektronik-1 (İngilizce), Under Graduate, 2018 - 2019

İleri VLSI Tasarım, Post Graduate, 2018 - 2019

Elektronik-2 (İngilizce), Under Graduate, 2017 - 2018

Programlanabilir Tümeleşik Devreler, Under Graduate, 2018 - 2019

Analog Tümeleşik Devreler, Post Graduate, 2018 - 2019

VLSI Tasarım , Under Graduate, 2018 - 2019

Advising Theses

Tangel A., HİPERSPEKTRAL VERİLER İÇİN KAYNAŞTIRMA İLE UZAMSAL ÇÖZÜNÜRLÜK ARTIRIMI, Doctorate, S.KAHRAMAN(Student), 2019

Tangel A., Medikal görüntüleme cihazlarında kullanılan TDC mimarisinin VLSI gerçekenmesi, Post Graduate, M.AKİF(Student), 2019

Tangel A., 250 NM CMOS TEKNOLOJİSİ İLE SRAM BİRİM HÜCRE OPTİMİZASYONU VE 2 Kb SRAM TASARIMI, Post Graduate, H.KAYDIRMA(Student), 2019

Tangel A., Implementation of 8x8 luma intra prediction module for H.264/AVC standard, Post Graduate, B.ANTOINETTE(Student), 2019

Tangel A., FPGA tabanlı 5 eksenli mobil robot tasarımı ve gerçekenmesi, Post Graduate, H.KARCI(Student), 2013

Tangel A., FPGA tabanlı çok fonksiyonlu ultrasonik temizleme makinesi tasarımı ve prototip üretimi, Post Graduate, U.GÜVENÇ(Student), 2011

Tangel A., Katlamalı ve aradeğerlemeli analog sayısal dönüştürücülerin vlsi tasarımında eşik evirmeli nicemleyici tekniğinin kullanımı ve performansı, Doctorate, O.AYTAR(Student), 2009

Tangel A., 16-bitlik mikroişlemcinin FPGA mimarileri kullanılarak gerçekenleştirilmsi, Post Graduate, E.ALAER(Student), 2006

Tangel A., 10 bit iki adımlı analog sayısal dönüştürücünün VLSI tasarımı ve benzetimi, Post Graduate, A.ÇELEBİ(Student), 2005

Tangel A., RF ID teknolojisi, Post Graduate, İ.KİRAZ(Student), 2005

Tangel A., TIQ temelli 8-bit iki aşamalı ADC tasarımı, simülasyonu ve serim şeması, Post Graduate, O.AYTAR(Student), 2003

Tangel A., TIQ tabanlı 8 bit folding A/D dönüştürücü tasarımı ve simülasyonu, Post Graduate, M.FATİH(Student), 2003

Tangel A., Visual basic programının endüstriyel otomasyonda kullanımı (akıllı ev), Post Graduate, Ş.YILMAZ(Student), 2002

Education Infrastructure Information

Tangel A., Mikroelektronik (VLSI) Araştırma Laboratuvarı, May 2003

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **Using Programmable Josephson Voltage Standard for Static and Dynamic Gain Characterization of Integrating ADC**
COŞKUN ÖZTÜRK T., ERTÜRK S., TANGEL A., MEHEDİN A.
IEEE Transactions On Instrumentation And Measurement, vol.69, no.7, pp.4425-4435, 2020 (Journal Indexed in SCI)
- II. **A 10 GS/s time-interleaved ADC in 0.25 micrometer CMOS technology**
Aytar O., TANGEL A., AFACAN E.
JOURNAL OF ELECTRICAL ENGINEERING-ELEKTROTECHNICKY CASOPIS, vol.68, no.6, pp.415-424, 2017 (Journal Indexed in SCI)
- III. **Correlation template matching CPA method**
Kuzu E. A. , Tangel A.
ELECTRONICS LETTERS, vol.52, pp.1306-1307, 2016 (Journal Indexed in SCI)

