

Classroom of Excellence Program



Crawdad Invertebrate Neurophysiology Workshop

The Crawdad Neurobiology Workshop teaches a range of popular and cutting-edge neuroscience techniques, using invertebrates as model organisms.

Co-hosted by Cornell University and ADInstruments at Cornell's Ithaca, NY campus, the workshop specializes in hands-on, engaging and scientifically rigorous exercises that are designed to give educators the practical tools to inspire a new generation of neuroscientists.

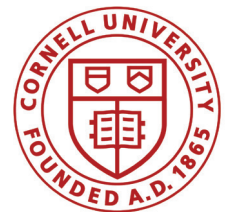
Course highlights

- Gain skills and knowledge to inspire your students and advance your career
- Develop tools to effectively demonstrate key concepts of neuroscience
- Enhance student lab experiences with practical exercises using common model organisms
- Join a community of like-minded scientists and educators from across the USA and abroad
- Develop your technical expertise with cutting-edge neurophysiology education systems and build proficiency with LabChart analysis software.

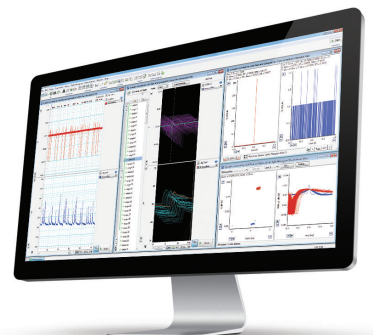
"Tweaking a neural preparation and getting an immediate response is a dynamic and exciting interaction between a physiologist and a functioning nervous system. Sharing that with other educators and students puts the icing on the cake. It's an exciting and charged atmosphere when educators gather at these workshops to trade stories, secrets, and communally create new teaching experiences for each other and their students."

Bruce Johnson

Lead Crawdad / CrawFly Instructor / Former President of Faculty for Undergraduate Neuroscience



ADInstruments Classroom of Excellence and Cornell University are committed to promoting and advancing best practices in neuroscience education.



PowerLab LabChart

Invertebrates as model systems

Invertebrates have consistently played an important role as model systems in neuroscience research. The influence of the fruit fly is well known but crustaceans too have contributed particularly to knowledge of the nervous system, due to the relative ease of exposing and recording from crustacean nerves and muscles and the ability to repeatedly identify individual neurons between preparations. They are available year-round at reasonable cost, making them an accessible choice for most institutions of learning and the perfect introduction to advanced studies in neuroscience.



Crawdad or CrawFly?

Crawdad is an intensive 3.5 day course exploring concepts such as synaptic connectivity and plasticity, ionic basis for membrane and action potentials, and evolution of excitability. Equipped with the latest ADInstruments hardware and software, and taught by experienced and knowledgeable faculty, at Crawdad you will learn exercises that can be used to form an entire semester course in neurophysiology or can supplement the teaching of nervous system physiology in a wide variety of educational environments.

CrawFly is a 5-day workshop, combining the topics covered from the Crawdad workshop and adding student-friendly fruit fly (*Drosophila melanogaster*) exercises. The workshop covers the use of many cutting edge fly models including optogenetic and thermogenetic activation of neural circuits and techniques to visualize the *Drosophila* nervous system using fluorescent microscopy. Topics vary each course so check our website for specifics to be covered.

Further workshops

In addition to our Crawdad workshops, ADInstruments Classroom of Excellence programs are held at many other locations across the USA on a bi-annual basis. Expand your neuroscience curriculum to include accessible model organisms such as earthworm, cockroach, cricket and crayfish models. Help your students develop a deeper understanding of the principles of electrophysiology that will stay with them throughout their careers.

Visit adi.to/adicoe for more details.

SCHOLARSHIPS

Each year ADInstruments provides scholarships for several participants at the Crawdad and CrawFly courses. These scholarships are aimed at supporting educators from around the world who are leading efforts to increase opportunities for under-represented minorities in science.

Please visit adi.to/adicoe for how to apply.

“The Crawdad/Crawfly scholarship program is an exceptional and timely effort. As the scope of neuroscience educational and research continues to grow around the globe, such programs not only expose educators to current equipment and approaches to questions, but also to a community of like-minded researchers and potential collaborators.”

Erik Wiertak, FUN Education Committee Chair / Former President of FUN

For more information contact a sales representative at: info.na@ad instruments.com

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