

Assoc. Prof. Mustafa Berke Yelten

Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: P-3247-2018

ScopusID: 57201361947

Yoksis Researcher ID: 230993

Education Information

Doctorate, North Carolina State University, Elektronik Mühendisliği, United States Of America 2008 - 2011

Postgraduate, North Carolina State University, Elektronik Mühendisliği, United States Of America 2006 - 2008

Undergraduate, Bogazici University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, Turkey 2003 - 2006

Foreign Languages

English, C1 Advanced

German, C1 Advanced

Dissertations

Doctorate, Variability and reliability in nanoscale circuits: Simulation, design, monitoring, and characterization, North Carolina State University, Elektronik Mühendisliği, 2011

Postgraduate, Theoretical analysis and design methodologies for low noise amplifiers based on tunable matching networks, North Carolina State University, Elektronik Mühendisliği, 2008

Research Areas

Electrical and Electronics Engineering, Electronic, Electronic Circuits, Microwave Circuits, Nanotechnology, Engineering and Technology

Academic Titles / Tasks

Associate Professor, Istanbul Technical University, Elektrik-Elektronik, Elektronik Ve Haberleşme Mühendisliği, 2020 - Continues

Assistant Professor, Istanbul Technical University, Elektrik-Elektronik, Elektronik Ve Haberleşme Mühendisliği, 2018 -

2020

Assistant Professor, Istanbul Technical University, Elektrik-Elektronik, Elektronik Ve Haberleşme Mühendisliği, 2015 - 2018

Academic and Administrative Experience

Deputy Head of Department, Istanbul Technical University, 2020 - Continues

Vice Dean, Istanbul Technical University, 2018 - 2020

Fakülte Akademik Kurul Üyesi, Istanbul Technical University, 2015 - 2020

Courses

Stokastik Modelleme, Undergraduate, 2017 - 2018

Electronics II, Undergraduate, 2017 - 2018

RF Microelectronics, Undergraduate, 2017 - 2018

Semiconductor Devices, Undergraduate, 2017 - 2018

Basics of Electrical Circuits, Undergraduate, 2016 - 2017

Analog Electronic Circuits, Undergraduate, 2017 - 2018

Mikrodalga Mühendisliği, Postgraduate, 2017 - 2018

Modeling of Semiconductor Devices and Components, Undergraduate, 2017 - 2018

Microelectronics Technology, Undergraduate, 2016 - 2017

Noise in Electronic Circuits and Systems, Postgraduate, 2015 - 2016

Advising Theses

Yelten M. B., YÜKSEK HIZLI BASKI DEVRE KARTLARINDA SİNYAL BÜTÜNLÜĞÜNÜN İNCELENMESİ, Postgraduate, K.AÇELYA(Student), 2023

Yelten M. B., CHARACTERIZATION AND MODELING OF NEGATIVE-BIAS TEMPERATURE INSTABILITY IN 40 NM CMOS TECHNOLOGY THROUGH LONG SHORT-TERM MEMORY (LSTM) NETWORKS, Postgraduate, F.BAŞAR(Student), 2023

Yelten M. B., A 560 MHz FREQUENCY MULTIPLIER EMPLOYING A NOVEL PSEUDO-DIFFERENTIAL CHARGE-PUMP PLL, Postgraduate, M.EMİN(Student), 2023

Yelten M. B., HIGH PERFORMANCE WIDEBAND 0.25 μ M GAAS PHEMT 6-BIT DIGITAL PHASE SHIFTER DESIGN FOR C-BAND PHASED ARRAY APPLICATIONS, Postgraduate, O.ALTAY(Student), 2023

Yelten M. B., BANDGAP REFERENCE AND LOW DROPOUT VOLTAGE REGULATOR DESIGN FOR CAPSULE ENDOSCOPY SYSTEM, Postgraduate, B.BERİL(Student), 2022

Yelten M. B., Design of Smart Electronic Adult Diaper, Postgraduate, R.KARAHALİL(Student), 2022

Yelten M. B., MODELING OF FM417 NPN TRANSISTOR AVALANCHE BREAKDOWN BEHAVIOUR WITH DISCRETE CIRCUIT COMPONENTS AT TINA ENVIRONMENT, Postgraduate, M.YETKİN(Student), 2022

Yelten M. B., Analysis and Design of Cryogenic Bulk-Driven Analog Integrated Circuits, Postgraduate, M.AYTUĞ(Student), 2022

Yelten M. B., A design of sub-mW-power 2.4 GHz CMOS cascode low noise amplifier with high linearity, Postgraduate, D.EROL(Student), 2021

Yelten M. B., Characterization of time-based degradation effects and machine learning-based modeling of hot carrier injection in 40 NM CMOS transistors, Postgraduate, X.XHAFA(Student), 2021

Yelten M. B., 5G kablosuz iletişim sistemleri için aşağı dönüşüm Gilbert hücre mikser tasarımı, Postgraduate, F.TALAY(Student), 2021

Yelten M. B., GAN BASED HIGH POWER MMIC SPDT AND SP8T SWITCH DESIGNS FOR V/UHF FREQUENCIES, Postgraduate, H.YUMUŞ(Student), 2021

Yelten M. B., V/UHF BANT CMOS RF GÜÇ DEDEKTÖRÜ TASARIMI, Postgraduate, M.KARAKURT(Student), 2021

