

JENS WIRA **PhD Student, UMCES**

701 E PRATT ST, 21202, BALTIMORE, MD, USA || +1 (443) 529-7424 || JWIRA@UMCES.EDU

8 LAKEPOINT DRIVE #03-48, SINGAPORE || +65 9838 2654

LANGUAGES SPOKEN: ENGLISH, MANDARIN, BAHASA INDONESIA/MELAYU, HOKKIEN, TEOCHEW

EDUCATION

University of Maryland Center of Environmental Sciences 2020 - Present	DOCTORAL STUDENT, MARINE ESTUARINE ENVIRONMENTAL SCIENCES GRADUATE PROGRAM 4.00 GPA Graduate Research Assistant, Place Lab, IMET Teaching Assistant – MEES687 (Next Generation Sequencing) 2023 & 2024 Ratcliffe Environmental Entrepreneur Fellowship Programme, 2021 University of Maryland Dean's Fellowship, 2020
John Hopkins University 2021-2022	VISITING SCHOLAR, WHITING SCHOOL OF ENGINEERING <i>Data processing for digital holographic microscopy data</i> Katz Lab, Department of Mechanical Engineering
National University of Singapore 2015-2019	B.SC (HONS), MAJOR IN CHEMISTRY, MINOR IN AQUATIC ECOLOGY 4.22 CAP, Dean's List Semester 1 AY 2018/2019 Overseas Undergraduate Research Opportunities In Science Project Title: <i>Polyketide Synthesis in Amphidinium carterae Under Differing Growth Conditions</i>

EMPLOYMENT SUMMARY

Tech-serve Engineering 2019-Present	ASSISTANT ENGINEER 3D design and creation of engineering drawings, failure analysis for damaged components, fabrication and repair of chemical process parts. Facilitated end-user and workshop discussions for the fabrication, and repairs of specialized parts and components, from design to installation Consultant for use of additive manufacturing techniques in accelerating industrial manufacturing and fabrication processes
Singapore Food Agency 2018 - 2019	INTERN, FOODBORNE & NATURAL TOXINS TEAM Food safety testing for regulatory, commercial export, import purposes using trace analytical techniques focusing on fungal, bacterial and marine biotoxins. Automated multiple daily laboratory workflows via Excel and VBA for improved productivity of Biology and Toxins teams
IMET, UMCES, MD 2018	RESEARCH INTERN, PLACE LAB Research project on polyketide synthase pathways and toxin formation in <i>Amphidinium carterae</i> strains under different conditions
BaseCamp Venture Pte. Ltd 2011 - 2020	TEAM LEADER & FREELANCER Personnel & logistics management, planning, and execution, for corporate, teambuilding, school, and sporting events of up to 5000 participants Education, outreach, ambassadorship for adventure sports at national level Full stack development for a virtual running race, including user portal, data tracking and display platform, shopfront sales, and data management

ARMED FORCES SERVICE SUMMARY

Singapore Armed Forces
2013 - 2015

PLATOON COMMANDER, BASIC MILITARY TRAINING CENTER
Enlisted in May 2013, entered Officer Cadet Course in August 2013, commissioned as an Infantry Officer in April 2014, and posted to Basic Military Training, 7th Company as a 2nd Lieutenant. Promoted to 1st Lieutenant and shifted to 6th Singapore Infantry Regiment 'A' Company in Nov 2014. Ended service in May 2015

PRESENTATIONS AND CONFERENCES

US Symposium on Harmful Algae
2021 Presentation - Mitigation and Control
The Use of Flavonoids and Cyclodextrins in Inhibiting Harmful Algal Blooms
2022 Poster & Speed Talk – Microbial Interactions
Benthic Dinoflagellate Swimming

Ocean Sciences Meeting
2022 Poster - Mixotrophs and Mixotrophy: Driving the Direction of Future Research
Digital Holography Microscopy for Studying the Movement of Plankton Populations in 3D

Gordon Research Conference – Phyco/Mycotoxins
2023 Poster
Exploring Gambierdiscus Behavior : A Framework for Observing Movement Patterns Over Multiple Diel Periods

International Conference on Harmful Algae
2023 Poster & Ignite Talk – Ciguatera and Benthic HABs
Shedding Light On Gambierdiscus: Diel Patterns and their Interspecies Variability

International Symposium in OKINAWA, 2023, on Ciguatera and Related Marine Biotoxins
2023 Poster & Talk
Shedding Light On Gambierdiscus: Diel Patterns and their Interspecies Variability

UMBC Guest Lecture
2024 BIOL405/BIOL605 – Advanced Topics in Comparative Physiology
On Benthic HABs and Dinoflagellate Motility, Taxises, Circadian Rhythms

ACADEMIC AWARDS

- MEES Colloquium – Best Poster **2023**
- MEES Colloquium – Best Presentation 2nd Place **2023**
- Ratcliffe Environmental Entrepreneurship Fellowship, Best 3 Final Pitch **2022**
- MEES Colloquium – Best Poster 2nd Place **2022**
- MEES Colloquium – Best Presentation 3rd Place **2021**
- University of Maryland Dean's Fellowship **2020**
- Dean's List (NUS) **2018**

RELEVANT PROFICIENCIES

- High Proficiency in MS Office, Google Suite
 - Microsoft Excel, Word, PowerPoint, including macros and automation in Visual Basic
 - Google Sheets, Docs, Slides, Gmail, linking and automation via GoogleAppScripts
- Coding proficiencies in MATLAB, R, Python/circuitPython, bash/SLURM, HTML/CSS/JS, jQuery
 - Scripting and automation, data processing and analysis, and statistical analysis
 - Website and web service design and automation, data collection and scraping

- Design, 3D Modelling, and Additive Manufacturing
 - Adobe Photoshop, Lightroom, Illustrator, InDesign
 - AutoDesk AutoCAD, Fusion360, manage and operate IMET BASLab 3D Printing Service
- Online, In-situ, Embedded and Edge Devices
 - Setup, deployment, and monitoring of multiple online in-situ water quality for stakeholders
 - Design, engineering, and construction of multiple embedded and edge devices for data collection, including connected devices and deployed data logging devices
- Microscopy and Imaging
 - Brightfield, fluorescence, confocal, flow, holographic, underwater microscopy
 - Design and execution of multiple fit-for-purpose microscope setups, including for long-term culture monitoring, and underwater microscope for substrate monitoring
 - Automated image and video processing and analysis
- Analytical Chemistry – Chromatography and Mass Spectrometry
 - Sample prep and cleanup, method development and validation
 - SCIEX QTRAP 6500+ LC-MS/MS System Advanced Training Course
 - Agilent 6400 Series QQQ LC/MS Techniques and Operation

OTHER CERTIFICATIONS AND PROFICIENCIES

- Team Leadership
 - WSQ - Advanced Certification in Team Leadership
 - 92/13 Infantry Officer Cadet Course, Singapore Armed Forces
 - Team captain for multiple international adventure races, mountaineering expeditions
- Other Competencies
 - Advanced Open Water Diver (PADI)
 - Event planning, management, and execution
 - Multi-day adventure race planning, logistic management, and execution
 - Orienteering, Team Singapore representative