Alper Şahıstan

MSc Student - Department of Computer Engineering - Bilkent University

@ alpersahistan@gmail.com alper.sahistan.bilkent.edu.tr Ankara, Turkey www.github.com/STLKRv1
in www.linkedin.com/in/alper-sahistan

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 subjects:**
  - Direct Volume Visualization(DVR), Delta-tracking, Web based visualization.
  - Remotely co-advised by Dr. Ingo Wald(@NVIDIA)
- **Past Researches:**
  - Ray-traced Shell Traversal of Tetrahedral Meshes for DVR
  - 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 Güdükbay
- **Relevant Courses:** Ray Tracing(from METU), Computational Geometry

Bahcelor'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 – current

- **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,WGSL** ●●●●●
  - **JavaScript, Java** ●●●●○
  - **C#, MATLAB** ●●●○○
  - **Python** ●●○○○
- Other:Unity Engine, Unreal Engine, Blender

Languages

English, Turkish ●●●●●
Spanish, German ●○○○○

References

References are available on request.