

Isaac Ngui

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EDUCATION

2020 – Present

University of Illinois Urbana-Champaign

Expected Graduation: May 2025
Ph.D. in Computer Science
Advised by Prof. Nancy Amato
GEM Fellow

2016 – 2020

University of Wisconsin – Milwaukee

Bachelor of Science in Computer Science
Minor in Math
Graduated Cum Laude
GPA: 3.649/4.000

AWARDS

- GEM 2020 University Fellow
- 2020 Golub CS Fellowship
- UWM Computer Science Graduating Student Award
- McNair Scholar Summer Research Grant
- UWM Lawton Scholar, Fall 2018-Spring 2019
- Deans Honor List: Fall 2016-Spring 2017, Fall 2018-Spring 2020
- STEM-Inspire Scholar 2019, 2020

RESEARCH

EXPERIENCE

07/2020-Present

Researcher

Parasol Lab
Dr. Nancy Amato
Researching planning under uncertainty and planning with sensors.

05/2020-08/2020

Summer Researcher

Parasol Lab
Dr. Nancy Amato
Developed an annotated bibliography on the topic of planetary path planning and navigation.

02/2019-07/2020

Research Assistant

UWM Biorobotics Laboratory
Dr. Mohammad Rahman
Developing an adaptive coordinated control system for a team of three wheeled omnidirectional mobile manipulators to carry rigid objects along a predefined trajectory. Developed using MATLAB Simulink and C/C++

Technology Lead

04/2018-05/2020 RockSat-C
Students for the Exploration and Development of Space (SEDS)
Create a science experiment payload for a sounding rocket to measure the shielding effects of different materials that have been known to block harmful radiation. Payload was launched into space on June 20th, 2019 at NASA's Wallops Flight Facility and results are still being processed.

- FUNDING**
- \$8000 2020 Golub CS Fellowship
 - \$2500 2020 UIUC Summer Pre-Doctoral Institute Research Grant
 - \$2800 McNair Scholar Summer Research Grant
 - \$1750 Support for Undergraduate Research Fellow (SURF)

**RELEVANT
WORK**

EXPERIENCE *Software Developer Intern*

- 03/2017-08/2017 Pixel Hangers
- Programmed VB.NET add-ons for Microsoft applications to enhance features of their content management system
 - Used agile to build large software application with group of 8 people
 - Taught new intern how to use VB.NET for the content management system

- OUTREACH**
- Volunteer Coding and Robotics Instructor, Central City Cyber School, Milwaukee, WI, 2019
 - Mentor, 2019 Black Male Summit, University of Wisconsin – Milwaukee, 2019

TEACHING EXPERIENCE

- Teaching Assistant:
 - CS 491: Professional Development, Prof. Nancy Amato, Fall 2020

POSTER PRESENTATIONS

- **Ngui, I.** “Trajectory Tracking Control of Three Wheeled Omnidirectional Mobile Robots”, Advised by Dr. Mohammad H. Rahman, Baylor University McNair Research Conference, Waco, TX, September 2019
- Krause, K., **Ngui, I.**, Roth, W., Gomez, D. “Students for the Exploration and Development of Space”, UW System Symposium, Green Bay, WI, April 2019

ORAL PRESENTATIONS

- **Ngui, I.** “Planetary Path Planning”, Advised by Dr. Nancy Amato, University of Illinois Urbana-Champaign Summer Pre-Doctoral Institute, Champaign, Illinois, August 2020

- **Ngui, I.** “Trajectory Tracking Control of Three Wheeled Omnidirectional Mobile Robots”, Advised by Dr. Mohammad H. Rahman, Baylor University McNair Research Conference, Waco, TX, September 2019
- **Ngui, I.** “Trajectory Tracking Control of Three Wheeled Omnidirectional Mobile Robots”, Advisor Dr. Mohammad H. Rahman, 28th Annual McNair Research Presentations, Milwaukee, WI, August 2019

SKILLS

- Programming Languages: Java, C/C++, Python,
- Software: MATLAB, MATLAB Simulink

OTHER EXPERIENCE

- Designing Tether Management System to provide power to aquatic robots collecting trash in rivers
- FIRST Tech Challenge, FIRST Robotics 2012-2016