Yelten M. B., GaN based high efficiency class AB power amplifier design for sub-6GHz 5G transmitter systems, Postgraduate, K.ÜNAL(Student), 2021

Yelten M. B., Silver nanowire coated wearable electronics applications, Postgraduate, İ.HALİL(Student), 2020

Yelten M. B., Design of 180 nm CMOD LC oscillator for space applications, Postgraduate, Y.UZUN(Student), 2019

Yelten M. B., A CRYOGENIC CMOS LOW DROPOUT REGULATOR DESIGN FOR SPACE APPLICATIONS, Postgraduate, H.İBRAHİM(Student), 2019

Yelten M. B., Radiation-induced effects on N-type metal oxide semiconductor field effect transistor devices: Modeling, simulation and optimization, Postgraduate, S.İLİK(Student), 2019

Yelten M. B., Statistical cryogenic modeling methodology of MOSFET DC characteristics in BSIM3, Postgraduate, A.KABAOĞLU(Student), 2019

Yelten M. B., A high linearity s-band cryogenic low noise amplifier using 180 nm CMOS technology for space applications, Postgraduate, A.ÇAĞLAR(Student), 2019

Yelten M. B., KÜP UYDULAR İÇİN, VHF/UHF BANDI AKTARICI TASARIMI VE GERÇEKLEMESİ, Postgraduate, H.Onur(Student), 2018

Yelten M. B., A 0.18 μ m CMOS X-BAND LOW NOISE AMPLIFIER FOR SPACE APPLICATIONS, Postgraduate, N.Şahin(Student), 2017

Taught Courses And Trainings

Yelten M. B., STEAM-Maker Uzman Liderlik Sertifika Programı, 2019 - 2019

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **A Resonant Pulley Rotary Actuator for Scanning Capsule Endoscopy**
Tekin E., Erten A. C., Yelten M. B., Ferhanoglu O.
IEEE Photonics Technology Letters, vol.35, no.16, pp.891-894, 2023 (SCI-Expanded)
- II. **Radiation-aware analog circuit design via fully-automated simulation environment**
Muhikanci O. Y., Ozanoglu K., Afacan E., Yelten M. B., Dündar G.
Integration, vol.90, pp.81-89, 2023 (SCI-Expanded)
- III. **Total Ionizing Dose (TID) Impact on Basic Amplifier Stages**
İlik S., Yelten M. B.
IEEE Transactions on Device and Materials Reliability, vol.23, no.1, pp.51-57, 2023 (SCI-Expanded)
- IV. **A highly-linear, sub-mW LNA at 2.4 GHz in 40 nm CMOS process**
As D. E., Yelten M. B.
INTEGRATION-THE VLSI JOURNAL, vol.88, pp.278-285, 2023 (SCI-Expanded)
- V. **A 3D-printed spiral actuator for focus adjustment in circumferential scanning endomicroscopy**
Zöğ İ. S., Gürcüoğlu O., Özdemir Ö., Yelten M. B., Ferhanoglu O.
Journal of Micromechanics and Microengineering, vol.33, no.1, 2023 (SCI-Expanded)
- VI. **A fully-differential, flipped-voltage-follower-based (FVF) transimpedance design for optical receivers with large-area photodetectors**
Gungordu A. D., Comertoglu I., Yelten M. B.
ANALOG INTEGRATED CIRCUITS AND SIGNAL PROCESSING, vol.113, no.2, pp.241-248, 2022 (SCI-Expanded)
- VII. **High-linearity Gilbert-cell mixer design for cryogenic applications**
Altuner E., Ozoguz I. S., Yelten M. B.
ANALOG INTEGRATED CIRCUITS AND SIGNAL PROCESSING, vol.113, no.2, pp.249-256, 2022 (SCI-Expanded)
- VIII. **An ISM-band direct down-conversion double-balanced mixer for biomedical applications**
Yesil E., Ferhanoglu O., Yelten M. B.
ANALOG INTEGRATED CIRCUITS AND SIGNAL PROCESSING, vol.113, no.2, pp.231-239, 2022 (SCI-Expanded)

