CHAYANON (NAMO) WICHITRNITHED

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github.com/namo626

EDUCATION

The University of Texas at Austin May 2020 - Present
Oden Institute for Computational Engineering and Sciences
Ph.D. Computational Science, Engineering, and Mathematics
Advisor: Clint Dawson
GPA: 3.9/4.0
Research areas: storm surge and coastal simulation, numerical methods for fluids, high performance computing

Georgia Institute of Technology August 2016 - May 2020
B.S. Physics with Highest Honor
Minor in Scientific & Engineering Computing
GPA: 3.94/4.00

RESEARCH EXPERIENCE

Graduate Research Assistant May 2021 - Present
Computational Hydraulics Group, Oden Institute

- Developing a coupled continuous/discontinuous Galerkin method based on the ADvanced CIRCulation model (ADCIRC) to improve modeling of storm surge and coastal flooding
- Compound flood modeling: implement and test parametric rainfall models on a discontinuous Galerkin variant of ADCIRC to better capture the interaction of various flooding sources
- Historic Flood level project: working on a project with the Texas Water Development Board (TWDB) on determining worst-case scenario flood level by running ADCIRC simulations for historical storms. Modified a large FEM mesh to a more compact one for use in this project.
- Parallel HEC-RAS: help implementing an MPI-parallel version of the River Analysis System (HEC-RAS)
- MusiKal project: modified a global FEM mesh to a smalller one for use in this project.

Undergraduate Research Assistant 2017 - 2020
Pattern Formation and Control Laboratory, Georgia Tech

- Generated MATLAB simulations of quasi-2D turbulent flows and their visualizations.
- Performed particle image velocimetry (PIV) to compare experimental data with simulation.
- Implemented and tuned recurrent neural networks (RNNs) to predict chaotic trajectories of dynamical systems.
- Tested and optimized parameter estimation algorithms for quasi-2D flows using simulation and experimental data.

TECHNICAL SKILLS

- **Programming** C,C++, Fortran, MPI, OpenMP, Python, MATLAB, Mathematica, Bash, HTML
- **Tools** GNU/Linux, Git, GNU Make, CMake, LaTeX, QGIS, Tracker
- **Research** ADvanced CIRCulation model (ADCIRC), Figuregen, OceanMesh2D

CONFERENCE PRESENTATIONS

- *Developing a Compound Flood Model using the Discontinuous Galerkin Method.* Planet Texas 2050 Conference. University of Texas at Austin, Austin, TX, April 2022.
- *The Impact of Boundary Conditions on Spectral Condensation of Turbulence: Numerics and Experiment.* 71^{st} Annual Meeting of the APS Division of Fluid Dynamics. Georgia World Congress Center, Atlanta, GA, November 2018.

HONORS & AWARDS

- National Initiative for Modeling and Simulation (NIMS) graduate fellowship, 2020 - 2024
- Runners up - Planet Texas 2050 Symposium Student Poster Competition, April 2022
- Faculty Honors, Fall 2016 - Spring 2018

ADDITIONAL INFORMATION

- **Languages** Fluent in Thai
- **Work Eligibility** Extended eligibility to work in the U.S.