Neng Shi

Contact Information

GRAVITY research group
Ohio State Univerisity
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Research Interests

Scientific visualization, machine learning

Education

Department of Computer Science and Engineering, The Ohio State University, OH
Ph.D. in Computer Science and Engineering, 2019-
G.P.A. 3.87/4.0

School of Earth Sciences, Zhejiang University, Hangzhou, China
B.S. in Geographic Information Science, 2014-2018
G.P.A. 3.81/4.0

Publications

- **Neng Shi**, Jiayi Xu, Haoyu Li, Hanqi Guo, Jonathan Woodring, and Han-Wei Shen *VDL-Surrogate: A View-Dependent Latent-based Model for Parameter Space Exploration of Ensemble Simulations,* IEEE Transactions on Visualization and Computer Graphics (Proc. IEEE VIS 2022), 2022. (**Best Paper Honorable Mention Award** at IEEE VIS 2022)
- **Neng Shi**, Jiayi Xu, Skylar W. Wurster, Hanqi Guo, Jonathan Woodring, Luke Van Roekel, and Han-Wei Shen *GNN-Surrogate: A Hierarchical and Adaptive Graph Neural Network for Parameter Space Exploration of Unstructured-Mesh Ocean Simulations,* IEEE Transactions on Visualization and Computer Graphics (Proc. IEEE PacificVis 2022, Acceptance Rate: 5/75=6.67%), 28(6):2301-2313, 2022.
- **Neng Shi**, Yubo Tao *CNNs based Viewpoint Estimation for Volume Visualization,* ACM Transactions on Intelligent Systems and Technology (TIST), Volume 10 Issue 3, May 2019

Experiences

Graduate Research Associate
Aug.2020-
The Ohio State University

Exploration and visualization of ensemble datasets with deep learning.

Summer Research Assistant Intern
May.2020-Aug.2020
Argonne National Laboratory

Worked on surrogate models for mining teleconnections in climate systems.

Summer Research Assistant Intern
July.2020-Aug.2020
Los Alamos National Laboratory

Worked on using deep surrogate models to approximate ocean simulation functions, helping simulation parameter space exploration.

Teaching Assistant
Jul.2017-Sept.2019
NineChapter Algorithm

TA for algorithm and artificial intelligence. Was responsible for communicating and answering questions and reviewing the course project.

Undergraduate Research Assistant   Jul.2017-Sept.2019
Zhejiang University

Worked on using CNN models to estimate one given volume rendering image's viewpoint and help viewpoint selection.

Skills

Languages: C/C++, Python, JavaScript
Graphics and Data Visualization: OpenGL, WebGL, GLSL, D3.js
Machine Learning: PyTorch

Honors and Awards

- Best Paper Honorable Mention Award, the IEEE Visualization Conference 2022 (IEEE VIS 2022).
- University Fellowship, The Ohio State University, 2019-2020
- Zhejiang University Academic Scholarship, 2014-2015, 2015-2016
- Third Prize in Zhejiang University Student Programming Competition, 2016
- First Prize in China NOIP (National Olympiad in Informatics in Provinces), 2012

Services

Reviewer

- IEEE VIS, 2022