

My research interest mainly focus on the large-scale data visualization and analysis, high-performance computing, computer graphics and machine learning. We have carried out various projects to help scientists handling and analyzing their large-scale data, such as: cosmological, turbine and climate datasets. We are interested in developing deep learning based techniques to facilitate scientific data analysis.

### Techniques used in study

In-situ data processing; Message passing interface; GPU programming (CUDA, Thrust); Information Theory; Statistical-based techniques; Volume rendering; Isosurface extraction; Visualization Tool Kit (VTK); Paraview; Data-driven document; Super-resolution techniques; Generative Adversarial Network; Convolutional neural network;

### Ko-Chih Wang, Assistant Professor

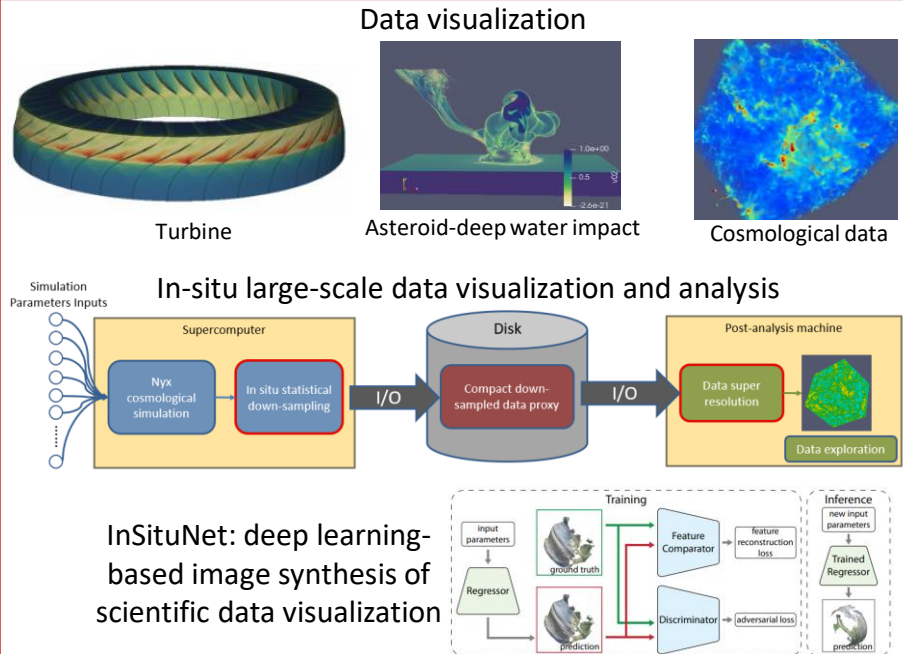
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### Background:

PhD in Computer Science and Engineering,  
The Ohio State University,  
Columbus, OH, USA

### Funding:

National Taiwan Normal University



### Publications

- Ko-Chih Wang, Tzu-Hsuan Wei, Shareef Naeem, and Han-Wei Shen, “Ray-based Exploration of Large Time-varying Volume Data Using Per-ray Proxy Distributions”, IEEE Transactions on Visualization and Computer Graphics, 2019.
- Wenbin He, Junpeng Wang, Hanqi Guo, Ko-Chih Wang, Han-Wei Shen, Mukund Raj, Youssef S. G. Nashed, , and Tom Peterka, “InSituNet: Deep Image Synthesis for Parameter Space Exploration of Ensemble Simulations”, IEEE Transactions on Visualization and Computer Graphics, 2019. [IEEE VIS 2019 (SciVis) Best Paper Award]
- Subhashis Hazarika, Haoyu Li, Ko-Chih Wang, Han-Wei Shen, and Ching-Shan Chou, “NNVA: Neural Network Assisted Visual Analysis of Yeast Cell Polarization Simulation”, IEEE Transactions on Visualization and Computer Graphics, 2019. [IEEE VIS 2019 (VAST) Honorable Mention]

