



International Society for Neuroethology

Newsletter/September 2018

International Society for Neuroethology
P.O. Box 1897
Lawrence, KS 66044, USA
Website: <http://neuroethology.org/>
Facebook: <https://www.facebook.com/groups/neuroethology/>
E-mail: isn@allenpress.com

PHONE: +1-785-843-1235
(or 1-800-627-0629 Ext. 233)
FAX: +1-785-843-1274

ISN Officers

President: Eric Warrant, Department of Biology, Lund University, Biology Building, Sölvegatan 35
223 62 Lund, Sweden
PHONE: +46 46 222 93 41
E-mail: eric.warrant@biol.lu.se

Past-President: Catharine Rankin, Department of Psychology, Kenny Room 3525 – 2136 West Mall, University of British Columbia, Vancouver, BC Canada V6T 1Z4
PHONE: +1-604-822-5449 FAX: +1-604-822-7299
E-mail: crankin@psych.ubc.ca

Treasurer: Karen Mesce, Department of Entomology and Graduate Program in Neuroscience, University of Minnesota, 219 Hodson Hall, 1980 Folwell Avenue, Saint Paul, MN 55108 USA
PHONE: +1-612-624-3734 FAX: +1-612-625-5299
E-mail: mesce001@umn.edu

The 2018 ISN Election is in progress, Voting ends Monday October 1, 2018. If you are a member in good standing and did not receive a ballot via e-mail, please contact Terry Leatherman at Allen Press (tleatherman@allenpress.com).

Voters in the 2018 ISN Election will select a new President-Elect, a new Secretary, 7 new Councilors, and new Early Career Rep. Voters will also weigh in on several changes to the ISN Bylaws. Biographies of the candidates are included with the ballot and are available on the ISN website. The incoming ISN Treasurer is Mark Bee of the University of Minnesota, St. Paul, MN, USA.

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The Prez Says

Eric Warrant
President of the ISN



Hello Everyone!

This is my first The Prez Sez column after assuming the presidency of our wonderful society, and it seems appropriate to start by saying thank you for giving me this amazing opportunity to serve our community! It is an immense privilege to say the least, but also a great pleasure – I have always experienced the ISN as being more like a large gathering of likeminded friends who share a joy for the wonders of the animal kingdom and

an insatiable curiosity to understand how they work. I think what sets us apart is that it doesn't matter if you work on the nervous system of a leech, or the meaning of body colouration in a frog or use genetic tools to dissect courtship behavior in a fruit fly, we are genuinely enthralled by *all* of it! And I think that's because neuroethologists are just old-fashioned naturalists that happen to be armed with the best methods that modern neuroscience can provide – but none of us have ever lost our sheer awe for the animals we work with. So often when I listen to Sir David Attenborough whispering closely to a camera about some extraordinary creature and its equally extraordinary behaviour, I think to myself “I get paid to study what he's talking about!” We really are incredibly lucky – and privileged – to be neuroethologists! So, thank you again for the opportunity to be your president for the coming two years.

It is also necessary to thank the retiring members of the Executive Committee, who have done an amazing job running our society. Past-President **Peter Narins**, Treasurer **Karen Mesce** and Secretary **Susan Fahrbach** have all put in a herculean effort over many years. Until I myself stepped into the Executive Committee just over two years ago, I really had no idea just how much work it is to manage the finances of the ISN or to manage our correspondence, our newsletters and our relationship with Allen Press (who look after the day-to-day running of the society's business). But I can assure you it really is a lot of work! So many thanks to all three of you for an excellent job well done. Likewise, many of our members have recently retired from various ISN committees that decide on prizes and grants, having selflessly given up their time to read applications or offer advice. Without the generosity of our members the ISN would simply cease to function – so again, many thanks to all of you!

As most of you know, we are just about ready to close the election for new members of the Executive Committee and Council. Information on winning candidates will be forthcoming soon after the polls close on Monday, October 1. Thank you to all members who voted. If you have not yet cast your ballot, do so immediately.

