

Baykal SARIOĞLU

İstanbul Bilgi University
Dept. of Electrical&Electronics Eng.
Eyüp/ISTANBUL

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ACADEMIC BACKGROUND

- Postdoctoral Researcher,** Jan. 2013 - Aug. 2013
Bogazici University, Istanbul, Turkey
Project: *EU FP7 Project “Magnetic Nano Actuators for Quantitative Analysis”*
Julius-Maximilians Universitaet, Universitat Autònoma de Barcelona, École Polytechnique
Fédérale de Zurich, Bogazici University
- Ph.D., Electrical & Electronics Engineering,** Jan. 2013
Bogazici University, Istanbul, Turkey
Thesis: *Low Power Optoelectronic Catheter Localization Architecture for Interventional MRI Environment*
Supervisor: Asst. Prof. Arda D. Yalçinkaya
- M.Sc., Electrical & Electronics Engineering,** Jan. 2007
Bogazici University, Istanbul, Turkey
Thesis: *Analog CMOS Implementation of Neuro-Fuzzy Systems*
Supervisor: Prof. Günhan Dündar
- B.Sc., Electrical & Electronics Engineering,** Jun. 2004
Kadir Has University, Istanbul, Turkey
Project: *Design and Implementantion of Pulse Code Modulation Experiment Kit*
Supervisor: Asst. Prof. Atilla Özmen

ACADEMIC AND PROFESSIONAL EXPERIENCE

- Assistant Professor,** 2013 -
Department of Electrical & Electronics Engineering,
İstanbul Bilgi University, Istanbul, Turkey
- Offered Courses**
- EEEN100, Electricity and Magnetism,
 - EEEN101, Introduction to Electrical and Electronics Engineering,
 - EEEN201, Electrical Circuits I,
 - EEEN222, Digital Systems Design,
 - EEEN302, Electronics II,
 - EEEN311, Logic Circuits and Microprocessors,
 - EEEN322, Communication Engineering,
 - EEEN364, Embedded System Design,
 - EEEN461, Integrated Circuit Design,
 - EEEN464, Advanced Digital Design (coordinated with Panasonic).
- Teaching Assistant,** 2007 - 2013
Beta Lab, Department of Electrical & Electronics Engineering,
Bogazici University, Istanbul, Turkey
- FPGA System Engineer,** PAVO A.Ş., Istanbul, Turkey 2007

RESEARCH INTERESTS

Analog and Digital Integrated Circuits
Biomedical Circuits and Systems
Embedded System Design

FUNDED PROJECTS

1. **Project Owner** 2015 - 2017
Project: *Design of an Optically Powered and Optically Programmable CMOS Based Biomedical Microsystem for Remote Patient Monitoring and Intervention*
TUBITAK (The Scientific and Technical Research Council of Turkey) 3501 Project, 114E549
 2. **Project Owner** 2015 - 2016
Project: *Acoustically Controlled Electronic Lock System*
Industrial Project, Funded By SoftTech A.Ş.
 3. **Researcher** 2014 - 2017
Project: *Thermal management of lithium ion batteries with liquid cooling*
TUBITAK (The Scientific and Technical Research Council of Turkey) 3501 Project, 114M774
 4. **Researcher** 2013 - 2015
Project: *Design and Fabrication of a Biopsy Catheter Capable of Doing In-Vivo Cell Imaging for Early Cancer Detection*
TUBITAK (The Scientific and Technical Research Council of Turkey) 1003 Project, 113S114
- Conference Committee Member** Jan. 2011 - Aug. 2011
Optical MEMS and Nanophotonics Conference 2011, 8-11 Aug., Istanbul, Turkey
- Conference Committee Member** Jan. 2008 - Jun. 2008
IEEE PRIME Conference 2008, 22-25 Jun., Istanbul, Turkey

M.SC. THESIS CONDUCTED TO COMPLETION

1. *Design and Implementation of an Electronic Control & Image Acquisition System for Laser Scanning Confocal Microscopy*
Student: Gokhan Gumus, Co-advisor: Faik Başkaya, Date: 2016
2. *Image Construction and Cancer Tissue Detection Algorithms for Portable Confocal Microscopy System*
Student: Gamze Koc, Co-advisor: Faik Başkaya, Date: 2014

HONORS & AWARDS

- Ranked in the first 0.4% among more than 1.500.000 students in the Nationwide University Entrance Exam, 1999.
- Graduated as valedictorian from the Faculty of Engineering, Kadir Has University.

