

Alper Şahistan

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Formal Education/Degree

Master of Science in Computer Engineering

Department of Computer Engineering - Bilkent University

September 2019 – July 2021(Ongoing)

- **CGPA:** 3.52/4.00
- **Current Research:** Ray-traced **Direct Volume Rendering** with RTX acceleration over Tetrahedral Meshes
- **Past Research:** GPU accelerated Fast&Efficient Tetrahedral Mesh Traversal for **Ray Tracing**
- **Supported (both researches)** (January 2019 - November 2020) by The Scientific and Technological Research Council of Turkey(TUBITAK) project no:117E881
- **Advisor:** Prof. Uğur Gündükbay
- **Relevant Courses:** Ray Tracing(from METU), Computational Geometry

Bachelor's Degree in Computer Engineering

Department of Computer Engineering - Bilkent University

August 2015 – June 2019

- **CGPA:** 3.40/4.00 (Honor Student)
- **Elective Research Course:** GPU accelerated Fast & Efficient Tetrahedral Mesh Traversal for **Ray Tracing**
- **Relevant Courses:** Computer Graphics, Parallel Computing, Algorithms I

Experience

Programming Languages course Teaching Assistant

Bilkent University

September 2019 – current

- Grading projects, assignments for the course given by Prof. H. Altay Güvenir.

Computer Organisation course Teaching Assistant

Bilkent University

September 2019 – current

- Tutoring and grading labs by Prof. H. Özcan Öztürk.

Engine Programming Intern

TaleWorlds Entertainment

June 2018 – July 2018

- Implemented C++ tools for 3D model exporter. Tool allowed rigid-body and LOD meshes to be exported in desired format with a single console command or GUI control.

Relevant Projects

RTX-umesh-renderer

2020 – current

- Experimental renderer for RTX accelerated direct volume rendering research

Chroma Ray Tracer

2019 – 2020

- github.com/chroma-works/Chroma-RayTracer
- Blog:chroma-works.github.io/Chroma-RayTracer
- Fully realised **Path Tracer** with **OpenGL** raster preview renderer
- Features: texturing, normal maps, bump maps, BRDF materials, A. aliasing, HDR imaging and **(PBRT)BVH** acceleration.

Neptune Renderer

2018 – 2020

- Experimental renderer for Fast & Compact Tetrahedral Mesh Traversal research

Chroma Engine

2019 – 2020

- github.com/chroma-works/Chroma-Engine
- A render engine written with **C++** **OpenGL**

Computer Skills

Programming Languages:

• C++, CUDA, GL/SL

• C, Java

• C#, JavaScript, MATLAB

• python

- Other:Unity Engine, Unreal Engine, Blender

Languages

English, Turkish

Spanish, German

References

References are available on request.