- IX. **Holistic Device Modeling: Toward a Unified MOSFET Model Including Variability, Aging, and Extreme Operating Conditions**
Yelten M. B.
IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS II-EXPRESS BRIEFS, vol.69, no.6, pp.2635-2640, 2022 (SCI-Expanded)
- X. **Monitoring modal shape of miniaturized dynamic structures via laser triangulation and stroboscopy**
Erdem Y. E., Yelten M. B., Ferhanoglu O.
MICROSYSTEM TECHNOLOGIES-MICRO-AND NANOSYSTEMS-INFORMATION STORAGE AND PROCESSING SYSTEMS, vol.27, no.10, pp.3751-3756, 2021 (SCI-Expanded)
- XI. **A meandered dual loop antenna for wireless capsule endoscopy**
Gures E., Yelten M. B., Özdemir Ö., Ferhanoglu O.
AEU-INTERNATIONAL JOURNAL OF ELECTRONICS AND COMMUNICATIONS, vol.137, 2021 (SCI-Expanded)
- XII. **A switchable DC offset cancellation circuit for time-based degradation correction**
Erol D., Güngördü A. D., Dundar G., Yelten M. B.
ANALOG INTEGRATED CIRCUITS AND SIGNAL PROCESSING, vol.106, no.3, pp.485-491, 2021 (SCI-Expanded)
- XIII. **Design and validation of an artificial neural network based on analog circuits**
Gencer F. B., Xhafa X., Inam B. B., Yelten M. B.
ANALOG INTEGRATED CIRCUITS AND SIGNAL PROCESSING, vol.106, no.3, pp.475-483, 2021 (SCI-Expanded)
- XIV. **A wide-temperature range (77-400 K) CMOS low-dropout voltage regulator system**
Kayihan H. I., Inam B. B., Dogan B., Yelten M. B.
ANALOG INTEGRATED CIRCUITS AND SIGNAL PROCESSING, vol.106, no.3, pp.501-510, 2021 (SCI-Expanded)
- XV. **An Automated Setup for the Characterization of Time-Based Degradation Effects Including the Process Variability in 40-nm CMOS Transistors**
Xhafa X., Güngördü A. D., Erol D., Yavuz Y., Yelten M. B.
IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT, vol.70, 2021 (SCI-Expanded)
- XVI. **Design of a tunable LNA and its variability analysis through surrogate modeling**
Xhafa X., Yelten M. B.
INTERNATIONAL JOURNAL OF NUMERICAL MODELLING-ELECTRONIC NETWORKS DEVICES AND FIELDS, vol.33, no.6, 2020 (SCI-Expanded)
- XVII. **Experimental and modeling studies of automotive-qualified OLEDs under electrical stress**
Guney A., Yelten M. B., Ferhanoglu O., KAHRAMAN N.
MICROELECTRONICS RELIABILITY, vol.111, 2020 (SCI-Expanded)
- XVIII. **A 180-nm X-Band Cryogenic CMOS LNA**
Caglar A., Yelten M. B.
IEEE MICROWAVE AND WIRELESS COMPONENTS LETTERS, vol.30, no.4, pp.395-398, 2020 (SCI-Expanded)
- XIX. **Reliability Testing of 3D-Printed Polyamide Actuators**
Kasap G., Gokdel Y. D., Yelten M. B., Ferhanoglu O.
IEEE TRANSACTIONS ON DEVICE AND MATERIALS RELIABILITY, vol.20, no.1, pp.152-156, 2020 (SCI-Expanded)
- XX. **Design of Cryogenic LNAs for High Linearity in Space Applications**
Caglar A., Yelten M. B.
IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS I-REGULAR PAPERS, vol.66, no.12, pp.4619-4627, 2019 (SCI-Expanded)
- XXI. **Variability-aware cryogenic models of mosfets: validation and circuit design**
Kabaoglu A., Sahin-Solmaz N., Ilik S., Uzun Y., Yelten M. B.
SEMICONDUCTOR SCIENCE AND TECHNOLOGY, vol.34, no.11, 2019 (SCI-Expanded)
- XXII. **Modeling of Total Ionizing Dose Degradation on 180-nm n-MOSFETs Using BSIM3**
İlik S., Kabaoglu A., Solmaz N. S., Yelten M. B.
IEEE TRANSACTIONS ON ELECTRON DEVICES, vol.66, no.11, pp.4617-4622, 2019 (SCI-Expanded)
- XXIII. **On Chip Reconfigurable CMOS Analog Circuit Design and Automation Against Aging Phenomena: Sense and React**
AFACAN E., DÜNDAR G., Baskaya F., PUSANE A. E., Yelten M. B.

- ACM TRANSACTIONS ON DESIGN AUTOMATION OF ELECTRONIC SYSTEMS, vol.24, no.4, 2019 (SCI-Expanded)
- XXIV. **Radiation tolerance impact of trap density near the drain and source regions of a MOSFET**
İlik S., Gencer F. B., Solmaz N. S., Çağlar A., Yelten M. B.
NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS, vol.449, pp.1-5, 2019 (SCI-Expanded)
- XXV. **Silver nanowire coated knitted wool fabrics for wearable electronic applications**
Gürarslan A., Ozdemir B., Bayat I. H., Yelten M. B., Karabulut Kurt G. Z.
JOURNAL OF ENGINEERED FIBERS AND FABRICS, vol.14, 2019 (SCI-Expanded)
- XXVI. **Statistical MOSFET Modeling Methodology for Cryogenic Conditions**
KABAOĞLU A., Solmaz N. S., İlik S., UZUN Y., Yelten M. B.
IEEE TRANSACTIONS ON ELECTRON DEVICES, vol.66, no.1, pp.66-72, 2019 (SCI-Expanded)
- XXVII. **Time-dependent dielectric breakdown (TDDB) reliability analysis of CMOS analog and radio frequency (RF) circuits**
SANIÇ M. T., Yelten M. B.
ANALOG INTEGRATED CIRCUITS AND SIGNAL PROCESSING, vol.97, no.1, pp.39-47, 2018 (SCI-Expanded)
- XXVIII. **Surrogate modeling and variability analysis of on-chip spiral inductors**
AKSO E., SOYSAL I. B., Yelten M. B.
INTERNATIONAL JOURNAL OF NUMERICAL MODELLING-ELECTRONIC NETWORKS DEVICES AND FIELDS, vol.31, no.5, 2018 (SCI-Expanded)
- XXIX. **Reliability Testing of 3D-printed Electromechanical Scanning Devices**
Gönültaş B. M., SAVAS J., Khayatzaheh R., Aygün S., ÇİVİTÇİ F., GÖKDEL Y. D., YELTEN M. B., FERHANOĞLU O.
Journal Of Electronic Testing-Theory And Applications, 2018 (SCI-Expanded)
- XXX. **Aging signature properties and an efficient signature determination tool for online monitoring**
Afacan E., Dundar G., Pusane A. E., Yelten M. B., Baskaya F.
INTEGRATION-THE VLSI JOURNAL, vol.58, pp.496-503, 2017 (SCI-Expanded)
- XXXI. **Comparison of modeling techniques in circuit variability analysis**
Yelten M. B., Franzon P. D., Steer M. B.
INTERNATIONAL JOURNAL OF NUMERICAL MODELLING-ELECTRONIC NETWORKS DEVICES AND FIELDS, vol.25, no.3, pp.288-302, 2012 (SCI-Expanded)
- XXXII. **Analog Negative-Bias-Temperature-Instability Monitoring Circuit**
Yelten M. B., Franzon P. D., Steer M. B.
IEEE TRANSACTIONS ON DEVICE AND MATERIALS RELIABILITY, vol.12, no.1, pp.177-179, 2012 (SCI-Expanded)
- XXXIII. **Demystifying Surrogate Modeling for Circuits and Systems**
Yelten M. B., Zhu T., KOZIEL S., Franzon P. D., Steer M. B.
IEEE CIRCUITS AND SYSTEMS MAGAZINE, vol.12, no.1, pp.45-63, 2012 (SCI-Expanded)
- XXXIV. **Surrogate-Model-Based Analysis of Analog Circuits-Part I: Variability Analysis**
Yelten M. B., Franzon P. D., Steer M. B.
IEEE TRANSACTIONS ON DEVICE AND MATERIALS RELIABILITY, vol.11, no.3, pp.466-473, 2011 (SCI-Expanded)
- XXXV. **Surrogate-Model-Based Analysis of Analog Circuits-Part II: Reliability Analysis**
Yelten M. B., Franzon P. D., Steer M. B.
IEEE TRANSACTIONS ON DEVICE AND MATERIALS RELIABILITY, vol.11, no.3, pp.458-465, 2011 (SCI-Expanded)

