



International Society for Neuroethology

Newsletter/June 2019

International Society for Neuroethology

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THIS ISSUE FEATURES

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Gordon Research Conference: Neuroethology 2019



The Prez Says

Eric Warrant

President of the ISN



Hello everyone!

It's hard to believe that almost 6 months have elapsed since my last newsletter, and 2019 is now almost halfway through! Many of you in the northern hemisphere are already looking forward to well-deserved summer breaks and those in the southern hemisphere are adjusting to colder weather. But despite the apparent lightning passage of time over

the last six months, much has happened in your society!

Our annual meeting of the Executive Committee (EC) took place in San Diego at the end of April, which this year also included the presence of **Uwe Homberg** (University of Marburg Germany) and **Rui Oliveira** (Gulbenkian Institute of Science, Portugal), respectively representatives of the Program Committee and Local Organising Committee of our next congress in Lisbon in 2020. Unfortunately, the one presence that was not included was my own! A very serious flu forced me to cancel, and to instead participate via Skype, a marathon session into the wee-hours of a Lund Saturday night, time-shifted by 9 hours...

But I am pleased to report that your society is in good shape! In her financial report, our outgoing Treasurer **Karen Mesce** revealed that despite a turbulent start to the year on the world's stock markets, and a number of unexpected expenses, the financial situation for the Society is now looking bright, with the necessary investment buffer to maintain our scholarships and prizes at the current level secured (these days this buffer needs to be around half a million dollars, and with Karen's careful stewardship we have managed to sustain this). Among other things, our new Secretary **Gabby Wolff** reported on exciting initiatives she has been working on with our early Career Representatives **Miriam Henze** and **Sara Wasserman** to help our younger members with career development. We look forward to seeing what they come up with!

Among the many interesting things we discussed at the EC meeting, apart from the Lisbon congress to which I will return later, was a great new initiative to help prospective new members from developing countries – sponsored membership. To quote the new addition to our ISN website: "Sponsored Members are qualified scientists who pay significantly reduced dues for regular, postdoc or student membership due to the economic and/or political conditions in their countries of residence." The idea is that society members donate to a special fund reserved for this category of membership, and that this fund is used to pay up to 75% of the membership fee of a disadvantaged neuroethologist who wishes to join the Society. Those of us fortunate enough to live in countries where a membership fee of between one or two hundred dollars is a relatively modest fraction of our monthly earnings, possibly don't realise that such a fee could

easily be most of the salary of one of our fellow neuroethologists in a less affluent region of the world. So please do consider donating what you can afford to the sponsored membership fund by logging into your account on the ISN website and following the links to donate. I have just done so, and already have the satisfaction of knowing that my donation will make it possible for a South American colleague to join the Society!

As President, I also have the immense pleasure of announcing the winners of this year's various awards and prizes, which have now been assessed by the prize juries – the Heiligenberg Student Travel Awards (two awards), the Konishi Neuroethology Research Awards (three awards) and the Capranica Prize (one prize). Our prizes and awards recognise the outstanding talents of our junior members and aim to encourage their development as the neuroethologists of the future. This year's winners of the Heiligenberg Student Travel Awards are **Shubham Rathore** of the University of Cincinnati in the USA and **Lucas Weiss** from the University of Giessen in Germany, while the winners of the Konishi Neuroethology Research Awards are **Fernanda Duque** from Georgia State University in the USA, **Angeles Salles** from Johns Hopkins University in the USA and **Torben Stemme** from Ulm University in Germany. The Capranica Prize – awarded for the best scientific article published during the previous year – was awarded to **Dominic Evans** from University College London in the UK. The competition this year was fierce, so extra well done for your excellent applications and my heartiest congratulations to each and every one of you on your awards and prizes!

