Chawit "Poom" Kritpracha

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Education

University of Colorado Boulder, Boulder, CO **Aug 2023 - Present**

Ph.D. Student

Rice University, Houston, TX **Aug 2019 - May 2023**

Bachelor of Arts, Computational and Applied Mathematics

Mathematics

Graduated with a Distinction in Research and Creative Work

Research Experience

Undergraduate Researcher **May 2022 - Present**

Rice University

- Worked on modeling a closed-loop compartmental model for solute transport in the human circulatory system with applications to Exercise and the Fontan circulations.
- Presented results at the Gulf Coast Undergraduate Research Symposium (awarded Outstanding Session Presentation) and Purdue Engineering Virtual Graduate Showcase.
- Supervised by Dr. Beatrice Riviere and Dr. Charles Puelz.

Undergraduate Research Assistant **Jan 2022 - May 2022**

Rice University

- Implemented dynamically indicating algorithms for a partial differential equation solver that determines between the usage of a finite volume method and discontinuous-Galerkin method in MATLAB.
- Supervised by Dr. Boqian Shen and Dr. Beatrice Riviere.

Cofounder – Team member **Sep 2019 - Sep 2020**

International Physicists' Tournament

- Cofounded the Rice University team with support from the Physics and Astronomy department.
- Placed third in internationals hosted by University of Warsaw.
- Placed first in nationals hosted by University of California, Berkeley.

Senior Design Project **Aug 2022 - Present**

Rice University – Worley

- Working on adopting algorithms to identify complex objects from a point cloud data set via machine learning.
- Working as part of senior design project and in collaboration with Worley Ltd.

Teaching & Mentoring Experience

Teaching Assistant **Aug 2023 - Present**
University of Colorado Boulder

- Caluclus I (Fall 2023), Calculus II (Spring 2024)
- Hosted weekly lectures going over the week's material and problem sets.

Rice Learning Assistant **Aug 2021 - May 2022**
Rice University

- Introduction to Engineering Computation (CAAM 210) with Dr. Anastasiya Protasov.
- Hosted weekly lectures going over the week's material, and devised hands-on coding examples to prepare students for the week's assignment.

Teaching Assistant **Aug 2020 - Dec 2020**
Rice University

- Single Variable Calculus I (MATH 101) with Dr. Jacob Russell-Madonia.
- Facilitated and moderated in-class group discussions in a flipped classroom environment.

New Student & Orientation Week Advisor **Aug 2020 - May 2021**
Rice University

- Advised a cohort of incoming students during the university's orientation week and the following school year.

Team Mentor & Juror **Jul 2020**
Institute for the Promotion of Teaching Science and Technology Bangkok, Thailand

- Mentored Thailand's national team in their preparation for the 2020 International Young Physicists' Tournament (online).
- Nominated and served as one of the jurors for the competition.

Awards & Honors

Michael Ross Franco Award **12/07/2022**

Award given to Rice undergraduates who are exemplary computational and applied math students.

Work Experience

Grader

- Introduction to Engineering Computation (CAAM 210) **Aug 2021 - May 2022**
- Single Variable Calculus I (MATH 101) **Aug 2020 - Dec 2020**

Technology Assistant **Aug 2020 - May 2021**
Rice University

- Aided instructors in setting up and facilitating a hybrid or fully-online classroom.

Presentations

Gulf Coast Undergraduate Research Symposium **10/08/2022**

A Zero-Dimensional model for Solute Transport in the Human Circulatory System,

Hosted by Rice University. Awarded Outstanding Session Presentation.

Purdue Engineering Virtual Graduate Showcase **09/26/2022**

A Zero-Dimensional model for Solute Transport in the Human Circulatory System,

Hosted by Purdue University.

CMOR Graduate Seminar **01/18/2023**

Modeling Exercise and Exercise Capacity in Fontan Patients,

Hosted by CMOR Department, Rice University.

Languages

Programming MATLAB (proficient), Python (intermediate), C/C++ (novice)

Markup LaTeX (proficient), HTML (novice)

Spoken English (native), Thai (native)