Articles Published in Other Journals

- I. **Cryogenic DC Characteristics of Low Threshold Voltage (V_{TH}) n-channel MOSFETs**
YELTEN M. B.
Balkan Journal of Electrical and Computer Engineering, vol.7, pp.362-365, 2019 (Peer-Reviewed Journal)

Books & Book Chapters

- I. **Surrogate Modeling of High-Frequency Electronic Circuits**
Xhafa X., Yelten M. B.
in: Surrogate Modeling for High-Frequency Design - Recent Advances, Slawomir Koziel, Anna Pietrenko-Dabrowska, Editor, World Scientific Publishing, Singapore, pp.381-404, 2022
- II. **Modelling Methodologies in Analogue Integrated Circuit Design**
Dündar G. (Editor), Yelten M. B. (Editor)
The Institution of Engineering and Technology (IET), London, 2020
- III. **Variation-Aware Circuit Macromodeling and Design Based on Surrogate Models**
Zhu T., YELTEN M. B., Steer M., Franzon P.
in: Simulation and Modeling Methodologies Technologies and Applications, Editor, Springer, pp.255-269, 2013
- IV. **Surrogate-Based Modeling and Optimization**
Zhu T., YELTEN M. B., Steer M., Franzon P.
in: Model Based Variation Aware Integrated Circuit Design, Editor, Springer, pp.171-188, 2013

Refereed Congress / Symposium Publications in Proceedings

- I. **A 560 MHz Frequency Multiplier Employing a Novel Pseudo-Differential Charge-Pump PLL**
Kisa M. E., Kelleci B., Yelten M. B.
18th International Conference on Ph.D Research in Microelectronics and Electronics, PRIME 2023, Valencia, Spain, 18 - 21 June 2023, pp.81-84
- II. **Modeling the Avalanche Breakdown of the FMMT417 NPN BJT in the TINA Environment**
Yetkin M., Yelten M. B.
19th International Conference on Synthesis, Modeling, Analysis and Simulation Methods, and Applications to Circuit Design, SMACD 2023, Funchal, Portugal, 3 - 05 July 2023
- III. **A 432 MHz Class-D Power Amplifier with 60% Power Efficiency for Wireless Capsule Endoscopy**
Ozturk F., Ferhanoğlu O., Yelten M. B.
19th International Conference on Synthesis, Modeling, Analysis and Simulation Methods, and Applications to Circuit Design, SMACD 2023, Funchal, Portugal, 3 - 05 July 2023
- IV. **High-Performance Wideband 0.25 μm GaAs pHEMT 6-Bit Digital Phase Shifter Design for C-Band Phased Array Applications**
Genc O. A., Gundel A., Yelten M. B.
19th International Conference on Synthesis, Modeling, Analysis and Simulation Methods, and Applications to Circuit Design, SMACD 2023, Funchal, Portugal, 3 - 05 July 2023
- V. **Shunt-Shunt Feedback Inverter Transimpedance Amplifier Design for Capsule Endoscopy**
Peker E., Ferhanoğlu O., Yelten M. B.
19th International Conference on Synthesis, Modeling, Analysis and Simulation Methods, and Applications to Circuit Design, SMACD 2023, Funchal, Portugal, 3 - 05 July 2023
- VI. **A Power-Efficient Magnetic Actuator Driver Design**
KEBAPCIOĞLU B., FERHANOĞLU O., YELTEN M. B.
2022 29th IEEE International Conference on Electronics, Circuits and Systems (ICECS), Glasgow, England, 24 - 26 October 2022
- VII. **40 nm CMOS Sureci Transistörlerinin Akım-Gerilim Karakteristiklerinin Oda Sıcaklığında ve Kriyojenik Koşullarda İncelenmesi**
Gencer F. B., İLİK S., GÜNGÖRDÜ A. D., Xhafa X., YELTEN M. B.
ELEKTRİK-ELEKTRONİK ve BİYOMEDİKAL MÜHENDİSLİĞİ KONFERANSI (ELECO), Bursa, Turkey, 24 - 26 November 2022
- VIII. **Down-Conversion Gilbert Cell Mixer Design for 5G Wireless Communications Systems**
TALAY F., YELTEN M. B.

