

**MAY 18, 2018**

11AM TO 6PM MARY GATES HALL

21ST ANNUAL

# UNDERGRAD RESEARCH SYMPOSIUM

A CELEBRATION OF UNDERGRADUATE  
SCHOLARSHIP AND CREATIVE WORK



APPLICATION  
DEADLINE

**FEB 13TH  
2018**

[symposium.uw.edu](http://symposium.uw.edu)  
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Created by the University of Washington Undergraduate Research Program with the support of Undergraduate Academic Affairs, the Office of Research, the U-W 1000+ Hours Program, the Early Undergraduate Program, and the Mary Gates Endowment for Students.

To request building accommodations, contact the Disability Services Office, addressing it to the on-site coordinator at the event at 206-685-6480 (voice) 206-543-8432 (TDD) 206-685-7344 (text). [uw.edu/dso](http://uw.edu/dso)

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# UW Undergraduate Research Symposium - May 18, 2018

The UW 21st Annual Undergraduate Research Symposium takes place on the UW Seattle Campus at Mary Gates Hall.

*A celebration of undergraduate scholarship and creative work.*

<https://www.washington.edu/undergradresearch/symposium>

Fifty Bothell Students will present their research at the 2018 UW Undergraduate Research Symposium as oral presentations or as a research poster. Below is a guide, organized by session and student last name. We encourage you to come and support our UW Bothell students! Be sure to use #UWSymp if you post about the symposium on social media.

## Oral Presentations

- **Monson, John**, Biology, Mentor: Jeffrey Jensen, *Investigating Population Structure of Sockeye Salmon in Lake Washington and Lake Sammamish*, Marine Ecology and Food Webs, Mary Gates Hall 228, 12:30 PM to 2:15 PM
- **Huynh, Mike Quan**, Biology, Mentor: Derek Stirewalt, *Characterizing the Immunophenotype of Leukemic Blasts and its Impact on Patients with AML*, Biomarkers and Diagnostics, Mary Gates Hall 389, 3:30 PM to 5:15 PM
- **Pham, Katie Hao**, Biology, Health Studies, Mentor: Melissa Maack, *Analyzing the Correlation between Active Learning Practices and Positive Student Outcomes in Introductory Biology*, Centering Our Voices, Mary Gates Hall 251, 3:30 PM to 5:15 PM
- **Abeyta, Austin**, Computer Science & Software Engineering, Mentor: Erika Parsons, *What Happens When You Take an Artificial Intelligence to a Music Studio?* Hot Topics: Robots, AR, CV, AI, Johnson Hall 175, 3:30 PM to 5:15 PM

## Poster Presentations Session #1

**Time: 11:00am - 1:00pm, Location: Mary Gates Hall - Commons East**

- **Hussen, Kadija**, Pre-Major, Mentor: Alka Kurian, *Investigating the Cause of Oppression and Activism within Hindu and Muslim Women Communities, with an Emphasis on India*, Easel-45
- **Jaber, Sommer**, Community Psychology, Society, Ethics, & Human Behavior, Systemic Oppression and Its Impact on Anti-Racism Activism, Easel-46
- **Kallinen-Camelio, Cheyenne**, Extended Pre-Major, Mentor: Seungkeun Choi, *Characterization of Organic Electrochemical Transistor (OECT) with Nafion*, Easel-66
- **Kirchan, Anna Elizabeth**, Electrical Engineering, Chemistry, Mentor: Seungkeun Choi, *Temperature Effect on Organic Electrochemical Transistor*, Easel-67
- **Maack, Melissa**, Extended Pre-Major, Mentor: Bryan White, *A Neurostructural, Neurochemical, and Genetic Analysis of the Pathogenesis of Autistic Spectrum Disorder*, Easel-165
- **Thom, Neele**, Biology, Mentor: Sergei Doulatov, *Investigating the Role of Autophagy in Early Erythropoiesis*, Easel-182
- **Trivisonno, Priscilla**, Community Psychology, Mentor: Charles Collins, *Systemic Oppression and Its Impact on Anti-Racism Activism*, Easel-46
- **Yadav, Kedar**, Pre-Major, Mentor: Andrew Abian, *Structures and Anomalies within the Collatz Conjecture*, Easel-56

## Poster Presentations Session #2

**Time: 1:00 - 2:30pm, Location: Mary Gates Hall - Commons East**

- **Conrad, Mark**, Business Administration, Mentor: Alejandro Francetich, *Designing and Implementing Contracts on a Blockchain*, Easel-1
- **Delizo, Derek**, Electrical Engineering, *Localizing Crow Vocalizations in Social Aggregations*, Easel-108
- **Flett, Derek**, Mechanical Engineering, Mentor: Shima Abadi, *Localizing Crow Vocalizations in Social Aggregations*, Easel-108
- **Guy, Virdie**, Mechanical Engineering, *Localizing Crow Vocalizations in Social Aggregations*, Easel-108
- **Jaber, Sommer**, Community Psychology, Society, Ethics, & Human Behavior, Mentor: William Hartmann, *Culture, Stigma, and Mental Illness in Arab and Arab-American Populations*, Easel-30
- **Kunder, Jessica**, Biology, Warren Gold, *Evaluating Ecological Functions of Campus Trees and Development Impacts*, Easel-35
- **Kwiatkowski, Alan**, Mechanical Engineering, Mentor: Cassandra Wright, *3D Bioprinting of Alginate-Polypyrrole Composites for Biomedical Applications*, Easel-147
- **Souaiaia, Sammy**, Electrical Engineering, Mentor: Harry Aintablian, *Worst-Case Analysis of Analog Circuits*, Easel-103
- **Wang, Ziye (Randy)**, Business Administration, Culture, Literature, and the Arts, Mentor: Deanna Kennedy, *The Internet of Things, Teamwork, and Service Projects*, Easel-58
- **Woo, Jaida**, Pre-Major, *3D Bioprinting of Alginate-Polypyrrole Composites for Biomedical Applications*, Easel-147
- **Yein, Thu**, Mechanical Engineering, *3D Bioprinting of Alginate-Polypyrrole Composites for Biomedical Applications*, Easel-147