- IV. **FPGA Tabanlı 5 Eksenli Mobil Robot Kolu Tasarımı ve Prototip gerçekleştirilmesi**
KARCI H., TANGEL A.
Journal Of The Faculty Of Engineering And Architecture Of Gazi University, vol.31, pp.295-302, 2016 (Journal Indexed in SSCI)
- V. **DESIGN AND PROTOTYPE IMPLEMENTATION OF A 5-DOF MOBILE ROBOT ARM BASED ON FPGA**
Karci H., TANGEL A.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.31, no.2, pp.295-302, 2016 (Journal Indexed in SCI)
- VI. **A 5 Bit 5Gs s flash ADC using multiplexer based decoder**
Aytar O., Tangel A., Şahin K.
Turkish Journal Of Electrical Engineering And Computer Sciences, vol.2013, pp.1972-1982, 2013 (Journal Indexed in SCI Expanded)
- VII. **FPGA Based Implementation and Comparison of Beamformers for CDMA2000**
Dikmese S., Kavak A., Küçük K., Şahin S., Tangel A.
WIRELESS PERSONAL COMMUNICATIONS, vol.57, pp.233-253, 2011 (Journal Indexed in SCI)
- VIII. **Employing threshold inverter quantization (TIQ) technique in designing 9-Bit folding and interpolation CMOS analog-to-digital converters (ADC)**
Aytar O., Tangel A.
SCIENTIFIC RESEARCH AND ESSAYS, vol.6, pp.351-362, 2011 (Journal Indexed in SCI)
- IX. **Digital signal processor against field programmable gate array implementations of space-code correlator beamformer for smart antennas**
Dikmese S., Kavak A., Küçük K., Şahin S., Tangel A., Dincer H.
IET MICROWAVES ANTENNAS & PROPAGATION, vol.4, pp.593-599, 2010 (Journal Indexed in SCI)
- X. **MOS mismatch effects on TIQ comparators**
Tangel A., Aytar O.
INTERNATIONAL JOURNAL OF ELECTRONICS, vol.96, pp.561-570, 2009 (Journal Indexed in SCI)
- XI. **"The CMOS inverter" as a comparator in ADC designs**
Tangel A., Choi K.
ANALOG INTEGRATED CIRCUITS AND SIGNAL PROCESSING, vol.39, pp.147-155, 2004 (Journal Indexed in SCI)

Articles Published in Other Journals

- I. **A High Voltage PIN Diode Design on SOI Substrate**
Tangel A., Çalışkan A. U.
Materials Today Proceedings, vol.18, pp.1826-1835, 2019 (Refereed Journals of Other Institutions)
- II. **Establishing Programmable Josephson Voltage Standard and Maintaining Its Quantum Accuracy**
COŞKUN ÖZTÜRK T., ERTÜRK S., TANGEL A., GEDİK A., YOĞUN M., CELEP M.
International Journal of Electrical and Electronic Engineering Telecommunications, 2019 (Refereed Journals of Other Institutions)
- III. **Shot Noise Measurement in PIN Photodiodes**
DOĞAN M., TANGEL A.
International Journal of Computing, Communication and Instrumentation Engineering (IJCCIE), vol.3, pp.297-300, 2016 (Refereed Journals of Other Institutions)
- IV. **An FPGA Based Multiple Output Ultrasonic Generator with Two Step Iterative Resonance Detection**
GÜVENÇ U., TANGEL A., YAKUT M.
International Journal of Electronics Communication and Computer Engineering, pp.1410-1421, 2012 (Refereed Journals of Other Institutions)
- V. **A Microcontroller Based Generator Design for Ultrasonic Cleaning Machines**
Yakut M., Tangel A., Tangel C.
Istanbul University Journal of Electrical&Electronics Engineering, vol.9, no.1, pp.853-860, 2009 (International

Refereed University Journal)

- VI. **MIB 16 FPGA Based Design and Implementation of a 16 Bit Microprocessor for Educational Use**
Alaer E., Tangel A., Yakut M.
WSEAS Transactions on Advances in Engineering Education, pp.326-330, 2008 (Refereed Journals of Other Institutions)
- VII. **Prototype Implementation of an RF ID Reader System**
KIRAZ İ., TANGEL A., DOLMA A.
Istanbul University Journal of Electrical&Electronics Engineering, vol.7, pp.287-292, 2007 (Refereed Journals of Other Institutions)
- VIII. **Future-ready ultrafast 8bit CMOS ADC for system-on-chip applications**
Yoo J., Lee D., Choi K., Tangel A.
Proceedings of the Annual IEEE International ASIC Conference and Exhibit, pp.455-459, 2001 (Refereed Journals of Other Institutions)

