Chawit "Poom" Kritpracha

poom@rice.edu — https://poom77.github.io.

Education

Rice University, Houston, TX   **Aug 2019 - May 2023 (expected)**

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**

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** | **Michael Ross Franco Award** | **12/07/2022** |
| **& Honors** | 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.

Housing and Dining Student Worker   **Jan 2020 - April 2020**
Rice University
- Operated cashier deck and did maintenance at one of the university's dining hall.

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)