Alper Şahıstan,

Curriculum Vitae

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Department of Computer Engineering, Bilkent University, Ankara, Turkey.
http://alper.sahistan.bilkent.edu.tr
alper.sahistan@bilkent.edu.tr
@stlkr_v1
www.github.com/STLKRv1

Education and Qualifications

2015–2019 Bilkent University Department of Computer Engineering
2019–2021 M.Sc. Bilkent University Department of Computer Engineering

Current Position

2019–2022 **(M.Sc.)Research &Teaching Assistant**, Bilkent University Department of Computer Engineering

- **Advisor:** Prof. Uğur Güdükbay

Areas of Specialization

My areas of research include **ray tracing, volume rendering, visualization and computer graphics**. I am also interested in high-performance computing and computational geometry.

Research

- I have been working with Prof. Güdükbay since my 3rd year as a undergrad(2018) on various topics including but not limited to; **volume rendering, acceleration structures, ray tracing** . We have recently started collaborating with Dr.Ingo Wald, Stefan Zellmann, and Nate Morrical.
  - **Our short paper was accepted to IEEE VIS 2021.**
- My current research projects revolve around scientific visualization, ray tracing:
  - We are working to extend the aforementioned short paper to work on clustered domains using MPI.
  - I am working with Nate Morrical separately on a Delta-tracking related project.
  - I am also collaborating with a team lead by Will Usher and Valerio Pascucci on a web based visualization project which utilizes WebGPU.
- I have also worked on a project funded by The Scientific and Technological Research Council of Turkey(TUBITAK) project no:117E881 which proposed compact tetrahedral-meshes as acceleration structures for ray tracing.

Experience

2019– **Teaching Assistant to Programming Languages course:** Grading projects,assignments for the course given by Prof.H.Altay Güvenir.
2019– **Teaching Assistant to Computer Organisation course:** Tutoring and grading labs by Prof.Özcan Öztürk.
2018 **Engine Programming Intern**, TaleWorlds Entertainment

Short Papers

1. Sahistan, A, S Demirci, N Morrical, S Zellmann, A Aman, I Wald, and G Uğur (2021). Ray-traced Shell Traversal of Tetrahedral Meshes for Direct Volume Visualization. In: *2021 IEEE Visualization Conference (VIS) (to appear)*, pp.1–5.