

FUN Newsletter



NEUROSCIENCE
2018

NOVEMBER 3-7
SAN DIEGO, CA

Dates to Remember:

- Saturday November 3 **FUN / JUNE Executive Committee Meeting**
9:30 AM - 2:00 PM
Bankers Hill Restaurant
- Sunday November 4 **FUN Social and Poster Session**
6:45 - 8:45 PM
San Diego Marriott Ballrooms 5-7

Call for Abstracts!

Consider submitting an abstract to the FUN Poster Session at this year's annual Society for Neuroscience meeting.

Abstracts are due by **October 1st** and can be submitted online through the FUN faculty website (<http://funfaculty.org/>).

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Upcoming Event - Next Generation Optogenetics: Tools and Applications An SfN Virtual Conference



one of these online conferences before, SfN brings the same careful attention to organization of these events that it does to events at the SfN Annual Meeting.

I hope you'll consider participating in this exciting virtual conference, and suggesting it to your students. By the way, SfN has already released a set of eight training modules focused on optogenetics in preparation for this virtual conference. I highly recommend you take a look at them! Here's the url: <http://neuroonline.sfn.org/Collections/Optogenetics-Training-Series>. Of special note, Module 5 explores the use of optogenetics in the classroom and was prepared by Heather Rhodes, Associate Professor in the Department of Biology and Director of the Neuroscience Program at Denison University. Thanks so much, Heather

In case you or your students are not members of the SfN, I also want to point out that folks who are not members of SfN can access up to 5 Neuroonline resources – including these training modules – each month for free. This should be an especially useful benefit for students in your courses, who may not be inclined to join SfN for the purpose of your neuroscience courses but would still like to access important material on Neuroonline.

— **Julio Ramirez**
Davidson College

I wanted to bring your attention to the Virtual Conference SfN is holding on **September 20** titled **“Next Generation Optogenetics: Tools and Applications.”** Organized by Alexandra Nelson (UCSF) and Veronica Alvarez (NIAAA), the [agenda](#) is packed with 19 outstanding speakers, including Karl Deisseroth, Rob Malenka, Ed Boyden, and Viviana Gradinaru. Topics include the development of new and innovative opsins, the use of optogenetics to understand circuit dysfunctions underlying human disease, and applications of optogenetics in different species.

Virtual Conference registration is \$50 for SfN members (\$150 for nonmembers), and SfN encourages those interested to organize viewing parties and invite others to watch it live, for a single fee. The virtual conference will also be available on-demand after September 20 for those registered to access content they may have missed or want to view again. For those who haven't participated in

Don't miss these opportunities!

**Abstract Submission: 2018 FUN
Poster Session**

Deadline: October 1, 2018

FUN Officer Elections

Deadline: October 10, 2018

FUN Equipment Loan Program

Deadline: December, 2018

**Neuroscience in England, Summer
2019**

Deadline: January 23, 2019

Neuroscience Seminar in Germany

Deadline: February 20, 2019

More information about these events, and others, can be found at <http://www.funfaculty.org/>

SfN Optogenetics Training Series Includes Module on Use in the Classroom

SfN's recently released [training series on the use of optogenetics](#) includes a module on [integrating optogenetics into teaching](#), specifically targeting undergraduate teaching labs. Optogenetics works by using light to activate or inactivate neurons in animals that contain genetically encoded light-sensitive ion channels. By using small, translucent organisms like *drosophila* larvae and *c. elegans*, students can alter animal behavior with light stimuli.

The training module on Neuronline includes articles about simple, low-cost, inquiry-based lab exercises using *drosophila* and *c. elegans*. Student lab worksheets and a demonstration video are also included. Materials are all freely available to SfN members (and there is limited free access for non-members).

A recent JUNE paper by [Pokala and Glater](#) also featured teaching labs for *c. elegans* optogenetics, offering a wealth of additional ideas for integrating this technique into classroom teaching.

Using optogenetics to alter behavior offers a powerful and exciting teaching opportunity. Give it a try! You can also share your experiences and tips in the community forum associated with the training module.



Coming up soon ... FUN officer elections!

FUN members will soon be voting for the following positions:

- ◆ President-Elect
- ◆ Treasurer-Elect
- ◆ Councilor (3 positions)



The election will be open until **Wednesday October 10th**. Please contact Ron Bayline if you have any questions.

FUN Equipment Loans

Be on the look out!

A call for proposals for the FUN equipment loan program will be going out early fall.

Submission deadline will be in December, with awards announced by mid-February.