And finally, with around 14 months remaining before our next congress in Lisbon, I am pleased to say that preparations are coming along very nicely indeed. The Local Organising Committee – **Rui Oliveira**, **Marta Moita** and **Susana Lima** – has secured wonderful venues in central Lisbon for the opening ceremony, the main conference (the Gulbenkian Foundation Congress Center) and the satellite symposia, while the Program Committee (chaired by **Uwe Homberg** and **Cindy Moss**) have already chosen 11 brilliant plenary lecturers and have attracted 20 applications for really interesting symposia (from which they will select 12). Moreover, we now have several superb satellite symposia planned for the meeting, which will occur on either side of the main congress. I can also let you

know that my own symposium – the so called “Presidential Symposium”, which opens the scientific program of the congress – is now in the final stages of planning, with 5 of the 6 speakers now confirmed! Even though I am still hunting the sixth, rest assured that the speakers I have secured so far will have you on the edge of your seat with their exciting, cutting-edge research on animals as diverse as butterflies, bumblebees, hummingbirds and fish! Thus, your next congress is looking really great. Cindy and I plan to make a visit to Lisbon next month to meet the Local Organising Committee and to see the congress venues for ourselves.

No matter whether you are about to embark on a summer beach holiday, or are preparing for a wintery ski trip, I wish everyone a restful and enjoyable mid-year break!

My warmest regards,

Eric Warrant
President, ISN



PLENARY SPEAKERS ANNOUNCED FOR THE 2020 ICN IN LISBON, PORTUGAL

Program Committee chairs **Uwe Homberg** and **Cindy Moss** are pleased to announce the plenary speakers for the 2020 ICN. Although the meeting is a year away, it's never too early to get excited about such a stimulating lineup of lectures from a diverse group of speakers. They hail from four continents and represent a broad swath of research areas in neuroethology including behavior, physiology, anatomy and molecular biology in both vertebrates and invertebrates!

Jenny Read - (Newcastle University, UK) Stereoscopic vision in the praying mantis

Michiyo Kinoshita - (SOKENDAI, Japan) Visual world of flower foraging swallowtail butterflies

Elena Grecheva - (Yale University, USA) Molecular adaptations to the unique life style in mammalian hibernators

Elissa Hallem - (UCLA, USA) Host-seeking behaviors of skin-penetrating nematodes

Carlos Ribeiro - (Chamalimaud, Portugal) The gourmet fly: how needs turn into “wants”

Nathan Morehouse - (University of Cincinnati, USA)
The evolution of color vision in jumping spiders

Eugenia Chiappe - (Chamalimaud, Portugal) Motor context orchestrates visual control of locomotion in *Drosophila*

Hideaki Takeuchi - (Okayama University, Japan)
Exploring the neural geography of the social brain using medaka fish

Paul Katz - Huber Lecture (Umass Amherst, USA) Form, function, and phylogeny of neural circuits underlying behavior in nudibranchs

José Luis Peña - Heiligenberg Lecture (Albert Einstein College of Medicine, USA) The biased owl: How the brain selects which information to rely on

Ana Amador - (University of Buenos Aires, Argentina)
An integrative view of birdsong production: biomechanics and neural dynamics



ISN 2018 YEAR-END FINANCIAL REPORT

Former ISN Treasurer and current President-Elect, **Karen Mesce** has prepared the following annual report to the Executive Committee, Council, and membership.

Total Assets beginning of year 1/1/2018 \$578,328.04

Total Assets as of end year 12/31/2018

Cash US Bank	\$ 20,055.76
Cash (Charles Schwab)	\$203,088.31
Investments (Charles Schwab)	\$289,195.10

Total Assets 12/31/2018 **\$512,339.17**
(\$65,988.87)

Cash Revenue

ICN-related grants	\$28,072.10
Membership Dues	\$31,300.00
Donations	\$1,075.00
Interest on cash deposits (US Bank)	\$14.62
Transfer from Schwab to US Bank	\$20,000.00
Misc income (T-shirts, refunds, etc.)	\$2,784.38
Partial Refund from ICN Australia	\$21,640.85

\$104,886.95

Investment Revenues for 2018 (start: \$558,567.22)

Investment cash, dividends and capital gains	\$22,060.45
Investment capital gain/(loss) (reinvested)	(\$984.25)
Transfer of funds from Schwab to US Bank	(\$20,000.00)
Wire transfer to ICN Brisbane	(\$31,194.00)
Investment gain	(\$36,116.01)
Service fees	(\$50.00)
Ending Value: \$492,283.41	

