

TACOMA INNOVATION, DISCOVERY & EXPLORATION SYMPOSIUM

UW TACOMA

FRIDAY, NOVEMBER 20, 2026
1:30- 4:30 PM
MILGARD HALL 110

PROGRAM

01:30 PM

INTRODUCTION/OPENING DR. ANDY HARRIS EVCAA

01:45 PM

POSTER SESSION I

02:30 PM

LIGHTNING TALKS

02:45 PM

POSTER SESSION II

03:40 PM

RAFFLE PRIZES AND CLOSING

Biomedical Sciences

1. **Monocular Deprivation Reveals Activity-Dependent Control of Synaptic Spinules in Mouse V1**
   Thalia Staehle, Dr. Marc Nahmani

2. **Arsenic Accumulation in Freshwater Lake Biofilms**
   Kamalpreet Grewal, Ashleigh McKee, Dr. Sarah Alaei

3. **Development of a Truncated Transcription Factor for DNA-binding Studies**
   Kayla Jean Libago, Dr. Hannah E. R. Baughman

4. **Filtyr 33: Using Yeast to Uptake Arsenic from Drinking Water**
   Thalia Staehle, Aurora Alexander, Kyler Hodson, Rashad Muhammad, Beren Lord, Joey Simanek

5. **Measurement of Phytochelatins in Plants to Assess the Impact of Mercury Pollution in the Amazon**
   Kyler Hodson, Dr. Jim Gawel, Dr. Hannah E. R. Baughman

6. **The Successful Purification of *Plasmodium* BEM46-Like Protein (PBLP) from Inclusion Bodies**
   Owen Greenheck, Han To, Dr. Hannah E. R. Baughman

7. **Investigating the Bioremediation Potential of Freshwater Lake Biofilms**
   Shamir Wylie and Dr. Sarah Alaei

8. **Effects of Polymicrobial Interactions on Porphyromonas Gingivalis Biofilm Formation**
   Claire Gilmore, Caitlyn Sevey, Dr. Sarah Alaei

Computer Science

9. **Marine Traffic Mapping For Autonomous Vessel Navigation**
   Tyler Lorentz, Sagar Keshari, Dr. Michael McCourt, Dr. Cassandra Donatelli, Dr. Heather Dillon

10. **Privacy-Preserving AI for Biomedicine**
    Ming-Chun Kao, Steven Golob, Daniil Filienko, Dr. Sikha Pentyala, Dr. Martine De Cock

Electrical Engineering and Computer Engineering

11. **RTL Design and Evaluation of a Mamba-3 Recurrent Accelerator**
    Jaiden Stipp, Dr. Morteza Nabavinejad

Environmental Science

12. **Advancing Arsenic Remediation in the Laboratory: Large Microcosm Investigation of Lanthanum-modified Bentonite and Alum**
Jade McCloud, Zaire Sanders, Chloe Johnson, Sophie McCarragher, Austin Warren, Dr. Jim Gawel

13. **In-lab Study Investigating the Efficacy of Lanthanum-Modified Bentonite as an Arsenic Remediation Treatment in Shallow Freshwater Lakes Using Large Microcosms**
Chloe Johnson, Sophia McCarragher, Aurora Alexander, Zaire Sanders, Jade McCloud, Kaitlyn Turner, Austin Warren, Dr. Jim Gawel

14. **Threat Determination via Chemoreception in Hermissenda Crassicornis**
Amanda P. Hoke

15. **Physical and Biological Conditions in the Upper Toutle River System and Interplay with Invasive New Zealand Mudsnails (NZMS): Possible Impacts on Chinook Salmon Reintroduction**
Ash Breault, Rose Chapman, Emily Raker, Dr. Jim Gawel

16. **Effects of Zero-Valent Iron on Arsenic Immobilization on Lake Sediments**
Aurora Alexander, Chloe Johnson, Sophie McCarragher, Zaire Sanders, Kaytlin Turner, Austin Warren, Dr. Jim Gawel

17. **Evaluating aluminum sulfate (alum) treatment for reducing arsenic mobility in Lake Killarney sediments**
Zaire Sanders, Aurora Alexander, Chloe Johnson, Sophie McCarragher, Kaytlin Turner, Austin Warren, Jade McCloud, Dr. Jim Gawel

Interdisciplinary Arts & Sciences

18. **Kiwi Science: An Investigation of New Zealand's Use of Science in Water Council Meetings and Results**
Christopher Daniels, Sarah Nelligan

Mathematics

19. **Heads and Tails: Building Community Through Vectors**
Adoura Greene, Abby Johnson

20. **Sangaku (Sangacool) Geometry**
Isaiah Hunter, Ariana Torres, Dr. Ryan Card

Mechanical Engineering

21. **Low-cost Manufacturing Methods for Flexible Thermoelectric Generators**
Joshua Klymenko, Dr.Hee-Seok Kim

22. **Development and Setup of Fluids Lab Wind-Tunnel for Academic Use**
Robert Paul Pellegrino, Dr. Cassandra Donatelli, Dr. Heather Dillon

23. **Improving Solar Energy Efficiency and Affordability for a Sustainable Future**
Rithyvong Sambath

24. **Preliminary Assessment of Tidal Energy Feasibility Across Multiple Sites in Washington State**
Dani Cortez, Nicholas French, Ali Manhal, Danielle Platt, Diandra Rodriguez, Issac Waithaka. Co-authors: Emanuel Martinez, Rashiq Mazumder, Elijah Facklam, Zachary Hendricks, Eve Trapnell, Davis Loy, Ethan Weight, Logan Vaughan, Matthew Gohar, Tyler Lorentz, Ryan Kulani, Jaiden Milum, Mustafa Najero

25. **Evaluation Of Electromagnetic Fields For Mitigating Ice Formation During Cryopreservation With Dimethyl Sulfoxide**
Noah Humphrey, Rowan Kost, Dr. Zhiquan Shu

Psychology

26. **Students by Day, World-Sculptors by Night: Developing Virtual Reality Scenes to Measure the Survival Memory Advantage.**
Madison M. Gosselin, Heidan N. Nguyen, Joanne Song, Liv Hanson, Dr. I-An “Amy” Su

27. **Voices and Opinions in Childhood Experiences (V.O.I.C.E.): Understanding Adolescent Experiences and Perceptions of Risk**
Lyanna Samaniego, Elisa Bertram, Zoe Cooper, Audrey T. Stowe, Dr.Gus Sjobeck, and Dr. I-An “Amy” Su

28. **Little Voices, Complex Memories: Developing a Child Asylum Interview Paradigm**
Adanya McCoy, Parinda Rodpai, Fernanda Chavez-Hernandez, Lindsay Chargualaf, Ashley E. Soto, Dr. I-An “Amy” Su

29. **Examining the Factor Structure of the Meaning in Life Measure Using a Sample of Students of Color**
Deonte Henderson, Kai Chung Chen, Dr.Jonah Li

30. **Evaluating the effectiveness of the Washington Pattern Jury Instructions**
Addison Fahrney, Dr. Stephen J. Ross

Social Welfare

31. **Navigating Access to Adolescent Mental Healthcare in Washington State**
Shreya Sanders, Dr. Rachel Hershberg

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