For more information, contact Dr. Divya Sitaraman (dsitaraman@sandiego.edu) or Dr. Lorenz S. Neuwirth (neuwirthl@oldwestbury.edu)

FUN members have often been at the forefront of efforts to broaden participation and success in the neurosciences (e.g. Ramirez and Tonidandel, 2009). The commentaries in this issue encourage us to continue and expand these efforts at every level. We hope their example in this issue will lead to more *JUNE* submissions related to this vital topic. Possible contributions include investigating equity of pedagogical outcomes, sharing best practices in student mentorship and professional development, and reporting on innovative programs that help promote inclusion.

lations in NEURON (Latimer and colleagues), and a neural network simulator that can interface with a cheap USB robot (Calin-Jageman).

Rounding out this issue is a set of articles reporting on some of the professional development sessions from the workshop. This includes a practical guide to writing specific aims (Kozolowski and Rose), a perspective on using addiction science as a lens for undergraduate neuroscience education (Napier), tips for undergraduates considering graduate studies (McLoon and Redish), a

“FUN members have often been at the forefront of efforts to broaden participation and success in the neurosciences.”

Curricular issues were also at the forefront of the workshop with an investigation of the Neuroscience major and minor in its different forms (stand-alone or housed primarily in Psychology or Biology). Discussion leaders from various institutions supported some exciting and meaningful conversations. It is exciting to share this work in this issue, with an updated set of curricular blueprints (Wiertelak and colleagues).

Another important strand of every FUN workshop is hands-on training in innovative lab techniques. In this issue, you'll find a treasure-trove of exciting lab activities to try out, some of which were also presented at the FUN Pre-Workshop Laboratory Exercise session just before the main Workshop. These were: introduction to NeuroBytes, a remarkable new network-construction kit (Burdo), an innovative but accessible learning lab with *C. elegans* optogenetics (Rose), behavioral and physiological optogenetics exercises with fruit flies (Vilinsky and colleagues) a low-cost approach to recording EMG signals directly from a laptop soundcard (Crisp), an out-of-the-box and very engaging comparative anatomy lab (Grisham and colleagues), a tutorial on using the Allen Brain Atlas with undergraduates (Gilbert), a beginners guide to kinesthetic illusions (Schiller and colleagues), a set of simu-

guide to educational funding at NIH and NSF (Carpenter), a review of the empirical literature on how to help motivate your students to actually read what you've assigned (Cressman), a guide to electrophysiology resources (Wytenbach and colleagues), and an editorial on fostering collaboration between SfN's Neuroscience Training Committee and FUN (Dunbar and Symonds).

A new aspect of the 2017 FUN workshop was the inclusion of 2 sessions of teaching demos—these were brief, rapid-fire presentations of useful pedagogical tools and tricks. The sessions were a blast, and participants were furiously taking notes on all the excellent ideas that were put forward. Most of these nuggets were too brief to be expanded into full-length articles for this issue, but you can browse these in the [online archive of conference materials](#). You'll find resources on using first-person narrative case studies to teach neuroscience conferences (Leah Roesch and Kristen Frenzel, Emory), a practical guide to using a flipped classroom (Alo Basu, College of the Holy Cross), tips and materials for implementing within-class peer review for term projects (Matt Carter, Williams College), a guide to using understanding checkpoints (Jennifer Schaefer, College of St. Benedict / St. John's University), a complete

lab using archival MRI data to measure hippocampal volumes in psychiatric patients (Bill Grisham, UCLA), materials for incorporating team-based projects into lab courses (Jennifer Taylor, Michigan State), and a tutorial to using ZipGrade and Socrative (Margaret Gill, North Central College).

There was even more at the conference that did not make it into this issue. We continue to encourage conference presenters to submit their work for future issues of *JUNE*. In the meantime, you can browse the archives (<https://funfaculty.org/conference/fun-2017/>) for additional outstanding materials, including presentations on off-campus programs for neuroscience (Michael Ruscio and Chris Korey, College of Charleston), establishing a chapter of Nu Rho Psi (Mike Kerchner, Washington College), assessment issues (Gary Muir, St. Olaf College), the FUN Program and Department Consultations Service (Eric Wiertelak, Macalester College), fostering diversity and inclusion (Karen Parfitt at Pomona college and Barbara Lom at Davidson College) troubles with animal rights activists (Philips), advancing neuroscience through understanding policy (Clinton), and securing tenure at a primarily undergraduate institution (Ramirez, Davidson College). In addition, many of the posters presented at the conference have been deposited in the archives.