Schwab Portfolio Appreciation/Depreciation

(\$66,283.81) (-11.87%)

Total Revenue \$38,603.14

Expenditures

Allen Press Operating Expenses	\$20,495.84
ISN (Allen Press) New Web Site	\$12,030.00
Allen Press Travel/Registration	\$3,928.42
Konishi Research Awards 1 @ \$2,500 each	\$2,500.00
HSTA Awards 25 total x \$750 each	\$18,750.00
4 Young Investigator Awards	\$4,800.00
1 Capranica Prize 2018	\$1,000.00
4 Developing Nations	\$6,000.00
6 Presidential Symposium Speakers	\$9,000.00
14 x \$712 (retroactive ICN 2016 student attendees)	
(15 total with 1 uncashed)	\$10,692.00
(Shared costs by Award recipients to defray wire fees)	(\$656.78)
1 plenary speaker	\$1,312.00
Tax filing fees for State of CA	\$10.00

Wires, credit card transaction fees, misc.	\$2,556.69
Service Awards	\$137.20
Transfer of Grass Funds and remaining seed money	\$9,000.00
T-shirt costs	\$2,185.18
Presidential Symposium Dinner	851.46

(\$104,592.01)

$\$104,886.95 + (\$66,283.81) = \$38,603.14$ less $\$104,592.01 =$
(\$65,988.87)



EARLY CAREER PERSPECTIVE: MENTORSHIP

Early Career Representatives **Miriam Henze** and **Sara Wasserman** have been working on new initiatives in the ISN to connect members who are beginning their journey in neuroethology with more experienced, senior researchers. Here they talk to members at various career stages about the impact of mentorship on their careers. Also take note of a new formal mentorship program that you can sign up for today.

As your early career representatives, we thought about what has helped us most along our scientific journey. A theme that kept arising during these conversations was a gratitude for the mentorship and advice we have received from others. We therefore decided to ask people at different stages in their careers to share a mentorship experience that has had great impact on their lives. Below you will find responses from established members of the Neuroethology community and new voices. **Kia Barclay** reflects on her undergraduate years, **Pablo Currera** on his PhD, **Sarah Hall** on the pre-tenure phase, and **Sönke Johnsen** reflects from his position as professor. We are very grateful to our contributors for sharing their thoughts, and we hope they inspire you to thank those that have helped you along the way and to support others around you. When asked about his first mentor in biology, who did not let him down against all odds, Sönke replied: "... he deserves a medal. I've been paying forward his good deeds for decades now." Listen to the two recordings that were published, when Sönke got the [Dean's Award for Excellence in Mentoring at Duke University in 2016](#), and you will understand his motivation.

We are excited to announce that a formal ISN mentorship program is in development. **You can now sign up to be a mentor or to indicate that you would like to have a mentor.** Log in on the ISN website and go to Membership -> My Account. You will see a Mentorship signup field on there. Let's amplify the heritage from our best mentors by being one ourselves!

Name: Kia Barclay
Wellesley College Undergraduate, Class of 2019
Contact: kbarclay@wellesley.edu

As both a woman and person of color in science, I have not been able to escape the disheartening reality that there remains a lack of diversity within the scientific community. Throughout my time as an undergraduate, I have suffered



from imposter syndrome and have struggled to find my place as an aspiring scientist. The best piece of advice I have received from my mentor during my undergraduate career is "be the change that you want to see in the world", a quote by Mahatma Gandhi. Upon receiving this advice, I thought to myself "how cliché", but I soon realized how applicable those words were to me and for my scientific journey. Since receiving that advice, the lack of representation among women and people of color in neuroscience, and the scientific community more generally, no longer discourages me. Rather, it has only motivated me to stay in science and change this reality. Personally, this has meant spending my time volunteering with various outreach programs to educate underrepresented minorities on scientific topics, seeking out mentors with similar backgrounds as myself, and considering the diversity within my own research questions and scientific approaches. As for my career, I now recognize that if I don't see professors of neuroscience that look like me, I should strongly consider becoming one. Mentorship in science is critical for raising the next generation of diverse and talented researchers. Therefore, being the change that I wish to see in the world involves building mentor based relationships that cultivate a scientific world, whose foundation is built upon the voices of those who have been left out of science for far too long.