- 2022 24th International Microwave and Radar Conference (MIKON), Gdansk, Poland, 12 - 14 September 2022
- IX. **A 3D Printed Rotational MEMS Actuator for Scanning Capsule Endoscopy**
Tekin E., ERTEN A. C., YELTEN M. B., FERHANOĞLU O.
2022 INTERNATIONAL CONFERENCE ON OPTICAL MEMS AND NANOPHOTONICS (OMN), 12 - 15 September 2022
- X. **A Noise-Canceling TIA Topology Compatible With Large-Area Photodetectors in 40 nm CMOS Process**
GÜNGÖRDÜ A. D., YELTEN M. B.
IEEE 65th International Midwest Symposium on Circuits and Systems (MWSCAS), Fukuoka, Japan, 7 - 10 August 2022, pp.1-4
- XI. **Responsivity Comparison of Different Photodiode Structures**
İLİK S., FERHANOĞLU O., YELTEN M. B.
2022 18th International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design (SMACD), Villasimius, Italy, 12 - 15 June 2022, pp.1-4
- XII. **A Simulation Tool for Space Applications: RadiSPICE**
Muhikancı Ö. Y., OZANOĞLU K., AFACAN E., YELTEN M. B., DÜNDAR G.
2022 18th International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design (SMACD), Villasimius, Italy, 12 - 15 June 2022, pp.1-4
- XIII. **The Supply Modulation Circuit for Dynamic Drain Voltage of the Sub-amplifiers in the Doherty Topology**
Tunç A., YELTEN M. B.
2022 9th International Conference on Electrical and Electronics Engineering (ICEEE), Antalya, Turkey, 29 March 2022, pp.6-9
- XIV. **Design of a 432 MHz Direct Down-Conversion Gilbert Mixer for Biomedical Applications**
Yeşil E., FERHANOĞLU O., YELTEN M. B.
2021 13th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 25 - 27 November 2021, pp.527-530
- XV. **GaN-Based High-Efficiency Class AB Power Amplifier Design for Sub-6 GHz 5G Transmitter Systems**
ÜNAL K., YELTEN M. B.
2021 13th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 25 - 27 November 2021, pp.90-93
- XVI. **Gamma Ray Effects on Organic Light-Emitting Diodes (OLEDs)**
İLİK S., Dülğar C. Ö., Güney A., FERHANOĞLU O., YELTEN M. B.
2021 13th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 25 November 2021, pp.1-4
- XVII. **Design of a High-Linearity Gilbert-Cell Mixer at 5 GHz**
ALTUNER E., ÖZOĞUZ İ. S., YELTEN M. B.
2021 13th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 25 - 27 November 2021, pp.102-105
- XVIII. **Ultra Low Power Transimpedance Amplifier Design for Receivers with Large-Area Photodetectors**
GÜNGÖRDÜ A. D., YELTEN M. B.
2021 13th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 25 - 27 November 2021, pp.98-101
- XIX. **The Design Overview of the Hybrid Doherty-Outphasing Technique**
Tunç A., YELTEN M. B.
2021 13th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 25 - 27 November 2021, pp.1-4
- XX. **A Theoretical Efficiency Analysis of Doherty Power Amplifiers built with Different Amplifier Classes**
Tunç A., YELTEN M. B.
2021 29th Telecommunications Forum (TELFOR), Belgrade, Serbia, 23 November 2021
- XXI. **A 3D-Printed Archimedean Actuator for Focus adjustment in Endoscopes**
Salaheldin-Zöğ İ., Gürcüoğlu O., ÖZDEMİR Ö., YELTEN M. B., FERHANOĞLU O.
European Conferences on Biomedical Optics 2021 (ECBO), Germany, 21 - 24 June 2021, pp.1-3

