

# Aziz Ege Gönül

Sabancı University, Tuzla, 34956, Istanbul, Turkey, (+90)535-030-0135  
website: [www.egegonul.com](http://www.egegonul.com) • e-mail: [egegonul@sabanciuniv.edu](mailto:egegonul@sabanciuniv.edu)

## EDUCATION

Sabancı University, Istanbul, Turkey  
Faculty of Engineering and Natural Sciences,  
B.Sc in Electronics Engineering, Graduation: January 2017

## SELECTED PROJECTS

**Designed a 4-track sampler/sequencer groovebox**  
Sabancı University, Istanbul & STEIM, Amsterdam  
Spring-2017, Supervisor: Asst. Prof. Selcuk Artut / Nicolo Merendino

- It was developed mainly for outdoor use during my Trans-Siberian Railway train journey throughout Siberia.
- Design steps include: Utilizing CAD tools for hardware design, 3D case print, PCB design and manufacture, audio engine and programming, front panel design. More info at: <http://www.egegonul.com/portfolio/tsr-instrument-design>
- Key features: Pushable encoders, 32 different synthesis parameters, LCD screen, sampling, step-wise parameter modulation, +25 hours battery & piezo mics

**Developed a motion-controlled gestural sound design tool**  
Sabancı University, Istanbul  
Autumn-2016, Supervisor: Asst. Prof. Selcuk Artut

- Final project for the VA-444 Interaction Design course (Team of two)
- Key features: Force sensitive resistors for finger-based gestures, accelerometer, sampling capability. More info at: <http://www.egegonul.com/portfolio/pantomimic>

**Implemented C++ Data Structures classes for practical computing problems**  
Sabancı University, Istanbul  
Autumn-2016, Supervisor: Asst. Prof. Cemal Yilmaz

- Total of five homework/projects for the CS-300 Data-Structures course
- Topics include: Search engine optimization, priority queues, LZW binary tree compression, hash tables, heaps, computational complexity

**Emulated Yamaha-DX7 using Supercollider**  
STEIM, Amsterdam  
Summer-2016, Supervisor: Kristina Andersen

- It can load original DX7 presets with high accuracy
- More info at: <https://github.com/everythingwillbetakenaway/DX7-Supercollider>

**Designed core DSP functions using Matlab**  
Sabancı University, Istanbul  
Spring-2016, Supervisor: Prof. Ozgur Ercetin

- Total of five extensive laboratory projects for the course EE-312 Discrete-Time Signals and Systems
- Topics include: Interpolation and decimation, IIR & FIR filters, FFT, Z-Transforms

**Created a generative music app for IOS and Android**  
Sabancı University, Istanbul  
Spring-2015, Supervisor: Murat German, Selim Balcisoy, Elif Ayiter

- Term project for the course CS-450 Arts and Computing (Team of three)
- Responsible for coding the entire audio engine using Pure Data
- More info at: <http://baranusta.wix.com/chorusapp>

### Written MATLAB codes for Sound Manipulations

Sabanci University, Istanbul

Autumn-2015, Supervisor: Prof. Hakan Erdogan

- Weekly basis MATLAB projects/homework for the course EE-311 Signal Processing
- Topics include: Fourier Series/Analysis, Convolution, FFT, DTFS, DFT, Sampling, Filtering, AM, FM

### Circuit Designs for the EL302-Digital Integrated Circuits

Sabanci University, Istanbul

Spring-2015, Supervisor: Assoc. Prof Ayhan Bozkurt

- Designed full custom Design of a Standard Cell Library using AMS 0.35 $\mu$ m CMOS Technology in Cadence Environment
- Library includes: Schematic and layout designs of Positive Edge Triggered D Flip-Flop with Asynchronous Set and Reset and various Logic Gates

### Designed schematic and layout of a Two-Stage Op-Amp

Sabanci University, Istanbul

Autumn-2014, Supervisor: Prof. Yasar Gurbuz

- Term project for the course EL-303 Analog Integrated Circuit
- Specification: Gain:80dB, Bandwidth:10MHz, SNR: 5V/ $\mu$ s, Load: 10pF

### VA446 History and Aesthetic of Electroacoustic Music course Project

Sabanci University, Istanbul

Summer-2013, Supervisor: Barkin Engin

- For the final project, I composed a piece entirely with probability operations
- Pitch, amplitude, longitude, and timbre of music is modulated by random functions Used Non-Real-Time system. More info [here](#)

## RESEARCH INTEREST

**Sound synthesis:** Signal processing, behavioral circuit modeling, creative coding, tactile interaction, audio effects processing, Ambisonics

**Electronic instrument design:** Analog/digital circuitry, hardware/software hacking, DIY-controllers & sensors, printed circuit board design, 3D design, CAD drawing

**Algorithmic composition:** Aleatory/indeterminacy, probability, Markov Chains, generative systems, live coding, machine learning, sonification, cellular automata

## WORK EXPERIENCE

STEIM Internship, June-September 2016, Full-time

[www.steim.org](http://www.steim.org)

I implemented Yamaha DX-7 emulation using the Supercollider programming language and engaged in various activities on different projects such as repairing instruments, sound design for various projects and variety of lab tasks.

IT Manager - Develioglu-Dag Firm, 2012-2015, Part-time

[www.develiogludag.com](http://www.develiogludag.com)

<https://www.linkedin.com/company/develioglu-&-dag-law-firm>

I had managed document management systems and customer relationship management applications and acted as the first line of support for end-user issues.

## CONFERENCES & WORKSHOPS

Wonky Drum Sequencer Workshop, (Weekly basis)

STEIM, Amsterdam

Supervisor: Frank Baldé, Nicolo Merendino, April-May 2017

<http://steim.org/event/wonky-drum-sequencer-workshop/>

Music Technology Intensive Workshop, (Full-Time)  
New York University, New York  
Supervisor: *Matthew Kulewicz*, 10-22-July 2016  
<https://steinhardt.nyu.edu/music/summer/musictechintensive>

Supercollider Workshop, (Full-time)  
Stanford University, California  
Supervisor: *Bruno Ruviano and Fernando Lopez-Lezcano*, June 2015  
<https://ccrma.stanford.edu/workshops/supercollider>

10<sup>th</sup> International Symposium on Computer Music Modeling and Retrieval  
CMMR 2013, Marseille, France, October 2013 - <http://www.cmmr2013.cnrs-mrs.fr/>

## SKILLS

### Programming Languages

Supercollider, Max/MSP/Jitter, Pure Data, C/C++, MATLAB, Java, R, Python

### Musical Instruments

Modular synthesizers, MPE keyboards, samplers, hardware sequencers, drum machines

### Circuit Design Environments

Cadence, Verilog HDL, Xilinx, OrCad Pspice, Eagle PCB design, Fritzing

### Software for Audio

Ableton Live, Cubase, Logic Pro, Audacity, Bitwig, Sound Forge, Arduino

### Graphic Design

Adobe Photoshop, Solidworks, Animate CC, Photomatix Pro, GIMP., Pixelmator

### Hardware Design

PCB layout design & printing, SMD soldering, 3D printing, front panel fabrication

## LANGUAGES

- English (Advanced)
- German (Basic)
- Turkish (Native)

## PERSONAL INTERESTS

- Seven years of private piano lessons in classical, including two years of solfege
- Building DIY synthesizers (Mostly Eurorack modular format)
- Running, cooking, dancing, meditation & sci-fi books