Refereed Congress / Symposium Publications in Proceedings

- I. **DATA ACQUISITION AND VISUALIZATION FROM INDUSTRIAL CONTROL FIELD IN PARDUS OPERATING SYSTEM**
TANGEL A.
4. INTERNATIONAL 19 MAY INNOVATIVESCIENTIFIC APPROACHES CONGRESS, Kocaeli, Turkey, 21 December 2020, pp.241-253
- II. **International Marmara Sciences Congress IMASCON 2020 - Autumn**
GAYİR E., IŞIK G., ERDEM İ., TANGEL A.
International Marmara Sciences Congress (Imascon 2020 – Autumn), Kocaeli, Turkey, 04 December 2020, pp.263-266
- III. **Measurement of Arbitrary Waveforms at Low Frequencies**
COŞKUN ÖZTÜRK T., ERTÜRK S., TANGEL A., MEHEDİN A.
Conference on Precision Electromagnetic Measurements (CPEM), Colorado, United States Of America, 24 August 2020
- IV. **KARARLILIĞI YÜKSEK YARI-İLETKEN DAC'IN KUANTUM VOLTMETRE İLE KALİBRASYONU**
COŞKUN ÖZTÜRK T., ERTÜRK S., TANGEL A., MEHEDİN A.
Ölçümbilim Sempozyumu ve Sergisi, Turkey, 20 November - 22 December 2019
- V. **LiDAR-GUIDED REDUCTION OF SPECTRAL VARIABILITY IN HYPERSPECTRAL IMAGERY**
Kahraman S., Bacher R., Tatsumi U., Chanussot J., Tangel A.
2019 10th Workshop on Hyperspectral Imaging and Signal Processing: Evolution in Remote Sensing (WHISPERS), Amsterdam, Netherlands, 24 - 26 September 2019
- VI. **LiDAR DATA-AIDED HYPERGRAPH REGULARIZED MULTI-MODAL UNMIXING**
Kahraman S., Xu Y., Chanussot J., Tangel A.
IGARSS-2019, Yokohama, Japan, 28 July - 02 August 2019, pp.696-699
- VII. **VLSI IMPLEMENTATION OF TDC ARCHITECTURES USED IN PET IMAGING SYSTEMS**
Özdemir M. A. , Tangel A.
International Marmara Science and Social Sciences Congress (IMASCON 2019 SPRING), Kocaeli, Turkey, 26 - 28 April 2019
- VIII. **130nm CMOS Teknolojide 2 Kanallı Zaman ayrışmalı ADC tasarımı**
YÜREKLİ L. B. , AKDERE E. C. , TANGEL A.
ELECO-2018, Turkey, 30 November - 01 December 2018, pp.242-248
- IX. **250nm CMOS 6 Transistörlü Statik Rastgele Erişimli Bellek Hücresi için Serim Alanı Optimizasyonu**
KAYDIRMA H., TANGEL A.
ELECO-2018, Turkey, 30 November - 01 December 2018, pp.129-133
- X. **Towards Wideband Voltage Scaling to Quantum Standards at the Accuracy of the Stability**

COŞKUN ÖZTÜRK T., ERTÜRK S., TANGEL A., MEHEDİN A., CELEP M.

Conference on Precision Electromagnetic Measurements (CPEM 2018), 8 - 13 July 2018