- XXII. **A Phase Error Correction Algorithm for RF Energy Harvesters Using Two Antennas**
GÜNGÖRDÜ A. D., EROL D., ÇAĞLAR A., YELTEN M. B.
International Conference on Synthesis, Modeling, Analysis and Simulation Methods, and Applications to Circuit Design, Erfurt, Germany, 19 - 21 July 2021, pp.100-103
- XXIII. **An ISM-Band Multi-Phase Injection-Locked Ring Oscillator**
Berk M. S., Inam B. B., Yelten M. B.
12th IEEE Latin America Symposium on Circuits and System (LASCAS), ELECTR NETWORK, 22 - 25 February 2021
- XXIV. **Design of a Constant Current Laser Driver for Biomedical Applications**
Temel O. D., Ferhanoglu O., Yelten M. B.
12th IEEE Latin America Symposium on Circuits and System (LASCAS), ELECTR NETWORK, 22 - 25 February 2021
- XXV. **A High Performance TIA Design in 40 nm CMOS**
GÜNGÖRDÜ A. D., DÜNDAR G., YELTEN M. B.
2020 IEEE International Symposium on Circuits and Systems (ISCAS), Sevilla, Spain, 12 - 14 October 2020
- XXVI. **An Offset Cancellation Set-up for Amplifiers Subject to Aging**
Erol D., GÜNGÖRDÜ A. D., DÜNDAR G., YELTEN M. B.
11th International Conference on Electrical and Electronics Engineering, 28 - 30 November 2019
- XXVII. **Design of a LC-based Voltage-Controlled Oscillator for Space Applications in C - Band**
Uzun Y., Kabaoglu A., YELTEN M. B.
11th International Conference on Electrical and Electronics Engineering, 28 - 30 November 2019
- XXVIII. **Design of an Analog Circuit-Based Artificial Neural Network**
Gencer F. B., Xhafa X., Inam B. B., YELTEN M. B.
11th International Conference on Electrical and Electronics Engineering, Bursa, Turkey, 28 - 30 November 2019
- XXIX. **A Cryogenic CMOS Low Dropout Voltage Regulator Design for Space Applications**
Kayihan H. İ., Kabaoglu A., YELTEN M. B.
11th International Conference on Electrical and Electronics Engineering, Bursa, Turkey, 28 - 30 November 2019
- XXX. **Comparison of ELTs with different shapes and a regular layout transistor in 180 nm CMOS process**
İLİK S., ŞAHİN N., Kabaoglu A., YELTEN M. B.
2019 16th International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design (SMACD), Lausanne, Switzerland, Switzerland, 15 - 18 July 2019, pp.21-24
- XXXI. **A Cryogenic LC VCO Utilizing Cryogenic Models of Active Devices**
GÜLEÇ H. O., YELTEN M. B.
2019 6th International Conference on Electrical and Electronics Engineering (ICEEE), İstanbul, Turkey, 16 - 17 April 2019, pp.220-224
- XXXII. **Hysteretic Buck-Boost Converter for Wearable Applications**
Ozanoğlu K., Cavallini P., YELTEN M. B., DÜNDAR G.
2019 15th Conference on Ph.D Research in Microelectronics and Electronics (PRIME), Lausanne, Switzerland, Switzerland, 15 - 18 July 2019, pp.45-48
- XXXIII. **Elyaf Bazlı Elektronik Tekstilde Veri Aktarımı**
Bayat İ. H., İLİK S., GÜRARSLAN A., YELTEN M. B.
Elektrik-Elektronik ve Biyomedikal Mühendisliği Konferansı (ELECO 2018), Bursa, Turkey, 30 November - 01 December 2018
- XXXIV. **Design of a LC Voltage-Controlled Oscillator for Space Applications in C-Band**
Uzun Y., Kabaoglu A., Yelten M. B.
11th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 28 - 30 November 2019, pp.388-391
- XXXV. **Yüksek Verimli Geniş Bant J Sınıfı Güç Kuvvetlendiricisi Tasarımı**
Çağdaş E., Kızılbey O., YAZGI M., PALAMUTÇUOĞULLARI O., YELTEN M. B.
ELECO 2018, Elektrik-Elektronik ve Biyomedikal Mühendisliği Konferansı, Bursa, Turkey, 30 November - 01 December 2018
- XXXVI. **Impact of transistor scaling on the time-dependent dielectric breakdown (TDDB) reliability of analog circuits**

SANIÇ M. T., YELTEN M. B.

2017 10th International Conference on Electrical and Electronics Engineering (ELECO), 30 November 2017 - 02 December 2018

XXXVII. Elyaf Bazlı Elektronik Tekstillerde Veri Aktarımı

BAYAT H. İ., ILIK S., GÜRARSLAN A., YELTEN M. B.

Elektrik Elektronik ve Biomühendislik Konferansı, Bursa, Turkey, 30 November - 01 December 2018

XXXVIII. Yüksek Verimli Geniş Bant J Sınıfı Güç Kuvvetlendirici Tasarımı

ÇAĞDAŞ E., KIZILBEY O., YAZGI M., PALAMUTÇUOĞULLARI O., YELTEN M. B.

ELECO 2018, Turkey, 30 November 2018

XXXIX. A High Speed 180 NM CMOS Cryogenic SAR ADC

SUNA A., ÇEVİK İ., YELTEN M. B.

2018 18th Mediterranean Microwave Symposium (MMS), İstanbul, Turkey, 31 October - 02 November 2018

XL. Cryogenic Measurement of Low Threshold Voltage MOSFETs

YELTEN M. B.

International Congress on Semiconductor Material and Devices, Ardahan, Turkey, 28 - 30 August 2018

XLI. A Novel Multiple Membership Function Generator for Fuzzy Logic Systems

KHAYATZADEH R., Yelten M. B.

15th International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design, SMACD 2018, Prague, Czech Republic, 2 - 05 July 2018, pp.101-104

XLII. Design of Logic Gates by Using a Four-Gate Thin Film Transistor (FG TFT)

İik S., GENCER F. B., Yelten M. B.

15th International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design, SMACD 2018, Prague, Czech Republic, 2 - 05 July 2018, pp.77-80

XLIII. A rare event based yield estimation methodology for analog circuits

ODABAŞI I. Ç., Yelten M. B., AFACAN E., Baskaya F., Pusane A. E., Dündar G.

