



International Society for Neuroethology

Newsletter/January 2019

International Society for Neuroethology
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The Prez Says

Eric Warrant
President of the ISN



Hello Everyone!

Since my last column just over three months ago, it seems quite a lot has happened in our Society! As I penned the last words in my September column, our Society elections were drawing to a close, and this of course means that we now have a brand new Executive Committee and Council! For those who don't yet know, our incoming President is **Karen Mesce** from the University of Minnesota, our new secretary is **Gabby**

Wolff from the University of Washington and our new treasurer is **Mark Bee**, also from the University of Minnesota. **Catharine Rankin** from the University of British Columbia, steps into the role of Past President. Our past secretary **Susan Fahrbach** and treasurer **Karen Mesce** – who did an amazing job in these roles for many years – are still in the process of handing over the reigns to Gabby and Mark. There has been a lot for them to learn, but I can assure you that our Society will remain in excellent hands. And what a bonus for Mark (and for all of us!) that his predecessor is a stone’s throw away AND incoming president! Our first Executive Council meeting is scheduled for April next year, in lovely San Diego (which has become somewhat of a tradition it seems, thanks to the generosity of **Bill Kristin** who organises a room for us at the University of California).

Our new members of Council (who join the seven existing members) are a stellar line-up of neuroethologists: **Ana Amador** (University of Buenos Aires), **Marie Dacke** (University of Lund), **Jose Pena** (Albert Einstein College of Medicine), **Ana Silva** (Universidad de la República), **Andrea Simmons** (Brown University), **Monika Stengl** (University of Kassel) and **Nachum Ulanovsky** (Weizmann Institute of Science). Our new Early-Career Representative is **Miriam Henze** from the University of Queensland. Congratulations to all of you! The role of the Council is to provide support and advice to the Executive Committee, and thus to uphold the quality and smooth running of our Society.

And of course, an election isn’t possible unless willing candidates offer themselves for service, and members of the Society take the time to evaluate these candidates and vote. So my sincere thanks to all of the truly excellent candidates who stood for election, and to everyone who took the time to vote! Even though you may not have been elected to office now, your time may very well come in the future.

I am happy to report that preparations for our next congress in Lisbon in July 2020 are now well underway! The Local Organising Committee – **Rui Oliveira**, **Marta Moita** and **Susana Lima** – are doing a fantastic job with preparations in Lisbon, and our Program Committee Chairs, **Cynthia Moss** and **Uwe Homberg**, have put together a truly outstanding Program Committee, consisting of **Kentaro Arikawa** (Sokendai School of Advanced Sciences), **Michael Dickinson** (Caltech), **Karin Nordström** (Flinders University, who was also on the Program Committee for the Brisbane congress), **Lauren O’Connell** (Stanford University), **Ana Silva** (Universidad de la República) and **Yossi Yovel** (Tel Aviv University). This Program Committee has already been incredibly active – as of late November, they have

assembled a preliminary program, secured ten superb plenary lecturers (names to be revealed at a later date), and sent out a call to all ISN members to submit proposals for symposia! In addition, I am now in the process of inviting the six speakers for the Presidential Symposium. So we are well underway!

Talking of symposia, now is the time to start thinking about hosting one at ISN 2020 and submitting your proposals. One of the main criteria for these symposia is that “The topic should be novel, timely, and interesting to a broad range of neuroethologists. Applications that incorporate innovative approaches and analyses for the study of the neural bases of behavior are encouraged.” So now is the time to be inspired to come up with a great idea for your dream symposium at our next congress! Proposals are limited to a single page, and should be submitted to **Cynthia Moss** and **Uwe Homberg** by no later than May 1st 2019. Full instructions can be found in this newsletter and on our Society’s website: neuroethology.org/Meetings.aspx. I have absolutely no doubt that the Lisbon congress will be truly outstanding. So mark the congress in your calendars: 26-31 July 2020. The conference website, which is still under construction, is neuroethology2020.com.

As I mentioned in my last Prez Sez column, also don’t forget to mark your calendars with this year’s Gordon Research Conference on Neuroethology, which will be held in the USA at Mt Snow in Vermont from July 28th to August 2nd 2019. Applications to attend the conference are now open! The theme of the conference is “Multimodal strategies for behavioral control: Molecules, neurons, circuits and behavior”, and the conference chairs Mark Fry (UCLA) and Marie Dacke (University of Lund) have put together a really exciting program! The conference web site is: www.grc.org/neuroethology-behavior-evolution-and-neurobiology-conference/2019/.