## Poster Presentations Session #3

**Time: 2:30 - 4:00pm, Location: Mary Gates Hall - Commons East**

- **Acosta, Camilo**, Biology, Mentor: Cynthia Chang, *Spider Community Assembly on Mount St. Helens*, Easel-23
- **Bilotta, Andrea**, Community Psychology, Mentor: Douglas Wacker, *Is Gap Duration in Crow Calls an Important Source of Information?* Easel-26
- **Cain, Keenan**, Environmental Science, *Mycoremediation of Coliform Bacteria in University of Washington Bothell Wetlands*, Easel-69
- **Cham, Alhagie Bai**, Electrical Engineering, Mentor: Kaibao Nie, *Investigating Novel Noise Reduction Techniques in Hearing Devices*, Easel-89
- **Cofer, Bryan**, Biology, *Winter is Coming: Spatial Dynamics of a Communal Crow Roost*, Easel-25
- **Cook, Michael**, Mechanical Engineering, *Underwater Recording Device*, Easel-108
- **Dehaan, Jeremiah**, Computer Science & Software Engineering, Mentor: Erika Parsons, *Investigating Garbage Collection Design in D*, Easel-55
- **Delizo, Derek**, Electrical Engineering, *Underwater Recording Device*, Easel-108
- **Driscoll, Zachary**, Biology, Mentor: Douglas Wacker, *Winter is Coming: Spatial Dynamics of a Communal Crow Roost*, Easel-25
- **Ferguson, Tara Rose**, Biology, Mentor: Douglas Wacker, *Communal Crow Roosts Induce Changes in Social Behavior of Song Sparrows (*Melospiza melodia morphna*)*, Easel-27
- **Flett, Derek**, Mechanical Engineering, *Underwater Recording Device*, Easel-108
- **Garcia, Jackelyn**, Extended Pre-Major, Mentor: Cynthia Chang, *Phenotypic Plasticity and Transgenerational Epigenetic Modification of *A. thaliana* in Response to Variable Conditions Predicted with Climate Change*, Easel- 24
- **Guy, Virdie**, Mechanical Engineering, *Underwater Recording Device*, Easel-108

- **Huang, Guohao (GoGo)**, Physics, Mentor: Joey Key, *Graviational Wave Data Sorting Enhanced with BayesWave Algorithm*, Easel-48
- **Khalil, Lara (Laura)**, Biology, Mentor: Keya Sen, *Assigning E. coli Isolates from Wetlands to respective Phylo-groups*, Easel-62
- **Maloney, Kellen**, Environmental Science, *Mycoremediation of Coliform Bacteria in University of Washington Bothell Wetlands*, Easel-69
- **Mayer, Ryan**, Environmental Science, Mentor: Rob Turner, *Mycoremediation of Coliform Bacteria in University of Washington Bothell Wetlands*, Easel-69
- **Newton, Jeremy Granville**, Applied Computing, *Is Gap Duration in Crow Calls an Important Source of Information?* Easel-26
- **Nguyen, Molly**, Biology, Mentor: Ellen McGough, *Functional Mobility Analysis and Classification of Turning Strategies in Older Adults*, Easel-127
- **Nguyen, Nancy**, Biology, *Is Gap Duration in Crow Calls an Important Source of Information?* Easel-26
- **Perkins, Jomardee**, Physics, Mentor: Joey Key, *Characterizing Transient Noise in LIGO Data*, Easel-51
- **Qureshi, Urooj**, Mechanical Engineering, Mentor: Shima Abadi, *Underwater Recording Device*, Easel-108
- **Rouske, Jessica**, Pre-Major, *Is Gap Duration in Crow Calls an Important Source of Information?* Easel-26
- **Sharma, Vinayak**, Mathematics, Mentor: Milagros Loreto, *Nonsmooth Spectral Projected Gradient Methods on Convex Sets*, Easel-189
- **Xu, Yiting**, Electrical Engineering, Mathematics, Mentor: Lawrence Lam, *Plant Watering Optimization Using Machine Learning*, Easel-92

#### **Poster Presentations Session #4**

**Time: 4:00 - 6:00pm, Location: Mary Gates Hall - Commons East**

- **Clark, Benjamin**, Computer Science & Software Engineering, Mentor: Pietro Paparella, *On Polynomials that Preserve all Nonnegative Matrices of a Fixed Order*, Easel-18
- **Kumar, Tanya**, Law, Economics & Public Policy, Mentor: Camille Walsh, *A Comparative Analysis on Global Humanity and its Socialized Trends Towards Marginalized Religious Communities*, Easel-7
- **Soomro, Warisha**, Extended Pre-Major, Mentor: William Erdly, *Educating Young Eyes*, Easel-68
- **Yamamoto, Kaitlyn Kuulei Kiyomi**, Computer Science & Software Engineering, *Educating Young Eyes*, Easel-68
- **Yang, Mingyou**, Environmental Science, Mentor: Santiago Lopez, *Association between King County Population's Cardiovascular Disease Rate and Accessibility to Environmental Amenities Using GIS*, Easel-11