Trung Vu

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Citizenship: Vietnam

Research interests

Algebraic combinatorics, cluster algebra, combinatorial aspects of vertex models, exactly solved models and integrable systems

Education

2020 – Present **University of Illinois at Urbana-Champaign** – Urbana, Illinois
PhD in Mathematics
Mentors: Professors A, B.

2020 – 2021 **University of Illinois at Urbana-Champaign** – Urbana, Illinois
Master of Science in Mathematics
Mentors: Professors A, B.

2016 – 2020 **St. Olaf College** – Northfield, Minnesota
BA in Mathematics with concentration (minor) in Neuroscience

Honors and scholarships

2018 Pi Mu Epsilon Mathematical Honor Society

2019 Steen Fellowship (St. Olaf College)
$4,170 to fund independent summer research project

Publications

2017 **Matrix square roots of polynomials**
Kosmas Diveris, Trung Vu
Pi Mu Epsilon Journal.

Research experience

At. St. Olaf College

Fall 2017 – Spring 2019

Pupillometry and Auditory Cognition in Normal Hearing Listeners, Hearing Impaired Individuals and Cochlear Implant Users
Mentors: Professor Jeremy Loebach (St. Olaf College).
Project investigating auditory and neurocognitive mechanisms that givse rise to accurate speech perception in a variety of listening environments in normal hearing, hearing impaired and cochlear implant users. Responsibility include testing participants in a multipart auditory neurocognitive battery, setting up and running the eye tracker for pupillometry measurements, helping condition and analyzing data.

Fall 2017-Sping 2020

Free field sound localization using the SoLoArc Project
Mentors: Professor Jeremy Loebach (St. Olaf College).
Project focuses on using SoLoArc (Sound Localization Arc) – a student-made portable sound localization apparatus – to test the ability to localize sound in horizontal space using interaural time difference (ITD) and interaural level difference (ILD), and in vertical space using head-related transfer functions and filtering. We developed the graphical user interface (GUI) for the SoLoArc. The GUI gave students who have had limited coding experience in MATLAB easily access and use the device, allowing it to be used in classes with less supervision. We designed and improved the automated pointing system using a potentiometer and a servo for more precise sound indication.

Teaching experience

At. St. Olaf College

Fall 2017

Teaching assistant, Chem 121: Course name here (University)
Topics and description of your responsibilities. Aliquam volutpat est vel massa. Sed dolor lacus, imperdiet non, ornare non, commodo eu, neque.
Average student rating: X/5.

Spring 2020

Teaching assistant, MATH 234: Course name here (University)
Topics and description of your responsibilities. Aliquam volutpat est vel massa. Sed dolor lacus, imperdiet non, ornare non, commodo eu, neque.
Average student rating: X/5.

Talks and tutorials

Month Year

Title of your most recent presentation
Name of conference, workshop, seminar, etc., or a description

Month Year

Title of your second most recent presentation
Name of conference, workshop, seminar, etc., or a description

Month Year — Title of your third most recent presentation
Name of conference, workshop, seminar, etc., or a description

Mentorship and service

Month Year – Present — **Title of organization you are in (Name of your role)**
Description of your responsibilities. Integer pretium semper justo. Proin risus. Nullam id quam. Nam neque. Phasellus at purus et lib ero lacinia dictum.

Month Year – Month Year — **Title of organization you were in (Name of your role)**
Description of your responsibilities. Integer pretium semper justo. Proin risus. Nullam id quam. Nam neque. Phasellus at purus et lib ero lacinia dictum.

Professional memberships

Year – Present — Name of professional society
Short description or conferences you attended.

Year – Present — Name of professional society
Short description or conferences you attended.

Technical skills

Programming languages
Proficient in: Python, MATLAB, R, HTML, CSS, LaTeX
Familiar with: C++, Julia

Software
Proficient in: Sage, Mathematica, Macaulay2
Familiar with: Tensor Flow, Arduino packages from MATLAB, Pupil Labs (Eye-tracking devices software)

Languages
English (fluent), Vietnamese (fluent)