

Arman Galioglu

M. SC. STUDENT · ELECTRONICS ENGINEER

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Research Interests

CURRENTLY WORKING ON READOUT IC BLOCKS FOR INFRARED APPLICATIONS AND TI SAR ADC FOR MY MASTER THESIS. MY RESEARCH INTERESTS ARE IN ANALOG, RF INTEGRATED CIRCUITS, ESPECIALLY IN LOW POWER/LOW VOLTAGE DESIGNS FOR SCALABILITY.

EDUCATION

SABANCI UNIVERSITY

M.Sc. IN ELECTRONICS ENGINEERING

- GPA: 3.82/4.00
- Academic Advisor: Prof. Yasar Gurbuz

Istanbul, TURKEY

2015 - 2017 (Expected)

SABANCI UNIVERSITY

B.S. IN ELECTRONICS ENGINEERING, MINOR IN PHYSICS

- GPA: 3.9/4.00

Istanbul, TURKEY

20011 - 2015

WORK EXPERIENCE

SABANCI UNIVERSITY

RESEARCH ASSISTANT

- Worked as a research assistant in the ROIC group of Prof. Yasar Gurbuz. Worked on IC design projects on several tape-outs with 0.25 μm and 90 nm technologies, designed a ROIC architecture, various analog sub-blocks that operate at 77K; operational amplifiers, buffers, single-to-differential converter, sample and hold stage, 10 bit SAR ADC, design of test set-up and test cards, cryogenic device measurements.
- Worked on developing a ROIC for SiGe Multi Quantum Well Bolometer Detectors
- Worked on the design and implementation of High Speed Low Power MWIR and LWIR DROICs using Extended Counting Method
- Currently supervising 3 senior EE students on their graduation projects

Istanbul, TURKEY

September 2015 - Current

SABANCI UNIVERSITY

TEACHING ASSISTANT

- Worked as a teaching assistant in Circuits I course (Fall semesters) and in Circuits II course (Spring semesters). Responsibilities included holding weekly recitation sections, lab sections and office hours, preparing and grading lab assignments, exams and homework.

Istanbul, TURKEY

September 2014 - Current

LINZ INSTITUTE FOR ORGANIC SOLAR CELLS (LIOS) / INSTITUTE OF PHYSICAL CHEMISTRY,

JOHANNES KEPLER UNIVERSITY

SUMMER INTERN

- Fabricated bottom-gate/top-contact organic field effect transistors (OFETs) based on Epindolidione on glass substrates and designed custom shadow masks implementing inverters/NAND gates/NOR gates/ring oscillators for both ambipolar and unipolar semiconductor OFETS.

Linz, AUSTRIA

July 2015 - September 2015

LEIBNIZ INSTITUT FÜR INNOVATIVE MIKROELEKTRONIK (IHP GMBH)

SUMMER INTERN IN TECHNOLOGY DEPARTMENT, PROCESS INTEGRATION

- Worked to test and characterize capacitive RF MEMS switches and automatize their measurement with LabView (pull-in voltage, hysteresis, pull-out voltage, capacitance etc.)

Frankfurt (Oder), GERMANY

June 2014 - September 2014

PUBLICATIONS

JOURNALS

- M. Yazici, O. Ceylan, A. Shafique, S. Abbasi, A. Galioglu, Y. Gurbuz "High Dynamic Range Smart Pixel Architecture for Infrared Focal Plane Arrays", *IEEE Transactions on Circuits and Systems II: Express Briefs*, 2016 (Under review).
- S. Abbasi, A. Galioglu, A. Shafique, O. Ceylan, M. Yazici; Y. Gurbuz, "A PFM Based Digital Pixel with Off-Pixel Residue Measurement for Small Pitch FPAs," *IEEE Transactions on Circuits and Systems II: Express Briefs*, vol. PP, no.99, pp.1-1 doi: 10.1109/TCSII.2016.2614339, 2016. (Click here).
- O. Ceylan, A. Shafique, A. Burak, C. Caliskan, M. Yazici, S. Abbasi, A. Galioglu, H. Kayahan, Y. Gurbuz, "Digital Readout Integrated Circuit (DROIC) Implementing Time Delay and Integration (TDI) for Scanning Type Infrared Focal Plane Arrays (IRFPAs)", *Infrared Physics and Technology*, 2016 (Click here).
- A. Shafique, H. Kayahan, S. S. Afridi, O. Ceylan, M. Yazici, S. Abbasi, A. Galioglu, Y. Gurbuz, "Dynamic power reduction in digital pixel design for large format focal plane arrays", *Microelectronics Journal*, Volume 58, Pages 9-13, December 2016. (Click here).