We hope you'll find the *JUNE* Workshop issue and Workshop archive useful. We also hope it inspires you to think about what you will contribute to the 2020 meeting at Davidson college (hope to see you there). Remember that presenters and authors love to receive emails letting them know you found their materials useful; the conversations we have within FUN often lead to amazing things.

References

Ramirez JJ, Tonidandel S. 2009. SOMAS-URM : The evolution of a mentoring and summer research program. *J Undergrad Neurosci Educ* 8:A69–A72.

2017 FUN Conference

Online Archive of Materials:

<http://www.conference.funfaculty.org/>

Organizing Committee:

Veronica Martinez Acosta, University of the Incarnate Word

Irina Calin-Jageman, Host, Dominican University

Robert Calin-Jageman, Host, Dominican University

Jean Hardwick, Ithaca College

Bruce Johnson, Cornell University

Eric Wiertelak, Chair, Macalester College

Sponsors:

[ADInstruments](#)

[Backyard Brains](#)

[Dominican University](#)

[International Neuroinformatics Coordinating Facility](#)

[NeuroTinker](#)

[Society for Neuroscience](#)

Host:

Dominican University, River Forest, IL (with special thanks to president Donna Carroll, senior event coordinator Dolores Carrizosa and director of dining services Claressa Padilla).



DOMINICAN
UNIVERSITY



SOCIETY for
NEUROSCIENCE

Have a resource you'd like to share?

Consider contributing to the next FUN newsletter!

We welcome submissions on any topic suitable for the FUN membership, including:

Editorial: an opinion piece on an issue or topic relevant to the advancement of FUN

I'd wish I'd known then: advice you wish you'd been given related to teaching neuroscience, career development, managing research, mentoring students, or other topics relevant to FUN membership

Resource pointers / reviews: summary and review of teaching resources you find useful (books, articles, videos, websites, etc.)

Ask FUN: a question on which you seek feedback from the FUN community (e.g., grading dilemma, managing work-life balance, etc.)

Other: submitted articles directly relevant to FUN membership may be solicited or accepted for publication.

Please submit your article via email to newsletter@funfaculty.org

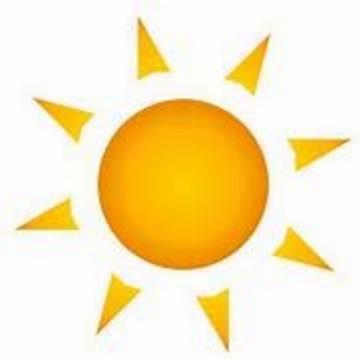
Submission Deadline: January 15, 2019



That would be a
GREAT piece for the
next FUN newsletter!



Summer will be here before
you know it!



**HARLAXTON
COLLEGE**
The British Campus of the
UNIVERSITY OF EVANSVILLE

Join us in **England** to learn about **stress and resilience!**

NEUR 499: Special Topics in Neuroscience : Neural and Behavioral Resilience

Dr. Lora Becker, University of Evansville and Dr. Michael Kerchner, Washington College

What does it mean to possess resilience? In this course we will explore what factors contribute to the resilience that a person may exhibit in response to social, personal and physiological stressors as well as what factors may impair their resilience. We will explore these questions at numerous levels – the social, cultural, cognitive and spiritual factors as well as the fundamental genetic, physiological and neural factors. Our mode of inquiry will include peer reviewed primary research articles, highly regarded books on resilience, field-trips to regional research laboratories and our own empirical research project. Some readings will be assigned prior to arrival at Harlaxton.

For more information, go to: www.harlaxton.evansville.edu. The application deadline is **January 23, 2019**.

The **FUN Abroad German Neuroscience** course is back for the summer of 2019.

Neuroscience Seminar in Germany is a summer study abroad program for undergraduate students interested in neuroscience. It is a collaboration between the College of Charleston, the [Faculty for Undergraduate Neuroscience](#), [Ludwig Maximilians Universität \(LMU\)](#) in Munich and [Charité Medical University](#) in Berlin. Since 2012, the course has brought together neuroscience students from across North America to engage with cutting edge neuroscience research while immersing themselves in the deep history of the discipline found in Germany. The course can also be stepping off point for future neuroscience research experiences abroad. Former students have returned to Germany to do summer research through the RISE program, several students have earned Fulbrights and spent a year in Germany, and several have also applied to German neuroscience graduate programs.

The program dates are **May 22nd to June 15th 2019**. Specific course information can be found at the course website - <http://blogs.cofc.edu/germanneuro/>. Please contact Chris Korey (koreyc@cofc.edu) if you would like further information. The application deadline is **February 20, 2019**.



GERMANY