- XI. **Design of Low Power 6-Bit DACs using 180nm CMOS Technology**
TAŞTEKİN S., HELVACI M., TANGEL A.
ICENS-2018, Kiev, Ukraine, 12 - 16 June 2018
- XII. **Implementation of different architectures of forward 4×4 integer DCT for H.264/AVC encoder**
Ringnyu B. A. , TANGEL A., Karabulut E.
10th International Conference on Electrical and Electronics Engineering, ELECO 2017, Bursa, Turkey, 29 November - 02 December 2017, pp.423-427
- XIII. **Metrolological Measurements Using Programmable Josephson Voltage Standard**
ÖZTÜRK T. C. , ERTÜRK S., TANGEL A., ARİFOVIÇ M., TURHAN S.
ELECO-2017, 30 November - 02 December 2017
- XIV. **Implementation of Different Architectures of Forward 4x4 Integer DCT for H.264/AVC Encoder**
RİNGNYU B. A. , TANGEL A., KARABULUT E.
ELECO-2017, 30 November - 02 December 2017
- XV. **IMPLEMENTATION OF FORWARD 8x8 INTEGER DCT FOR H.264/AVC FRExt**
RİNGNYU B. A. , TANGEL A.
ICONTES-2017, Antalya, Turkey, 26 - 29 October 2017
- XVI. **A High Voltage PIN Diode Design on SOI Substrate**
TANGEL A., ÇALIŞKAN A. U.
INTERNATIONAL CONGRESS ON SEMICONDUCTOR MATERIALS AND DEVICES, 17 - 19 August 2017
- XVII. **Design and Implementation of a Communication Protocol for Mobile Device Controlled Smart Home Management System**
MENTEŞOĞLU m., KAVAK A., YAKUT M., TANGEL A., ŞAHİN S., ÖZCAN H.
SIU2015, Turkey, 16 - 19 May 2015
- XVIII. **A High Speed Low Power CMOS Current Comparator**
AFACAN E., TANGEL A., AYTAR O.
IEEJ, 17 July 2008 - 21 March 2014
- XIX. **A new Style CPA attack on theML Implementation of RSA**
Akalp Kuzu E., Tangel A.
ICSEC2014, Khon Kaen, Thailand, 30 July - 01 August 2014, pp.323-328
- XX. **New cross correlation attack methods on the Montgomery Ladder implementation of RSA**
Akalp Kuzu E., Soysal B., Şahinoğlu M., Güvenç U., Tangel A.
2013 3rd IEEE International Advance Computing Conference, IACC 2013, Ghaziabad, India, 22 - 23 February 2013, pp.138-142
- XXI. **All BitsCross Correlation Attack on the Montgomery Ladder Implementation of RSA**
Akalp Kuzu E., Tangel A.
DSP2013, Athens, Greece, 1 - 03 July 2013, pp.183-187
- XXII. **A high performance PIN diode design in 0.25um SiGe HBT process**
Cesur E., TANGEL A.
8th International Conference on Electrical and Electronics Engineering, ELECO 2013, Bursa, Turkey, 28 - 30 November 2013, pp.398-403
- XXIII. **A high performance PIN diode design in 0.25 mu m SiGe HBT process**
Cesur E., TANGEL A.
8th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 28 - 30 November 2013, pp.398-403
- XXIV. **An FPGA based multiple output PWM pulse generator for ultrasonic cleaning machines**
Tangel A., Yakut M., Afacan E., Güvenç U.
Applied Electronics, Plzen, Czech Republic, 8 - 09 September 2010
- XXV. **An FPGA based multiple output PWM pulse generator for ultrasonic cleaning machines**
TANGEL A., YAKUT M., AFACAN E., GÜVENÇ U., ŞENGÜL H.

