

# Alper Şahistan

PhD Student - University of Utah - School of Computing

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## Formal Education/Degree

Ph.D. in Computing Science

School of Computing - University of Utah

August 2022 – ongoing

- Accepted as fellow.

M.Sc. in Computer Science

Department of Computer Engineering - Bilkent University

September 2019 – July 2022

- CGPA: 3.52/4.00
- Current Research subjects:
  - Direct Volume Visualization, Scientific visualization.
  - Collaborating with Dr. Ingo Wald
- Past Researches:
  - GPU accelerated Fast & Efficient Tetrahedral Mesh Traversal for Ray Tracing
- Supported (January 2019 - November 2020) by The Scientific and Technological Research Council of Turkey(TUBITAK) project no:117E881
- Advisor: Prof. Uğur Gündükbay

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

Teaching Assistant

Bilkent University

September 2019 – May 2022

- Programming Languages course: Grading projects, assignments for the course given by Prof. H. Altay Güvenir.
- Computer Organisation course: Tutoring and grading labs by Prof. 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.
- Realised a C# script to simulate motion of waves for floating objects to enhance the scenes.

## 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

## Computer Skills

- Programming Languages:
  - C++,CUDA,C,GLSL
  - JavaScript, Java
  - python C#, MATLAB
- Other:Unity Engine, Unreal Engine, Blender

## Languages

English, Turkish  
Spanish, German

## References

References are available on request.