Name: Pablo Currea
Florida International University Graduate Student
Contact: johnpaulcurrea@gmail.com

As an undergrad, I joined a cognitive psychology lab and was responsible for transcribing the written reports of hundreds of human subjects. This was mind-numbingly boring and probably occupied 95 percent of my time in the lab. One of my professors (and my current mentor), Jamie Theobald, offered what turned out to be invaluable advice. With some clever programming, our lab could allow participants to 'transcribe' the data directly into the computer for us. He suggested learning a programming language called Python, which could generate a user interface and store the users' inputs without too much work. Though we were unable to implement this idea in the middle of the study, I started learning the basics of Python coding and seeing its many potentials. I eventually joined Jamie's lab in graduate school and took on a project that included counting the ommatidia of fruit fly eyes, of which there are hundreds per eye (I should know). This, again, was a very repetitive task and I couldn't help but think of Jamie's advice. In fact, throughout my graduate career, I have witnessed students working on boring, repetitive tasks that are a necessary evil for scientific progress. From cell counting in slides, to motion



tracking of animal behavior, to acoustic analysis, to the analysis of huge datasets, programming in general and Python in particular offer an efficient and consistent alternative to conventional, subjective methods. Obviously, programming takes some time to learn and I struggled for a while. But with some help and a lot of practice, I now use Python at every level of the scientific process: to generate experimental stimuli, analyze and present data, run model simulations, and even structure monthly budgets. Of all the things I've learned in graduate school, programming has proven the most useful and indispensable. And, given the highly competitive nature of the academic job market, programming would likely prove the most useful tool in getting a job in industry.

In Short: Sadly, research often involves a lot of boring, repetitive work. You should learn how to program, so computers can do a lot of that work for you.

Sarah Hall
Assistant (soon to be associate) Professor of Biology at Syracuse University
Contact: shall@syr.edu

Establishing your own lab as an early stage PI on the tenure-track can be a daunting task. For me, the transition from being a postdoc to faculty was challenging, since my carefully honed skills at the bench seemed useless for many of the new responsibilities I faced as a lab head. Being one of the first researchers to use Illumina sequencing for genome-wide chromatin analysis did not exactly prepare me with best practices to teach Genetics to hundreds of students in a large auditorium. However, one of the biggest challenges for me as an early stage PI was overcoming the anxiety of the tenure process. At Syracuse University, new faculty are bombarded with workshops, discussion panels, and emails about strategies to get tenure. These resources are meant to be helpful, but promote a "check all the boxes" mentality for tenure preparation. During this time, one of my wise mentors told me that if I just do my job as I was trained, then tenure will naturally follow. The job I was trained for included a desire to find answers for biological questions, work with others in my lab to design experiments to get those answers, write grants so we are paid to get those answers, and share our knowledge with the community through publications, presentations, and the classroom. As such, when I worked towards my goal of understanding the epigenetic mechanisms regulating environmental programming, then I was also working towards my goal of getting tenure. When viewed through this lens, tenure seemed to me like a much more attainable goal, and in a few months, I will have the "Associate Professor" title to prove it.



Sönke Johnsen
Professor of Biology Duke University
Contact: sjohnsen@duke.edu

I've had four mentors whose words and kindness have taken me from careening youth to happy middle age. The first was Stuart Kauffman, the real Ian Malcolm from the "Jurassic Park" book (played by Jeff Goldblum). When he wasn't telling me to "stop fidgeting!", he would remind me that it was just as hard to solve a stupid problem as it was to solve a good one. The second was my PhD supervisor Bill Kier, who studied muscle development in squid, and whose patience with me will one day earn him a front row seat in heaven. When I started looking for jobs and would state that I'd sooner die than move to Florida, he'd tell me never to turn down a job that I hadn't been offered yet. I say this to anyone who will listen.



