



Sciences & Mathematics (SAM)

Newsletter

Winter 2015

Welcome to winter quarter!

Hopefully you all enjoyed quality family time and/or frosty adventures over the break, and are returning refreshed and energized to rise to the challenges of the new year. Let's take a moment to reflect on events and accomplishments of our faculty, staff, and students over the last quarter. This winter we welcome new contingent faculty Alan Bartlett (math), Kelly Biedenweg (ecosystem services), and Olga Shatunova (math/stats). The new classes Animal Behavior, Ecosystem Services, Natural Resource Policy, and Precalculus I are off to a strong start this winter, and students and faculty are busily preparing for their trip to Costa Rica for the Neotropical Ecology course. This coming spring we'll be offering, for the first time, Stream Ecology as a field course, the capstone course TEST495 Environmental Studies Experiences: Giving Garden, Precalculus 2 (the two-quarter alternative to Precalculus), the non-majors math course Spatial and Geometric Reasoning, and Coding Theory. Students can now sign up for Options in Biology or Geosciences, which show up on their transcripts, as opposed to the previous Tracks which were not transcriptable. We are busy developing our new degree programs: a BS in Mathematics, a BS in Biomedical Sciences, and an MS in Environmental Science, under consideration for starting in autumn 2015. Since the academic year started, we've developed a whopping 30 new course proposals or course changes. We are in the process of hiring two new assistant professors (Hydrology, Applied Math/Stats) and several competitively-hired lecturers in math and geology. We are also in the process of hiring the new SAM manager, Michelle Miller (replacing Lia Wetzstein). New courses, new degrees, new staff to support them, and new faculty to teach them—this new year will bring lots of growth and new opportunities for our students.

In these pages, you can read about our papers, presentations, grants, community events, and the successes of our students. Enjoy!



Spotlight on New Faculty

Jeremy Davis:

Jeremy uses field and laboratory experiments to explore how insect decisions are influenced by their physical and social environment. He is particularly interested in exploring how insects use natal information (cues from the environment that their mother chose for them) and social information (cues available from the behavior of other individuals), when making egg-laying decisions. He is also interested in “silver spoon” effects, in which the quality of the environment in which animals develop have long lasting effects on their ability to find, use, and/or defend resources.



Jeremy watching two male walnut flies (one of his study systems) fighting over a fake walnut



Faisal Hossain:

Faisal’s work examines sustainable water resource management through the use of satellite remote sensing tools and hydrologic modeling. He also studies the human impact on weather and climate for improving resilience of large water infrastructures and current engineering practice. His recent capacity building initiative promoting satellite remote sensing has resulted in an independently-owned satellite water management system for South Asian nations.

He has received the NASA Earth System Science Fellowship, NASA New Investigator Award, Fulbright Faculty Award and American Geophysical Union (AGU) Charles Falkenberg Award. He has published over 100 peer-reviewed journal articles, authored an undergraduate-level textbook, edited two book volumes and contributed eight book chapters. His film “Rising Tide” contested in the 2014 Sundance and Berlin Film Festivals. Currently he is working on his second movie that is scheduled for launch in 2015.



Credit: Cheryl Mar-land, CC 2.0

Congratulations On Your Achievements!

Publications

John Banks:

Hudson, L. N., Newbold, T., Contu, S., Hill, S. L. L., Lysenko, I., De Palma, A., Phillips, H. R. P., Senior, R. A., Bennett, D. J., Booth, H., Choimes, A., Correia, D. L. P., Day, J., Echeverría-Londoño, S., Garon, M., Harrison, M. L. K., Ingram, D. J., Jung, M., Kemp, V., Kirkpatrick, L., Martin, C. D., Pan, Y., White, H. J., Aben, J., Abrahamczyk, S., Adum, G. B., Aguilar-Barquero, V., Aizen, M. A., Ancrenaz, M., Arbeláez-Cortés, E., Armbrrecht, I., Azhar, B., Azpiroz, A. B., Baeten, L., Báldi, A., Banks, J. E., et al. 2014. The PREDICTS database: a global database of how local terrestrial biodiversity responds to human impacts. Ecology and Evolution. doi: 10.1002/ece3.1303
<http://onlinelibrary.wiley.com/doi/10.1002/ece3.1303/abstract>

Banks, H.T., Banks, J.E., Link, K., Rosenheim, J.A., Ross, C., and K.A. Tillman. 2015. Model comparison tests to determine data information content. Applied Mathematics Letters 43:10-18.
<http://www.sciencedirect.com/science/article/pii/S0893965914003462>

Peter Horak:

Horak, P. 2014. On graphs with many cycles. Discrete Math. 331, 1-2.

Craig McBride:

McBride, C. 2014. Flipping Math & Stats Classes Advice for Beginners: What I Have Learned Flipping Undergraduate Math & Stats Classes. International Journal for Cross-Disciplinary Subjects in Education (ISSN 2042 6364)

Grants

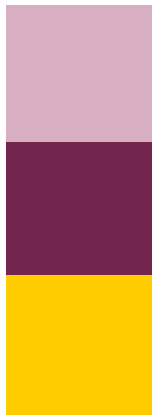
Erica Cline was awarded a grant from the Stuntz Foundation to study metals in wild edible mushrooms using a citizen-science approach (\$2381)

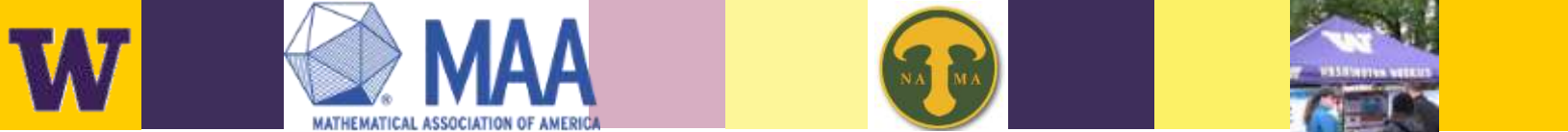
Craig McBride received the Interdisciplinary Research and Teaching Grant (\$3,000)

As of winter 2015, you can sign up for an "Option" in Biology or Geosciences, within the Environmental Sciences degree.

