CIHAN ASCI

One Analog Way ◇ Wilmington, MA USA 01887

+1 (857) · 472 · 9616 ◇ cihan [dot] asci9 [at] gmail [dot] com

EDUCATION

Tufts University, Medford, MA, USA   *Sep. 2018–Jul. 2024*
Ph.D. in Electrical & Computer Engineering   CGPA: 3.88 / 4.00.
Research Interests: Analog/mixed–signal circuit design, sensors, RF circuits.

Middle East Technical University, Ankara, Turkey   *Feb. 2016–Aug. 2018*
M.S. in Electrical & Electronics Engineering   CGPA: 3.57 / 4.00.
Concentration: Electromagnetics, Microwaves and Antennas.
Thesis: Design and Implementation of VHF–UHF Antenna with Non–Foster Matching Circuit

Cankaya University, Ankara, Turkey   *Sep. 2010–Jun. 2015*
B.S. in Electronic & Communication Engineering (Valedictorian)   CGPA: 3.94 / 4.00.
Minor in Materials Science and Engineering (Sep.2013–Jun.2015)   CGPA: 3.02 / 4.00.

EXPERIENCE

Analog Devices, Inc.   *Jul. 2024–Present*
Senior Design Evaluation Engineer, High–Speed ADCs   *Wilmington, MA*

· Evaluation and characterization of high–speed ADCs and DACs for next generation transceiver products.
· Functional and performance evaluation of core technologies and calibration algorithms.
· Development of bench hardware and software to control and automate bench test equipment using Python.

Analog Devices, Inc.   *Jun. 2023–Sep.2023*
Product Engineering Intern – High–Speed DACs   *Wilmington, MA*

· Development of bench hardware and software to control and automate test equipment using Python.
· Evaluation of SFDR and IMD performance of high-speed DACs. Helped improve static and dynamic DAC calibration. Evaluated various DAC related blocks such as delay-locked loop circuit and data scrambler.

Analog Devices, Inc.   *May. 2022–Aug.2022*
Product Engineering Intern – High–Speed DACs   *Wilmington, MA*

· Development of bench hardware and software to control and automate test equipment using Python.
· Evaluation of SFDR performance of high–speed DACs over PVT. Performed and improved static and dynamic DAC calibration and delay–locked loop circuits.

Tufts University, Nanoscale Integrated Sensors and Circuits Lab.   *Sep. 2018–Jul. 2024*
Graduate Teaching/Research Assistant   *Medford, MA*

· Design and implementation of a low–power multiplexed analog front–end (AFE) for sensing applications.
· Design and implementation of ingestible sensing capsules comprised of 6–DoF IMU, temperature sensor, pH sensor and external EEPROM. Developed and improved device libraries written in C++. Developed an audio signal analyzer in Python for in–vivo sampling capsule tests.

Middle East Technical University, Ayasli Research Center   *Oct. 2016–Dec. 2017*
Project Expert   *Ankara, Turkey*

· Designed and implemented a non–Foster impedance matching network using negative impedance converters for wire monopole antennas in VHF–UHF band.
· Designed and implemented broadband efficient monopole antennas using reactive loading concept with genetic algorithm. Designed different RF filters comprised of lumped elements that cover 146–512 MHz band.

TECHNICAL STRENGTHS

Programming Languages	C, C++, Python, Verilog/SystemVerilog, HTML5/CSS3.
Tools	Cadence Virtuoso/Genus/Innovus, Altium Designer, AWR Microwave Office, LTSpice, MATLAB/Simulink, LaTeX, MS Office.

PUBLICATIONS

Sharma, A., **Asci, C.**, Marty, J.L. & Sonkusale, S. (2024). Wearable Biosensors on Sutures and Threads in Wearable Biosensing in Medicine and Healthcare, pp. 267-297. Springer Nature Singapore.

Asci, C., Sharma, A., Del-Rio-Ruiz, R. & Sonkusale, S. (2023). Ingestible pH sensing device for gastrointestinal health monitoring based on thread-based electrochemical sensors in Microchimica Acta, 190, 10. DOI:10.1007/s00604-023-05946-1.

Sharma, A., **Asci, C.**, Del-Rio-Ruiz, R., Trinidad, K., Hossain, N.I., Kaplan, D.L. & Sonkusale, S. (2023). Multiplexed Sensing Probe for Bioreactors for Cellular Agriculture. IEEE Sensors Letters, vol. 7, no. 8, pp. 1-4. DOI:10.1109/LSENS.2023.3300799.

Wang, W., **Asci, C.**, Zeng, W., Owyeung, R. & Sonkusale, S. (2023). A frequency-adjustable helical antenna using shape memory alloy in Applied Physics Letters. vol. 123, no. 4. DOI:10.1063/5.0154602.

Wang, W., **Asci, C.**, Zeng, W., Zeng, W. & Sonkusale, S. (2023). Zero-power screen printed flexible RFID sensors for Smart Home in Journal of Ambient Intelligence and Humanized Computing. vol. 14, no. 4, pp. 3995-4004. DOI:10.1007/s12652-022-04466-9.

Asci, C., Del-Rio-Ruiz, R., Sharma, A. & Sonkusale, S. (2022). Ingestible pH Sensing Capsule with Thread-Based Electrochemical Sensors in 2022 IEEE Sensors. pp. 1-4.

Das, R., Zeng, W., **Asci, C.**, Del-Rio-Ruiz, R. & Sonkusale, S. (2022). Recent progress in electrospun nanomaterials for wearables in APL bioengineering. vol. 6, no. 2. DOI:10.1063/5.0088136.

Asci, C., Sadeqi, A., Wang, W., Nejad, H.R. & Sonkusale, S. (2020). Design and implementation of magnetically–tunable quad–band filter utilizing split–ring resonators at microwave frequencies in Scientific reports, vol. 10, no. 1050. DOI:10.1038/s41598-020-57773-6.

Asci, C., Wang, W. & Sonkusale, S. (2020). Security monitoring system using magnetically-activated RFID Tags. 2020 IEEE Sensors. pp. 1–4. DOI:10.1109/SENSORS47125.2020.9278750.

AWARDS & SCORES

Tufts University	Full Scholarship, Sep. 2018–Present.
Cankaya University	Graduated as Valedictorian in 2015. High Honor Student (2011–2015).
Test Scores	GRE Q: 170/170, TOEFL iBT: 103/120.

REFERENCES

Prof. Sameer Sonkusale
Department of Electrical and Computer Engineering, Tufts University, Medford, MA, USA 02155.
e–mail: sameer@ece.tufts.edu

Dr. Adnan Gundel
ARFEL Chip Solutions
Ankara, Turkey
e–mail: adnangundel@yahoo.com