Finally, please take a glance at our new-look website (neuroethology.org), which has been several months in the making and whose development has been expertly overseen by our outgoing secretary **Susan Fahrbach**, working closely with **Terry Leatherman**, our incredibly helpful contact at Allen Press who made it all happen (you may have had the pleasure of meeting Terry at the T-shirt stand in Brisbane). And of course, if you have any suggestions for the content of the web site, or indeed have a contribution to make to an upcoming newsletter (much appreciated!), please contact our new secretary **Gabby Wolff** (gabwolff@uw.edu).

I hope that 2019 is both exciting and productive!

My very warmest wishes and a happy new year!

Eric Warrant
President, ISN



INTRODUCING – NEW COUNCIL MEMBERS

Newly elected representatives for Council were announced by President Eric Warrant this autumn. Congratulations to all!



Ana Amador is a professor in the Physics Department at the University of Buenos Aires. Her career has been profoundly interdisciplinary, performing physiological and electrophysiological experiments together with mathematical modelling to study how complex behaviors emerge from the interaction between the brain, the body and the environment. Her research combines physics and biology to study birdsong, the physical mechanisms involved and the neural code used during its production and perception.



Marie Dacke is a professor at the Department of Biology at Lund University, Sweden, where she also earned her PhD in 2003. The research in her lab primarily focuses on the compass systems used by South African dung beetles. This charismatic and diverse group of insects provide an excellent platform to formulate a universal model for how animals are able to traverse the different habitats of our globe. During her career, she has discovered new and unexpected orientation mechanisms, has led several international research programs and is an alumna of the Swedish Young Academy. Marie Dacke received the IgNobel prize in 2013 and is a Swedish champion in Science Communication.



Jose Pena is a Professor in the Department of Neuroscience at the Albert Einstein College of Medicine. His research program investigates the mechanisms by which the brain represents sensory

information and commands behavior in barn owls. Currently, his research aims to discover the emergence of adaptive behavioral commands where sensory evidence is weighted by actual and anticipated reliability, and whether and how statistics of natural scenes are built-in decision making.



Ana Silva is an associate professor in the Laboratory of Neuroscience, at the School of Sciences, Universidad de la República. She is also associate researcher at the Instituto de Investigaciones Biológicas Clemente Estable, Montevideo, Uruguay, where she coordinates the laboratory on Neural Bases of Behavior. Currently, her laboratory is interested in the study of neuroendocrine bases of social behavior focusing in two species of native weakly electric fish with different social organization. Combining field and lab approaches, her research seeks to understand how aggression shapes the spacing behavior of species in the wild, as well as how the brain controls the acquisition and consolidation of the dominance-subordinate status. on closely related species.



Andrea Simmons is Professor in the Department of Cognitive, Linguistic and Psychological Sciences at Brown University, with a secondary appointment in the Department of Neuroscience. One is the developmental process by which bullfrogs are able to process first underwater and then airborne sounds across the metamorphic transition from tadpole to frog. The second is a comparative study of the mechanisms of periodicity perception in bullfrogs and in big brown bats, two hearing specialists with sensitivity in different parts of the frequency spectrum. Currently, she is part of a multi-investigator team studying bat biosonar on behavioral, physiological, and computational levels.



Monika Stengl is an associate professor in the Department of Biology, Animal Physiology at the University of Kassel, Germany, where she is also a faculty member in CINSaT, the Center for Interdisciplinary Nanostructure Science and Technology. Her research focuses on the mechanisms of rhythm generation at multiple timescales in neuronal networks and single neuropeptidergic circadian pacemaker neurons as basis of genetically determined behavior. She compares neuronal

mechanisms of more genetically programmed with mainly stimulus-elicited behaviors, working with olfactory receptor neurons and neuropeptidergic circadian pacemaker networks in different insect species.