CONFERENCE PROCEEDINGS

- S. Abbasi, A. Shafique, A. Galioglu, O. Ceylan, M. Yazici, Y. Gurbuz, "A PFM based digital pixel with off-pixel residue measurement for 15 μm pitch MWIR FPAs", *Proc. SPIE 9819, Infrared Technology and Applications XLII*, 981929, May 20, 2016. (doi:10.1117/12.2224791).

HONORS & AWARDS

- 20015 - 2017 **FULL GRADUATE SCHOLARSHIP**, ELECTRONICS ENGINEERING MASTER PROGRAM, SABANCI UNIVERSITY
SABANCI UNIVERSITY HONOR SCHOLARSHIP, GIVEN TO STUDENTS RANKING IN THE 0.1 PERCENTILE IN TURKEY'S NATIONAL UNIVERSITY ENTRANCE EXAM, HONOR SCHOLARSHIP MEETS TUITION FEE FOR FOUR YEARS, OFFERS MONTHLY STIPEND AND COVERS FEES FOR 4-PERSON DORMITORIES WITHIN THE CAMPUS.
- 2011 - 2015 **THE REPUBLIC OF TURKEY GENERAL DIRECTORATE OF HIGHER EDUCATION CREDIT AND HOSTELS INSTITUTION (KYK) GRANT**, MONTHLY STIPEND GIVEN TO STUDENTS THROUGHOUT THEIR UNDERGRADUATE EDUCATION, AWARDED TRIPLE THE NORMAL AMOUNT GIVEN TO STUDENTS IN NEED, FOR RANKING IN THE TOP 100 OF TURKEY'S NATIONAL UNIVERSITY ENTRANCE EXAM IN 2011 WHICH IS TAKEN BY AN AVERAGE OF 1.7 MILLION STUDENTS EVERY YEAR.
- 2011 - 2015 **CERTIFICATES OF HIGH HONOR**, ELECTRONICS ENGINEERING PROGRAM, SABANCI UNIVERSITY

ACTIVITIES

SABANCI UNIVERSITY MICROELECTRONICS WORKSHOP 2016 (SUMICRO.SABANCIUNIV.EDU/)

ISTANBUL, TURKEY

PARTICIPANT

June. 2016

- Microelectronics Workshop focuses on microelectronics, from technology to circuits and systems perspective, and its applications on sensing and processing electronic systems for space applications. All lectures are presented by invited speakers around the world.

ASIAN SCIENCE CAMP 2012 (ASC2012.ORT.ORG.IL/)

Jerusalem, ISRAEL

PARTICIPANT

Jul. 2012

- ASC, developed by two Nobel recipients and based on the Lindau meetings, included lectures and discussions by 5 Nobel recipients as well as over 20 leading scientists. Selected and participated as a member of the Turkish Committee.

CIVIC INVOLVEMENT PROJECT (CIP.SABANCIUNIV.EDU)

Istanbul, Turkey

TEACHER

2011 - 2012

- Tutoring elementary/middle school students after school time and preparing pedagogical and creative content.

SKILLS

CAD TOOLS

CADENCE VIRTUOSO, ADS, PSpICE, LTSpICE, XILINX ISE, XILINX VIVADO, SONNET, ALTIUM DESIGNER.

PROCESS TECHNOLOGIES

SUBSTANTIAL TAPEOUT EXPERIENCE IN: IHP 0.25 μM , IHP 0.13 μM AND TSMC 90 NM.

MEASUREMENT SKILLS

ANALOG AND MIXED-MODE CHIP MEASUREMENTS USING CUSTOM DESIGNED TEST CARDS, ON WAFER MEASUREMENTS USING PROBE STATIONS

TEST SCORES

TOEFL:116/120, GRE: V:166/170 Q:168/10 WRITING:4/6

CLEANROOM/FABRICATION EXPERIENCE

CLASS 1000, CLASS 100: PHOTOLITHOGRAPHY, DEPOSITION/EVAPORATION, WET ETCHING, ANODIZATION

PROGRAMMING

MATLAB, C++, VERILOG, LABVIEW.

LANGUAGES

TURKISH (NATIVE), ENGLISH (FLUENT)

REFERENCES

PROF. YASAR GURBUZ, PH. D.

FACULTY MEMBER AT THE ELECTRONICS ENGINEERING PROGRAM AND HEAD OF RFIC/ROIC GROUPS, SABANCI UNIVERSITY.

E-MAIL: YASAR@SABANCIUNIV.EDU

DR. MEHMET KAYNAK, PH. D.

DEPARTMENT HEAD, TECHNOLOGY, IHP

E-MAIL: KAYNAK@IHP-MICROELECTRONICS.COM