My third advisor, and first postdoc advisor, was Edith Widder of giant squid fame. I don't remember any specific advice, but for years she would answer the phone with a breathless "bioluminescence!", showing that science was a passion first and a job second. My fourth and last advisor was Larry Madin. He's now the director of research at Woods Hole and shakes hands with presidents, but back then had just become department chair. The only thing on his desk was a crab in a glass case. He said it was passed from chair to chair to remind them that part of being in charge is pinching people. So there you go.



GORDON RESEARCH CONFERENCE: NEUROETHOLOGY 2019

Mark Frye and Marie Dacke are co-chairing this year's Gordon Research Conference on Neuroethology. Graduate students and postdocs can also register for the Gordon Research Seminar which is a great venue for meeting other early career members as well as receiving valuable mentorship from more experienced members. Registration is closing at the end of this month so sign up now!

As many of you are aware, this year's GRC neuroethology meeting is being held **July 28-August 2** on Mt. Snow, Vermont, USA. The technical program theme is **Multisensory Integration** (broadly defined)

and speaker list is below. As you know, Gordon Conference talks are short (~20 minutes) and the attendee list is short (maximum 200 participants), with ample free time scheduled every afternoon. These characteristics facilitate in-depth interactions among participants. The conference registration site is open until June 30th on the [conference](#) website. Space is limited so submit your registration today! We hope to see you there.

- **Program for Neuroethology 2019: Behavior, Evolution and Neurobiology**
Theme: Multimodal Strategies for Behavioral Control: Molecules, Neurons, Circuits and Behavior
- **Analyzing the Neural Basis of Behavior**
(Trevor Wardill / Emily Baird / Andrew Straw / Susan Renn)
- **Multimodal Control of Behavior**
Mark Frye / Jeffrey Riffell / Sanjay Sane / Julie Semmelhack)
- **Multimodal Control of Search and Orientation**
(Stanley Heinze / Kenneth Catania / Jessica Fox / Markus Knaden)
- **Integration of State and Sense: Biogenic Amines and Peptides**
(Jing Wang / Monica Dus / Elissa Hallem / Adi Mizrahi)
- **Multimodal Integration in Cells and Circuits**
(Sara Wasserman / Sophie Caron / Basil el Jundi / Andrea Green)
- **Optogenetic Experimental Analysis**
(Julie Simpson / Gwyneth Card / Weizhe Hong / Matthieu Louis)
- **The Magnetic Sense**
(Eric Warrant / David Dreyer / Pauline Fleischmann / Miriam Liedvogel / Andreas Vidal-Gadea)
- **Robotics Modelling and Systems Identification**
(Simon Sponberg / Mitra Hartmann / Mandyam Srinivasan / Adrienne Fairhall)
- **Keynote Session: Multi-Sensory Integration Drives Mosquito Host-Seeking Behavior**
(Ines Ribeiro, Patric Vaelli / Leslie Vosshall)
- **Power Hour**
(Kim Hoke)

Neuroethology: Behavior, Evolution and Neurobiology (GRS)
Exploring the Molecular and Neural Bases of Animal Behavior
Jul 27-28, 2019
Chairs: Patric Vaelli and Ines Ribeiro



2019 Gordon Research Seminar on:

Neuroethology: Behavior, Evolution, & Neurobiology



Exploring the Molecular and Neural Bases of Animal Behavior

July 27-28, 2019, Mount Snow, VT, US

Organizers:

Patric Vaelli & Inês M.A. Ribeiro

The GRS is geared specifically toward graduate students and postdocs. It provides a unique opportunity to share your work and interact with peers and mentors. This meeting will focus on integrating both novel and traditional approaches to address long-standing questions in Neuroethology.

Discussion Leaders:

Gwyneth Card

Basil el Jundi

Karen Maruska

Keynote Speaker:

Gene Robinson

Associated Gordon Research Conference (GRC):

*Multimodal strategies for Behavioral Control
July 28 - August 2, 2019*

More details and online application are available at:
<http://www.grc.org/neuroethology-behavior-evolution-and-neurobiology-grs-conference/2019/>

