Alper Şahıstan,

Curriculum Vitae

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Current Position

2022–current **Ph.D. Student**, University of Utah School of Computing **Advisor:** Valerio Pascucci

Education and Qualifications

2019–2022 M.Sc. Bilkent University Department of Computer Engineering **CGPA:3.52**
2015–2019 B.S. Bilkent University Department of Computer Engineering **CGPA:3.40**
2011–2019 Ankara University Private High School

Areas of Specialization

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

Research

- Currently working with Prof. Valerio Pascucci of the University of Utah alongside Dr. Ingo Wald, Dr. Stefan Zellmann, and Nate Morrical on scientific visualization and volume rendering projects.
- I have performed research with Prof. Güdükbay of Bilkent University between 2018-2022 on various rendering-related topics. We have remotely collaborated with Dr. Ingo Wald, Dr. Stefan Zellmann, and Nate Morrical for multiple publications.
- Our research during my M.Sc. was 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

2019–2022 **Teaching Assistant to Programming Languages course:** Grading projects,assignments for the course given by Prof. H. Altay Güvenir.
2019–2022 **Teaching Assistant to Computer Organisation course:** Tutoring and grading labs by Prof. Özcan Öztürk.
2018 **Engine Programming Intern**, TaleWorlds Entertainment

Publications

Full Papers

1. N. Morrical, A. Sahistan, U. Güdükbay, I. Wald, and V. Pascucci (2022). Quick Clusters: A GPU-Parallel Partitioning for Efficient Path Tracing of Unstructured Volumetric Grids. In: *2022 IEEE Visualization Conference (VIS)*.
2. S. Zellmann, I. Wald, J. Barbosa, S. Demirci, A. Sahistan, and U. Güdükbay (2022). Hybrid Image-/Data-Parallel Rendering Using Island Parallelism. In: *The 12th IEEE Symposium on Large Data Analysis and Visualization*.
3. S. Zellmann, I. Wald, A. Sahistan, M. Hellmann, and W. Usher (2022). Design and Evaluation of a GPU Streaming Framework for Visualizing Time-Varying AMR Data. In: *Eurographics Symposium on Parallel Graphics and Visualization*. Ed. by R. Bujack, J. Tierny, and F. Sadlo.

Short Papers

1. A. Sahistan, S. Demirci, N. Morrical, S. Zellmann, A. Aman, I. Wald, and U. Güdükbay (2021). Ray-traced Shell Traversal of Tetrahedral Meshes for Direct Volume Visualization. In: *2021 IEEE Visualization Conference (VIS) Short Papers*.

Honors& Rewards

2022 Best Paper Honorable Mention*IEEE Visualization Conference(VIS)*