There is of course no doubt in anybody's mind that the neuroethological event of the year was our spectacular congress in beautiful Brisbane last July. I think it is fair to say that **Justin Marshall** and his local organizing committee, as well as the Program Committee co-chaired by **Harold Zakon** and **Karin Nordström** put on a meeting that will certainly live long in all our memories. In the magnificent Brisbane Convention Centre on the banks of the Brisbane River, we were treated to five superb days of cutting edge science and no less than six satellite symposia on topics as varied as herpetology and

biosonar. There were so many brilliant talks and posters that picking a single favorite was impossible. As usual, our talented Young Investigators gave mind-blowing talks on a wide range of topics: hawkmoth visual processing, aggression in poison frog tadpoles, birdsong and visual cues in finches, and sensory integration in the insect central complex. It is safe to say that neuroethology is in good hands in the future. Congratulations to this year's Young Investigators **Anna Stöckl**, **Eva Fischer**, **Lena Veit**, and **Nicholas Kathman**! And of course, congratulations to everyone else who won travel awards from the ISN to attend the conference! **Catharine Rankin's Presidential Symposium** (once again generously supported by the **Journal of Comparative Physiology**) was also a highlight, with talks on a range of topics from dung beetle dancing to the attraction of mosquitos to human odor. Then, of course, our plenary lectures were outstanding – on such of variety of study systems (from electric fish, to leeches, poison frogs, bats, coral fish and insects) explained by the absolute experts in the field. Each of these hours was a sheer pleasure! But as usual the greatest disappointment of visiting one of our congresses is the number parallel talks and posters one *missed*.... Honestly, we could have stayed in Brisbane for twice the time, but then I guess we would have overstayed the marvellous hospitality of our Brisbane hosts. On behalf of the entire ISN, my sincerest thanks to all of you – including the exemplary Program Committee – for a congress that will be hard to forget! Long-time ISN member **Fred Delcomyn** provided the photographs of Brisbane scattered through this newsletter. Thank you, Fred.

And now of course we look forward to Lisbon in 2020 and Berlin in 2022! The preparations for the Lisbon congress are already in progress, so keep an eye on the ISN's new-look website for updates. The Local Organizing Committee, consisting of **Rui Oliveira** (Gulbenkian Institute of Science), and **Marta Moita** and **Susana Lima** (both from the Champalimaud Centre for the Unknown), are already well underway with the organisation. I am also pleased to report that we have also secured excellent and enthusiastic Co-Chairs for the Program Committee: bat biosonar specialist and one of our most recent ISN Fellows, **Cynthia Moss** (Johns Hopkins University, USA) and insect central complex specialist **Uwe Homberg** (University of Marburg, Germany). Cynthia and Uwe are now busy populating the Program Committee, and from the names they are discussing I have absolutely no doubt that the Lisbon meeting – like that in Brisbane – will be outstanding. So mark the Lisbon Congress in your calendars: 26-31 July 2020. The conference website is neuroethology2020.com. Also mark your calendars for next year's Gordon Research Conference on Neuroethology, which will be

held in the USA at Mt. Snow in Vermont from July 28 to August 2, 2019. The theme of the conference is Multimodal strategies for behavioral control: Molecules, neurons, circuits and behavior, and the conference chairs **Mark Frye** (UCLA) and **Marie Dacke** (University of Lund) have put together a really exciting program. Applications are now open, and the conference web site is: www.grc.org/neuroethology-behavior-evolution-and-neurobiology-conference/2019/.

I wish you all a very pleasant and productive autumn (or a lovely spring if you are in the southern hemisphere)!

Eric Warrant
President, ISN



ICN 2018 WRAP-UP

The following report was provided by the Chair of the Local Organizing Committee, Justin Marshall. Photos were provided by ISN member Fred Delcomyn.

Way back in 2016, we invited you all down under for a dance, to share your knowledge and to see the countries of Australia and New Zealand. You came all that way and made it back safely! Thank you! It was great to see so many happy faces talking about science, enjoying the blue skies of Brisbane and the hospitality of the local environment, especially the modern Brisbane Convention and Exhibition Centre. You danced too – intellectually and some of you pretty seriously at the banquet. What a great venue and a great band so thanks to them – Riverlife and Savvy – for a great final night and thanks to you and your enthusiasm for making it so.



The biggest thanks from the Local Organizing Committee (LOC) and myself go to the **ICMS Australasia team**, **Emma**, **Andrea**, **Jemma** and **Suellen** who did all the hard work in the background for 2 years and then in the foreground with grace, style and beauty at the conference. Thanks guys – we love you!