IEEE Conference on Applied Electronics, 8 - 09 September 2010

- XXVI. **A 9-BIT 1GS/S CMOS folding ADC implementation using TIQ based flash ADC cores**
Aytar O., TANGEL A., Dundar G.
15th International Conference on Mixed Design of Integrated Circuits and Systems, MIXDES 2008, Poznan, Poland, 19 - 21 June 2008, pp.159-164
- XXVII. **FPGA Implementation of FFT Algorithms Using Floating Point Numbers**
Kaptan H., Tangel A., Şahin S.
ELECO 2007, Bursa, Turkey, 5 - 09 December 2007
- XXVIII. **YÜKSEK HIZLI CMOS AKIM KARŞILAŞTIRICI**
AFACAN E., AYTAR O., TANGEL A.
12.EEBB, Turkey, 13 - 17 November 2007
- XXIX. **An auto calibrator for TIQ based flash ADC designs**
TANGEL A., Yakut M., Ayar M.
6th WSEAS International Conference on Circuits, Systems, Electronics, Control & Signal Processing (CSECS 07), Cairo, Egypt, 29 - 31 December 2007, pp.47-51
- XXX. **"MIB-16" FPGA based design and implementation of a 16-bit microprocessor for educational use**
ALAER E., TANGEL A., YAKUT M.
6th WSEAS International Conference on Circuits, Systems, Electronics, Control & Signal Processing (CSECS 07), Cairo, Egypt, 29 - 31 December 2007, pp.284-288
- XXXI. **A 10 bit 500Ms s Two Step Flash ADC**
ÇELEBİ A., AYTAR O., TANGEL A.
IEEE Int. Conf. on Computer as a tool, Belgrade, Serbia And Montenegro, 21 - 24 November 2005, pp.898-901
- XXXII. **An 8 Bit CMOS Folding ADC Implementation Using TIQ Based Flash ADC Core**
TEKİN M. F. , TANGEL A., AYTAR O., ÇELEBİ A.
12th International Mixed Design of Integrated Circuits and Systems Conference (MIXDES 2005), Krakow, Poland, 22 - 25 May 2005, vol.1, pp.43-45
- XXXIII. **TIQ Tabanlı 8 bit Folding A D Dönüştürücü Tasarımı**
TEKİN M. F. , TANGEL A., AYTAR O., ÇELEBİ A.
ELECO 2004 Elektrik-Elektronik-Bilgisayar Mühendisliği Sempozyumu, Bursa, Turkey, 8 - 12 December 2004, vol.1, pp.118-122
- XXXIV. **8-bit 1Gs/s Semi-Flash ADC Based on Threshold Inverter Quantization Technique**
Aytar O., Çelebi A., Tangel A., Tekin F.
MIXDES-2004, Warszawa, Poland, 5 - 07 January 2004
- XXXV. **A VLSI Implementation for Fast All Boolean Motion Estimation Based on Pre Coded Imag Planes Matching**
Çelebi A., Ertürk S., Tangel A.
3rd International Conference on Electrical and Electronics Engineering (ELECO'2003), Bursa, Turkey, 3 - 07 December 2003, vol.1, pp.36-40
- XXXVI. **The CMOS Inverter as a comparator in ADC designs**
Tangel A., Choi K.
ELECO 2001, Bursa, Turkey, 7 - 11 November 2001
- XXXVII. **Future Ready Ultrafast 8 bit CMOS ADC for System on Chip Applications**
YOO J., LEE D., CHOI K., TANGEL A.
ASIC/SOC Conference, 12 - 15 September 2001
- XXXVIII. **A 1-GSPS CMOS flash A/D converter for system-on-chip applications**
Yoo J., Choi K., Tangel A.
IEEE Computer-Society Annual Workshop on VLSI, Florida, United States Of America, 19 - 20 April 2001, pp.135-139

Supported Projects

TANGEL A., Project Supported by Higher Education Institutions, 2019- MİKRO ELEKTRONİK VLSİ LABORATUVARI, 2019 - 2020

Tangel A., TUBITAK Project, Design and prototype implementation of FPGA Based multi functional ultrasonic cleaning machine , 2010 - 2011

Tangel A., Aytar O., Project Supported by Higher Education Institutions, TIQ tekniğinin boru tipi ve katlamalı ve aradeğerlemeli analog sayısal dönüştürücülerin VLSI tasarımında kullanılarak performans artırımının sağlanması, 2007 - 2010

Tangel A., Yakut M., Industrial Thesis Project, Prototype design and manufacture of microcontroller based, multi-frequency ultrasonic cleaning machine, 2007 - 2009

Tangel A., Aytar O., Çelebi A., TUBITAK Project, VLSI Design of High Speed Analog to Digital Converters , 2006 - 2007

Tangel A., Project Supported by Higher Education Institutions, Yüksek Hızlı Analog Sayısal Dönüştürücülerin VLSI tasarımı ve imalat sonrası testlerinin yapılması, 2003 - 2005

Tangel A., Aytar O., Çelebi A., TUBITAK Project, VLSI Design and Fabrication of High Speed Analog to Digital Converters, 2002 - 2005

Memberships / Tasks in Scientific Organizations

TÜBİTAK-TEYDEB, Member of Advisory Board, 2015 - 2017

Scientific Consultations

TÜBİTAK-UEKAE, Scientific Consultancy, Kocaeli University, Mühendislik Fakültesi, Elektronik ve Haberleşme Mühendisliği, Turkey, 2015 - 2017

Citations

Total Citations (WOS):151

h-index (WOS):6