How is this different than the current "Tracks"? The main difference is that the Option will show up on your transcript, while the Tracks will not.

Even more reason to meet with Arlyn or your faculty advisor to see if an option is right for you!





Presentations, Conference & Events

John Banks had an invited talk “The surrogate species approach to protecting biological diversity and ecosystem services: when can we extrapolate from a few species to many?” in a symposium entitled "Entomology's Role in Sustaining Ecosystem Services in Agroecosystems," 62nd Annual Meeting of the Entomological Society of America, Portland, Oregon, November.

Erica Cline presented “Metals in edible wild mushrooms” in The North American Mycological Association annual meeting, Eatonville, WA, October.

Cheryl Greengrove presented a Brown Bag Talk titled "Harmful Algal Blooms in Puget Sound" in December.

Cheryl Greengrove and Julie Masura presented a talk titled "*Alexandrium* cyst distribution and germination in Puget Sound" in the 16th International Conference on Harmful Algae (ICHA), Wellington, New Zealand, October.

Margaret Henderson and Cynthia Stanich gave a presentation on the use of ALEKS in general chemistry at the Washington College Chemistry Teachers' Annual Conference.

Craig McBride was invited to speak at five conferences in four countries over the last term:

“Advice for Flipping Your First Lesson: What I Have Learned Flipping Undergraduate Math & Stats Classes,” London International Conference on Education (LICE-2014).

Published in Peer Review conference proceeding:

<https://drive.google.com/file/d/0B7SIKTsH9KkCRVhrQ1lzNllyOVk/view>

“Flipping Your First Lesson – How to Get Started,” London International Conference on Education (Won Best Workshop Award!)

“Flipping Advice for Beginners: What I Have Learned So Far,” Ireland International Conference on Education (IICE-2014).

Published in Peer Review conference proceeding:

<https://drive.google.com/file/d/0B7SIKTsH9KkCRURVZ3VscVJpMjg/view>

“How Mentoring and Other Induction Program Techniques Can Reduce Attrition Rates of New STEM Teachers,” University of New Mexico, 7th Annual Mentoring Conference.

Published in Peer Review conference proceeding:

<https://drive.google.com/file/d/0B7SIKTsH9KkCRHVXV0FtdVpSUDg/view>

“Start Small and Build: Flipping Advice for Beginners,” Scottish Educational Research Association/World Educational Research Association Annual Conference.

Published in Peer Review conference proceeding:

<https://drive.google.com/file/d/0B7SIKTsH9KkCb1BKSU0tTVhqWXc/view>

Award/Recognition

Peter Horak accepted an invitation to join the editorial board of the International Journal of Mathematics and Statistics, published by Ceser Publications

<http://www.ceserp.com/cp-jour/index.php?journal=ijms&page=index>

Craig McBride was nominated for the 2015 Distinguished Teaching Award for Innovation with Technology.

Congratulations

to the Dolph S. Kleiner
Memorial Scholarship
recipients for 2014:

Alison-Marie Dunn

&

Ryan Brookman!

Events & Updates

National Chemistry Week was celebrated at UWT during October 20th-24th. The theme this year was "The Sweet Side of Chemistry." Special thanks to Aron Rigg for all of his work in shopping, prepping, and helping out at this event! Jenny Quinn's write up on this event is available at:

<http://sections.maa.org/pnw/history/newsletters/2014-2.pdf>

2nd Annual Puyallup River Film Festival: a Competition to Save Our Watershed was held on December 9th. With a generous grant from The Russell Family Foundation, the University of Washington Tacoma hosted the film festival focusing on our own Puyallup River Watershed.



MAA (Mathematical Association of America Northwest sectional and NUMS (Northwest Undergraduate Mathematics Symposium) will be on campus April 10 & 11th!

More info at: <http://depts.washington.edu/maannums>



Dani Litwin presented her poster, "Effect of Soil Inoculation on Ectomycorrhizal Diversity" and
Cherese Bentley presented her poster, "Effects of Biosolids on

Alumni News

Jake Asplund and Levi Keesecker, now graduate students at Washington State University (Dept. of Entomology) and University of Idaho (Dept. of Plant, Soil, and Entomological Sciences), respectively, presented at the 62nd Annual Meeting of the Entomological Society of America, Portland, Oregon

Simone Hoffer (now Simbeck) has started an Environmental Consulting firm in New Zealand with her partner, Ken, after doing extensive water quality monitoring in New Caledonia for another consulting firm.

Thao Le (B.S. 2015) has been accepted into the School of Pharmacy at Washington State University.

Quyen Nguyen (B.S. 2009) has accepted a position as an Environmental Health Specialist at the Tacoma-Pierce County Health Dept.

Chelsie Strowbridge (B.S. 2012) is starting in January at the WA Dept of Ecology as an Environmental Technician in the Water Quality program.

Learn Lake Science at Waughop Lake

UWT is starting work on a year-long study of Waughop lake as part of a management plan for the City of Lakewood. “Learn Lake Science at Waughop Lake” invited the community to join students and faculty from UWT for an afternoon of hands-on lake science. Participants got to go for a boat ride on the lake, learned how limnologists (lake scientists) monitor water quality, took plankton samples and measured what is happening in Waughop Lake.