21st IEEE International Symposium on Design and Diagnostics of Electronic Circuits and Systems, DDECS 2018, Budapest, Hungary, 25 - 27 April 2018, pp.33-38

XLIV. A test-bed based guideline for multi-source energy harvesting

DAVUT E., KAZANCI O., ÇAĞLAR A., ALTINEL D., YELTEN M. B., KARABULUT KURT G. Z.

2017 10th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 30 November - 02 December 2017, pp.1-4

XLV. A 0.18 mu m CMOS X-BAND Low Noise Amplifier for Space Applications

Sahin N., Yelten M. B.

1st New Generation of CAS Conference (NGCAS), Genoa, Italy, 6 - 09 September 2017, pp.205-208

XLVI. A high linearity LNA using 180 nm CMOS technology for S-Band

Çağlar A., Berke Yelten M. B.

2017 European Conference on Circuit Theory and Design, ECCTD 2017, Catania, Italy, 4 - 06 September 2017

XLVII. Reliability of 3D-printed dynamic scanners

GÖNÜLTAŞ B. M., AYGÜN S., KHAYATZADEH R., Çivitci F., Gökdel Y. D., Yelten M. B., Ferhanoğlu O.

22nd IEEE International Mixed-Signals Test Workshop, IMSTW 2017, Thessaloniki, Greece, 3 - 05 July 2017

XLVIII. A cryogenic modeling methodology of MOSFET I-V characteristics in BSIM3

KABAOĞLU A., Berke Yelten M. B.

14th International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design, SMACD 2017, Giardini Naxos, Taormina, Italy, 12 - 15 June 2017

XLIX. Review: Analog design methodologies for reliability in nanoscale CMOS circuits

Afacan E., Berke Yelten M. B., Dündar G.

14th International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design, SMACD 2017, Giardini Naxos, Taormina, Italy, 12 - 15 June 2017

L. A Heuristic Sensitivity Analysis Technique for High-Dimensional Systems

Yelten M. B.

23rd IEEE International Conference on Electronics, Circuits and Systems (ICECS), Monaco, 11 - 14 December 2016,

pp.181-184

- LI. A variability analysis algorithm for spiral inductors using enhanced single- π model**
SOYSAL I. B., AKSO E., YELTEN M. B.
2016 National Conference on Electrical, Electronics and Biomedical Engineering (ELECO), Bursa, Turkey, 1 - 03 December 2016
- LII. A Variability Analysis Algorithm for Spiral Inductors Using Enhanced Single- π Model**
Soysa I. B., Akso E., Yelten M. B.
National Conference on Electrical, Electronics and Biomedical Engineering (ELECO), Bursa, Turkey, 1 - 03 December 2016, pp.442-446
- LIII. Efficient signature selection tool for sense & react systems**
Afacan E., Dündar G., Pusane A. E., Başkaya F., Yelten M. B.
13th International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design, SMACD 2016, Lisbon, Portugal, 27 - 30 June 2016
- LIV. Scalable and Efficient Analog Parametric Fault Identification**
Yelten M. B., NATARAJAN S., XUE B., GOTETÍ P.
32nd IEEE/ACM International Conference on Computer-Aided Design (ICCAD), San-Jose, Costa Rica, 18 - 21 November 2013, pp.387-392
- LV. Variation-Aware Circuit Macromodeling and Design Based on Surrogate Models**
Zhu T., Yelten M. B., Steer M. B., Franzon P. D.
1st International Conference on Simulation and Modeling Methodologies, Technologies and Applications (SIMULTECH 2011), Noordwijkerhout, Netherlands, 29 - 31 July 2011, vol.197, pp.255-269
- LVI. Process Mismatch Analysis based on Reduced-Order Models**
Yelten M. B., Franzon P. D., Steer M. B.
13th International Symposium on Quality Electronic Design (ISQED), Santa-Clara, Cuba, 19 - 21 March 2012, pp.648-655
- LVII. APPLICATION OF SURROGATE MODELING IN VARIATION-AWARE MACROMODEL AND CIRCUIT DESIGN**
Zhu T., Yelten M. B., Steer M. B., Franzon P. D.
1st International Conference on Simulation and Modeling Methodologies, Technologies and Applications (SIMULTECH 2011), Noordwijkerhout, Netherlands, 29 - 31 July 2011, pp.502-508
- LVIII. Theoretical Analysis and Characterization of the Tunable Matching Networks in Low Noise Amplifiers**
Yelten M. B., Gard K. G.
European Conference on Circuit Theory Design, Antalya, Turkey, 23 - 27 August 2009, pp.890-893
- LIX. A novel design procedure for tunable low noise amplifiers**
Yelten M. B., Gard K. G.
2009 IEEE 10th Annual Wireless and Microwave Technology Conference, WAMICON 2009, Clearwater, FL, United States Of America, 20 - 21 April 2009

Supported Projects

Yelten M. B., Güngördü A. D., Baltacı M. A., Project Supported by Higher Education Institutions, Uzun ve Kısa Kanal CMOS Teknolojilerinde Plastik Optik Fiber ve Görünür Işık Haberleşmesi İçin Düşük-Güç Düşük-Gürültüye Sahip Tümüleşik Optik Algılayıcı ve Alıcı Devre Tasarımı, 2022 - Continues

