

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: Simulation of hurricane storm surge and coastal flood, numerical methods for fluids
- Relevant coursework: High-performance Computing, Stabilized Methods for CFD, Numerical Analysis, Fluid Dynamics, Conservation Laws, Applied Analysis

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 finite element method based on the ADvanced CIRCulation model (ADCIRC) to improve modeling of storm surge and coastal flooding
- Implement and test parametric rainfall models on DG-SWEM, a discontinuous Galerkin variant of ADCIRC to better capture the interaction of various flooding sources in compound floods
- Working with the Texas Water Development Board (TWDB) to determine worst-case scenario flood levels by running parallel ADCIRC simulations for historical storms with extreme levels of surge or river discharge
- Prepared and validated compact finite element meshes of the Gulf of Mexico using OceanMesh2D and QGIS for use in multiple projects

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, L^AT_EX, 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.* 71st 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.