Nachum Ulanovsky is an Associate Professor at the Department of Neurobiology of the Weizmann Institute of Science. He is interested in the neural basis of natural behaviors. His main area of research is how complex naturalistic spaces are represented and remembered in the mammalian

brain – and in particular, in the hippocampal formation. To this end, he pioneered bats as a novel animal model for studies of the neural basis of spatial memory and spatial cognition. His lab studies Egyptian fruit bats, which are fitted with miniature wireless-electrophysiology devices (‘neural loggers’) – the smallest devices of their kind in the world, which his lab developed – and this allows them to measure the activity of individual neurons in freely flying bats.

Further congratulations to our new Early Career Representative (ECR) to the Council, **Miriam Henze** (m.henze@uq.edu.au) and continuing ECR **Sara Wasserman** (swasserm@wellesley.edu).



Miriam Henze is a post-doctoral academic at the Queensland Brain Institute of the University of Queensland in Australia. She studied at the University of Tübingen in Germany, earned her PhD at the University of Zürich in Switzerland and did a postdoc at Lund University in Sweden, before she escaped the

long Scandinavian winters by moving down under. Miriam is particularly interested in vision in arthropods, since they have evolved sophisticated eyes, but small brains compared to vertebrates or cephalopods. Her research addresses questions such as: How do arthropods make sense of complex visual information from the environment without much computing power? Do they use the same processing strategies as their ‘brainy’ relatives? Are the small brains of arthropods one of the reasons for their enormous diversity of eye designs?

Sara Wasserman is the Kresa Family Assistant Professor of Neuroscience at Wellesley College, just outside of Boston, MA. She did her PhD in the Piali Sengupta's Lab at Brandeis University and her postdoc in Mark Frye's Lab at UCLA. Her lab is interested in understanding how

changes in external and internal environment modulate sensory perception to drive adaptive behavior.



A MESSAGE FROM OUR ECR REPRESENTATIVES

ISN has Early Career Representatives (ECRs) on each hemisphere of the earth now! **Sara Wassermann** close to Boston, USA, and **Miriam Henze** in Brisbane, Australia. In fact, if Sara digs a tunnel on campus at Wellesley College, where she works, straight through the center of the globe and crawls out at the other side, the closest landmass will be Australia.



Being near antipodes from a geographical point of view, we want to join forces and hope that we will be able to address the needs of our young and more seasoned ICN members worldwide.

We are aware that our early career members are in an especially exciting yet sometimes vulnerable period of their career, and we would like to offer as much support as we can. Thanks to the efforts of previous ECR representatives and council members, the ISN has a few valuable resources already.

As a first step, we have therefore compiled **topics relevant to early career members**, which were covered in previous newsletters, and added a link to the respective newsletter for each topic. You can find this **look-up table** below and soon you will find it on the ISN website on a new page titled ‘Career Development’ under the Resources tab.

Topic	ISN Newsletter
Short courses and summer courses	February 2018 (See February 2015 for a long report on the Sensory ecology course in Lund)
Funding for neuroethologists	February 2015
Crowd-sourced funding	January 2017
How to get a postdoc position	June 2014
Where and how to look for positions in academia (postdoc and faculty)	June 2014
Crafting successful applications for faculty positions	January 2017
Preparing for a job interview (faculty position)	March 2014
Kids and academia	September 2016
Alternative career paths	December 2015
Digital laboratory notebooks	June 2017
Public data archiving	December 2015
Outreach activities	March 2014
Neuroethology course materials	June 2015

Do you have **other burning questions**? **Let us know** and we will try to find experts to answer them.

Do you think you would benefit from a **mentoring relationship**? Please **contact us**, if you would like to have a mentor and / or be one yourself.

In any case, feel free to email us if there is anything you would like to bring to our attention. We are also always up to meet for a coffee or drink and chat if you are close!



CALL FOR 2020 ICN SYMPOSIA

The Program Committee is now soliciting proposals for symposia for the 2020 ICN meeting in Lisbon.

Symposia will include 4 speakers and be two hours in length, including 5 minutes for introductory remarks, 20 minutes per talk and 5 minutes for questions following each talk. Please note that although symposium speakers need not be members of ISN, symposium organizers must be members. We anticipate having up to 12 symposia.

Proposals are due 1 May 2019. They will be reviewed by the Program Committee on the basis of the criteria listed below, with final decisions made by 30 June 2019.