Yelten M. B., Aslan A. R., Karabulut Kurt G. Z., TUBITAK Project, Kriyojenik Haberleşme Elektronikleri İçin Önce-Karıştırıcı Türü Bir Alıcının Tasarlanması Ve Gerçekleştirilmesi , 2021 - 2024

Ferhanoglu O., Yelten M. B., Özdemir Ö., TUBITAK Project, Lazer Taramalı Kablosuz Kapsül Endoskopi Cihazının Geliştirilmesi , 2020 - 2023

Karaçuha E., Akıncı M. N., Karaçuha K., Yelten M. B., Temeltaş H., Acar M. H., GÖSE E., ŞAHİNTÜRK H., Şeker Ş. S., Yılmaz Abdolsaheb T., TUBITAK Project, SAVA120, 2020 - 2022

Yelten M. B., YAVUZ Y., ÇAKMAK C., KARADEMİR J., PEKER E., KORKMAZ F. S., Project Supported by Higher Education Institutions, Experimental Determination of Gate-Oxide Breakdown of CMOS Transistors at Cryogenic Temperatures, 2020 - 2022

Yelten M. B., Zayım E., DÜNDAR G., Hacıyakupoğlu S., TUBITAK Project, Nesnelerin İnterneti, Savunma ve Yenilikçi Hesaplama Yöntemlerindeki Analog Devre Uygulamaları için 40 nm Transistör Teknolojisinin Zamana Bağlı Yıpranma, Kriyojenik Ortam ve Işınım Etkilerine Yönelik Ölçeklendirilebilir Modellemesi, 2018 - 2022

Akgül T., Ferhanoğlu O., Yelten M. B., Project Supported by Higher Education Institutions, Yüksek Hızlı Kamera Görüntülerinin Elde Edilmesi ve Analizi, 2018 - 2022

Yelten M. B., Rivera A., EU Supported Other Project, CA17126 - Towards understanding and modelling intense electronic excitation, 2018 - 2022

Yelten M. B., Karabulut Kurt G. Z., Güngördü A. D., Project Supported by Higher Education Institutions, Kablosuz Enerji Hasatlaması İçin Tümlşik Devre Çözümleri, 2018 - 2021

Yelten M. B., Ferhanoğlu O., TUBITAK Project, Lazer Taramalı Endoskoplara Yönelik Hibrit Uyarma Mekanizmalı ve Yekpare 3-Boyutlu Tarayıcı Sistemi, 2018 - 2020

Yelten M. B., Dabak S., TUBITAK Project, 320x240 Piksel RGB AMOLED Aviyonik Ekran Geliştirilmesi, 2015 - 2020

Yelten M. B., İlik S., Project Supported by Higher Education Institutions, Metal-Oksit-Yarıiletken-Alan-Etkili-Transistörlerinde Işınım Etkilerinin İncelenmesi ve Modellenmesi, 2017 - 2019

Yelten M. B., Aslan A. R., Hacıyakupoğlu S., TUBITAK Project, Uzay Araştırmaları İçin Analog Ve Radyo Frekansı Metal Oksit Yarıiletken Alan Etkili Transistör Mosfet Modellemesi Ve Tümlşik Devre Tasarımı, 2016 - 2019

Yelten M. B., Project Supported by Higher Education Institutions, Yonga Üstü Tümlşik İndükleçlerin Modellenmesi, 2016 - 2018

Yelten M. B., Project Supported by Higher Education Institutions, Metal-Oksit-Yarıiletken-Alan-Etkili-Transistörlerinde (MOSFET'lerde) Kriyojenik Sıcaklık, Işınım, Zamana Bağlı Yıpranma ve Proses Değişkenliği Etkilerinin Kapsamlı Modellenmesi, 2016 - 2017

Yelten M. B., TUBITAK Project, Çok Boyutlu Sistemler İçin Çevrimiçi Öğrenmeye Dayalı Hassasiyet Analizi, 2016 - 2017

Activities in Scientific Journals

IEEE Transactions On Device And Materials Reliability, Editor, 2021 - Continues

Memberships / Tasks in Scientific Organizations

TÜBİTAK ARDEB EEEAG, Member of Advisory Board, 2022 - Continues, Turkey

Metrics

Publication: 99

Citation (WoS): 222

Citation (Scopus): 460

H-Index (WoS): 7

H-Index (Scopus): 10

Congress and Symposium Activities

ELECO 2019, Moderator, Bursa, Turkey, 2019

SMACD 2019, Moderator, Lausanne, Switzerland, 2019

ICEEE 2019, Working Group, İstanbul, Turkey, 2019

ELECO 2018, Working Group, Bursa, Turkey, 2018

MMS 2018, Moderator, İstanbul, Turkey, 2018
SMACD 2018, Attendee, Praha, Czech Republic, 2018
DDECS 2018, Attendee, Budapest, Hungary, 2018
ELECO 2017, Attendee, Bursa, Turkey, 2017
ICSMD 2018, Attendee, Ardahan, Turkey, 2017
SMACD 2017, Attendee, Catania, Italy, 2017
ELECO 2016, Attendee, Bursa, Turkey, 2016
ICECS 2016, Attendee, Monte Carlo, Monaco, 2016

Non Academic Experience

Business Organization (private), Intel Corporation
Intel Corporation (Hillsboro, Oregon, ABD)
North Carolina State University
North Carolina State University