



Cagil Benibol

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ABOUT ME

A curious Physicist doing his M.Sc. in Germany's leading universities and graduated from Turkey's one of the most outstanding universities with an honors degree. Have strong theoretical background and problem-solving skills. Knows statistical methods and data analysis in Astrophysics and Theoretical Physics. Knows Quantum Computing methods and algorithms. An effective team worker. Experienced in organizing many conferences and science festivals. A professional musician. Plays keyboard and piano in several bands.

EDUCATION AND TRAINING

M.Sc. Quantum Science & Technology

Technical University of Munich & Ludwig Maximilian University of Munich [2022 – Current]

Address: München (Germany)

Website: tum.de

B.Sc. Physics, Honors Degree

Middle East Technical University [2016 – Aug 2022]

Address: Ankara (Turkey)

Website: metu.edu.tr

Field(s) of study: Physics

Final grade: CGPA: 3.00 /4.00 – Honors Degree with 317 ECTS

Thesis: Estimating Hamiltonian in a Schwarzschild (Black Hole) Metric with Quantum Computers Using VQE Algorithm

Feza Gursey Institute Hakki Ogelman Summer School On "Astrophysical Modeling"

Feza Gursey Institute, Bogazici University [2019 – 2019]

Address: Istanbul (Turkey)

Website: <http://fezagursey.boun.edu.tr/>

PROJECTS

Estimating Hamiltonian in a 3+0 Schwarzschild (Black Hole) Metric with Quantum Computers Using VQE Algorithm

[2022]

What I tried to understand in my graduation project is the free electron's behavior in a 3+0 Schwarzschild Black hole by looking at its Hamiltonian by using Variational Quantum Eigensolvers.

Link: <https://github.com/Tihulu/400-Project-Cagil-Benibol>

RSA Decryption Algorithm with Shor's Algorithm

[2022]

Final project of a given course, called "Practical Quantum Computing for Scientists" in METU fall 2022

An algorithm that decrypts RSA with Shor's Algorithm on python Qiskit.

Link: <https://github.com/Tihulu/quantumcomputing/tree/main/project>

Gamma & X-ray observations of RCW-86 with Fermi - LAT and Chandra

[2020]

Final project of a given M.Sc. course in METU called "Data Analysis on Astrophysics" in spring 2020.

Link: <https://github.com/Tihulu/Astr-518>

WORK EXPERIENCE

Quantum Computing

QBronze and QSilver / METU [2022]

City: Ankara

Country: Turkey

QTurkey / Practical Quantum Computing for Scientists course was given in METU fall 2022

Final project/ RSA Decryption Algorithm with Shor's Algorithm

Backend Programmer

Freelance [2022 – Current]

City: Izmir

Country: Turkey

Link: tihulu.github.io/arafta

Basically, HTML generating Python Script
From Excel Menu to HTML Website generator
program.
tihulu.github.io/arafta

Keyboardist

Mediterra [2020 – Current]

2-Song Ep "Beni Anlat" and a single "Unknown"
MEDITERRA / SPOTIFY, APPLE MUSIC, YOUTUBE and more

Musician

Solo Project [2021 – Current]

Ka-Fa 1500:
8-Song Album "Everyone is Confused" and a 4-Song Ep
"The_Trrektor.exe"
SPOTIFY, APPLE MUSIC, YOUTUBE and more

Web and Graphic Designer

Arafta [2021 – Current]

City: Izmir

Country: Turkey

Link: tihulu.github.io/arafta

QR Code Menu Website Design and Designing of the QR Code Plate on AI and PS.

Web Designer

Freelancer [2021]

City: Izmir

Country: Turkey

Link: tihulu.github.io/unseverdesign

Portfolio website for Unseverdesign

Astronomy Guide

TUBITAK [2019]

City: Eskişehir

Country: Turkey

Sivrihisar Science Fest Organized by TUBITAK (4007 Project)

Astronomy Guide

TUBITAK [2018]

City: Ankara

Country: Turkey

Altindag Science Fest Organized by TUBITAK (4007 Project)

Organization of a physics summit

Interscholastic Physics Students' Summit (IPSS) [2018]

City: Istanbul

Country: Turkey

Organization Committee in 1st Interscholastic Physics Students' Summit (IPSS)
ISTANBUL TECHNICAL UNIVERSITY

Organization of an astronomy conference

Amateur Astronomy Society of METU [2017]

City: Ankara

Country: Turkey

Organization Committee in 1st Dilhan Eryurt Astronomy Day

MTA Museum Guide & Photographer

BIOGEN Society of METU [2017]

City: ANKARA

Country: Turkey

11th Aykut Kence Evolution Conference

LANGUAGE SKILLS

Mother tongue(s): **Turkish**

Other language(s):

English

LISTENING C1 READING C1 WRITING C1

SPOKEN PRODUCTION C1 SPOKEN INTERACTION C1

German

LISTENING A1 READING A2 WRITING A1

SPOKEN PRODUCTION A1 SPOKEN INTERACTION A1

DIGITAL SKILLS

Web: HTML, CSS / Music Production: Logic Pro X, Cubase, Reaper / Others: Photoshop & GIMP, Familiar with Linux & Mac OS environments, Rasp-berry Pi & Arduino / Quantum Computing: Qiskit, Qiskit Aqua, Qutip, Cirq / Computer Languages: Python, C Anaconda Spyder/Jupyter, Spyder MATLAB & Octave / Astrophysics: SAO Image DS9, Fermitools, fermipy, CIAO, CALDB, XSPEC

REFERENCES

References from my undergraduate university

[2022 – Current]

For Quantum Computing: Dr. OSMAN BARIŞ MALCIOĞLU, mbaris@metu.edu.tr

For Computational Physics: Prof.Dr. ALİ MURAT GÜLER, amg@metu.edu.tr

For Quantum Information: Prof.Dr. SADİ TURGUT, sturgut@metu.edu.tr