JOURNAL PUBLICATIONS

1. M. H. M. Kouhani, B. Camli, A. U. Cakaci, E. Kusakci, **B. Sarioglu**, G. Dunder, H. Torun, A. D. Yalcinkaya, "Integrated Silicon Photovoltaics on CMOS With MEMS Module for Catheter Tracking", *IEEE Transactions on Biomedical Circuits and Systems*, Vol. 33, No. 16, Aug. 2015
2. **B. Sarioglu**, M. Tumer, U. Cindemir, B. Camli, G. Dunder, C. Ozturk, A. D. Yalcinkaya, "An optically powered CMOS tracking system for 3 T magnetic resonance environment", *IEEE Journal of Selected Topics in Quantum Electronics*, Vol. 9, No. 1, Feb. 2015

3. B Camli, **B. Sarioglu**, A. D. Yalcinkaya, “Photodiodes for monolithic CMOS circuit applications”, *IEEE Journal of Selected Topics in Quantum Electronics*, Vol. 20, No. 6, Nov. 2014
4. M Tümer, **B. Sarioglu**, S Mutlu, Y Ulgen, A Yalcinkaya, C Ozturk, “Using a low-amplitude RF pulse at echo time (LARFET) for device localization in MRI”, *Medical & Biological Engineering & Computing*, Vol. 50, No. 12, pg. 885-894, October 2014
5. **B. Sarioglu**, O. Aktan, A. Öncü, S. Mutlu, G. Dündar, and A.D. Yalcinkaya, “An Optically Powered CMOS Receiver System for Intravascular Magnetic Resonance Applications”, *IEEE Journal on Emerging and Selected Topics in Circuits and Systems*, Vol. 2, No. 4, Dec. 2012
6. O. Aktan, **B. Sarioglu**, U. Çindemir, S. Ünlü, G. Dündar, S. Mutlu and A.D. Yalcinkaya, “Optoelectronic CMOS Power Supply Unit for Electrically Isolated Microscale Applications”, *IEEE Journal of Selected Topics in Quantum Electronics*, Vol. 17, No. 3, pg. 747-756, May-June 2011
7. A.D. Yalcinkaya, Y.D. Gokdel and **B. Sarioglu**, “One-dimensional LED Array Integrated Polymer Composite Scanner for 2D Imaging” *Sensors and Actuators A: Physical*, vol. 168, pp. 195-201, Jul. 2011
8. Y.D. Gokdel, **B. Sarioglu**, S. Mutlu and A.D. Yalcinkaya, “Design and Fabrication of Two-Axis Micromachined Steel Scanners”, *J. Micromechanics and Microengineering*, Vol. 19, No. 7, pg. 1-8, July 2009

CONFERENCE PUBLICATIONS

1. Aslı Yelkenci, **B. Sarioglu**, “Sayısal Biyomedikal Uygulamalar için Tek Kanal Üzerinden Güç ve Veri İletimi Gerçekleştirilen Optik İletişim Sistemi Modeli”, *ELECO 2016*, Dec. 2016, Bursa, Turkey.
2. Aslı Yelkenci, Okan Zafer Batur, **B. Sarioglu**, “Ultra Low Power All-Digital CMOS Sensor Read Out Circuit for Optically Powered Biomedical Systems”, *IEEE CISP-BMEI*, Nov. 2016, Datong, China.
3. Gokhan Gumus, **B. Sarioglu**, Yigit Daghan Gokdel, “System integration for real-time laser scanning confocal microscope”, *SIU 2016*, May 2016, Turkey.
4. Gokhan Gumus, **B. Sarioglu**, Yigit Daghan Gokdel, “An electronic control and image acquisition system for laser scanning microscopy”, *ELECO 2015*, Nov. 2015, Bursa, Turkey.
5. A Denker, AU Dilek, **B. Sarioglu**, J Savaş, YD Gökdel, “RoboSantral: An autonomous mobile guide robot”, *ICIT 2015*, March 2015, Sevilla, Spain.
6. G. Koç, **B. Sarioglu**, “Statistical analysis of threshold algorithms in image processing based cancer cell detection”, *SIU 2014*, April 2014, Turkey.
7. **B. Sarioglu**, O. Aktan, U. Cindemir, G. Dundar, C. Ozturk, S. Mutlu, A. D. Yalcinkaya, “An RF Front-End with Optically Powered CMOS Power Supply”, *OMN 2011*, 8-11 Aug 2011, Istanbul, Turkey.
8. Y.D. Gokdel, **B. Sarioglu** and A.D. Yalcinkaya, “2D Imaging with 1D LED Array Integrated FR4 Actuator”, *Proceedings of Transducers 2011*, 5-9 June 2011, Beijing, China.
9. **B. Sarioglu**, O. Aktan, U. Cindemir, G. Dundar, C. Ozturk, S. Mutlu, A. D. Yalcinkaya, “Optoelectronic CMOS Power Supply Unit for Interventional MRI Devices”, *Proceedings of ISMRM 2011*, 7-13 May 2011, Montréal, Canada.
10. Y.D. Gokdel, **B. Sarioglu**, S. Mutlu, A.D. Yalcinkaya, “Two-Axis Micromachined Steel Scanners”, *Proceedings of MME 2008*, pp. 93-97, September 28-30 2008, Aachen, Germany.

11. **B. Sarioglu**, Y.D. Gokdel, A.D. Yalcinkaya, "1.5D Display with FR4 Actuator and LEDs", *Proceedings of Eurosensors 2008*, September 7-10 2008, Dresden, Germany.
12. Y.D. Gokdel, **B. Sarioglu**, A.D. Yalcinkaya, "LED Integrated Miniaturized Polymer MEMS Display", *Proceedings of IEEE PRIME 2008*, pp. 93-97, June 22-25 2008, Istanbul, Turkey.