Proposal Criteria

The basic criteria for symposia include:

- The topic should be novel, timely, and interesting to a broad range of neuroethologists. Applications that incorporate innovative approaches and analyses for the study of the neural bases of behavior are encouraged.
- The topic and proposed speakers should not duplicate or substantially overlap symposia presented at the meeting in Brisbane (2018). The program committee will also give priority to those proposals that do not overlap with the 2019 Gordon Research Conference in Neuroethology.

- The proposed list of speakers should represent a good balance between established and new investigators, have an equitable representation with regard to gender and under-represented groups, and reflect the international diversity of ISN.

Proposal Content

Please include the following information in your 1-page proposal:

1. Name and affiliation of symposium Chair.
2. The title and goal of the proposed symposium. Please specify the extent to which your symposium contributes an innovative and/or integrative view to the neuroethological research.
3. The basic theme or area the symposium represents.
4. A list of the proposed speakers and a brief (1 sentence) statement of how their work fits into the topic of the symposium.
5. A short (2-3 sentences) statement of how the symposium meets the criteria listed above.
6. A statement as to which of the proposed speakers has agreed to participate.

Please be aware that the Program Committee may suggest revisions to ensure the kinds of diversity and non-duplication issues suggested above. Symposium chairs should not make commitments to speakers regarding financial support. Although we will work to raise funds for the conference, no promises can be made at this time.

Submission of Proposals

Please email your proposal by 1 May 2019 to both Program Committee Co-chairs **cynthia.moss@gmail.com** and **homberg@biologie.uni-marburg.de**. Please submit the proposal as a pdf attachment.



BEHAVIORAL NEUROBIOLOGY OF INVERTEBRATES 2019

This 5-week course will focus on learning techniques in neurobiological research such as behavioral recording and analysis, electrophysiology of intact and reduced preparations, voltage clamp and pharmacology, immunohistochemistry, and confocal microscopy of neural structures.

We will discuss and examine the cellular aspects of neurobiology and the nervous control of behavior. We will examine the current understanding of the cellular mechanisms that underlie behavior, with a focus on marine invertebrates. The main emphasis, however, will be hands-on experience with research techniques such as electrophysiology, immunolabeling, histology and microscopy, and behavioral analysis; then using these techniques to conduct a novel research project using marine invertebrates.

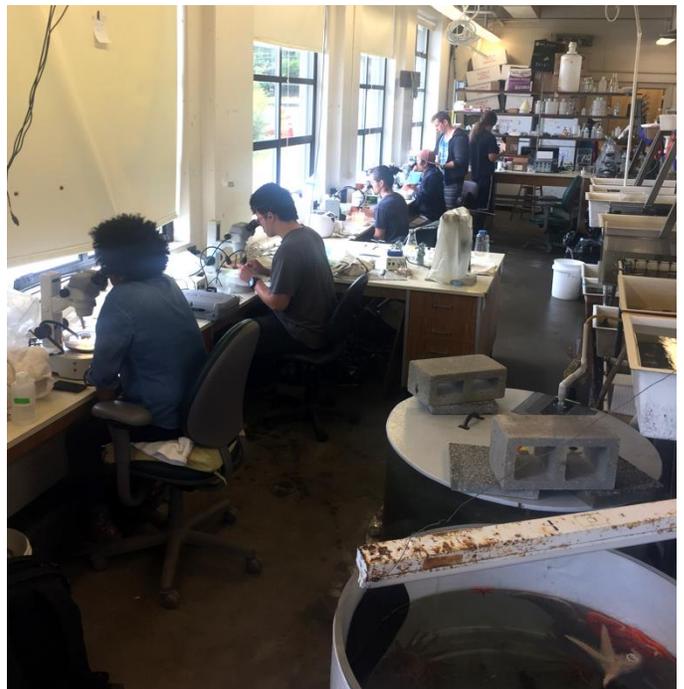
More info, and to apply:

<https://fhl.uw.edu/courses/course-descriptions/course/behavioral-neurobiology-of-invertebrates-2019/>

More info, and to contact faculty:

<https://www.facebook.com/FHLneuroethology/>

Email **Jim Murray (james.murray@csueastbay.edu)** or **Shaun Cain (shaun.cain@eou.edu)** with questions.



Students work in teams on novel projects to study the neuroethology of various invertebrate organisms at beautiful Friday Harbor Laboratories on San Juan Island off the coast of Washington State.