Also, thanks from me personally to the LOC, especially **Fabio Cortesi** who was up for anything and to those who did specific jobs such as organizing the art competition (**Shaun Collin**), the Brain Bee event (**Uli Siebeck**) and all of the LOC folks who assisted with the organization of the satellite meetings. Special mention there goes to **Karen Cheney**, who masterminded the largest satellite, the **Australasian Society for the Study of Animal Behaviour (ASSAB)**, in fact a conference on its own, and then delivered a great plenary lecture at the congress. It was a great pleasure for us on the LOC to work with the Program Committee, headed by **Harold Zakon** and **Karin Nordstrom** – who put such a stellar program together. I can't remember being so frustrated at any previous ICN because I did not get to see and hear everything.



The **Brain Bee**, which many of you missed due to pressing appointments with **koalas** and other Australian things pressed and otherwise, was a great success. We had 200 high-school kids and their teachers at the conference looking at posters and drinking in cutting-edge science. It is so important to *get them in young* and a great debt of thanks goes to all those involved, who stayed behind and to the ISN Executive committee for enthusiastically allowing this to go ahead.



Although it may not have appeared obvious at the time, it was great fun for the LOC and myself putting our part of ICN2018 together and this was made easy and pleasurable by the ISN Exec committee: **Catharine Rankin, Susan Fahrbach, Karen Mesce, Peter Narins, Eric Warrant,** and the superb background support of **Allen Press** and **Terry-the-T-shirt-man Leatherman.**

It was lots of fun having you and we all learned enough to make our frontal lobes fibrillate. Come back to Australasia when you can and keep spreading the word about Neuroethology – neuroscience in the real world.



A NEW ISN WEBSITE

Outgoing ISN Secretary Susan Fahrbach explains what’s behind the new ISN website.

Last year the ISN Executive Committee concluded that the ISN website needed an extensive update. We had numerous concerns, chief among them the dated, text-heavy, mobile-unfriendly appearance of our original website. We did not want prospective members to assume that our society is old-fashioned! Second, we wanted more color and easier navigation. Third, we did not want to lose any of the functionality that needs to be behind a secure interface to guarantee members’ privacy (membership directory, membership renewal). Fourth, as always, we were mindful of costs, as we are aware that

our funds represent the combination of our members’ generosity with careful stewardship on the part of successive ISN Treasurers. We also prioritized low maintenance, as no one on the Executive Committee ever has enough time. After extensive consultation with Allen Press, we contracted with a design team at Allen Press to help us create a new look.



Despite the hard work of the web design professionals, this turned out to be a far bigger project than any on the Executive Committee imagined. Although we were able to go live with the new website right before the Brisbane Congress, the project is still not quite finished. We are pleased that some of the more popular pages, such as the Career Opportunities page and the Membership Directory (which you need to be logged in to use) are up and running, but we are still working on ways to present historical content, including information on past congresses, in a visually-friendly format. Thanks to those who have already sent feedback and comments to the current ISN Secretary. I am certain that that the newly-elected ISN Secretary will be equally responsive to your feedback and will likely bring a few new ideas of his or her own to the table. And if you are worried that you don’t currently see some of your favorite archival material, don’t conclude that it has been lost. Everything has been archived and will soon be back in a more convenient format.



ISN FINANCIAL UPDATE

Outgoing Treasurer Karen Mesce provided an update on the financial status of ISN at the Business Meeting at the Brisbane Congress. Highlights of her report are summarized here. Please contact either Karen Mesce or the incoming Treasurer, Mark Bee, if you have any follow-up questions. This report is in US dollars, as the ISN is incorporated in the US State of California.

Total Assets 1/1/2017:	\$546,573.00
Total Assets 12/31/2017:	\$578,328.04
Gain of	\$ 31,755.04

2017 expenditures: Allen Press operating expenses, ISN Executive Committee meeting, Konishi Neuroethology Research Awards, Heiligenberg Student Travel Awards, tax filing fees, bank wire fees, and credit card transaction fees.

2017 revenues: membership dues, donations, interest on cash deposits, investment portfolio gains.

Mid-2018 report: Karen Mesce noted that congress years naturally result in more expenditures than non-congress years. As of 7/1/2018, the ISN balance was \$601,389. After payment of normal operating and congress expenses, the ISN balance on 8/31/2018 was projected to be \$524,651.

Responses to your questions: ISN Executive committee members are not compensated and do not receive travel support to attend congresses; the quarterly payment that the ISN makes to Allen Press is currently \$4606; the cost of the new ISN website was approximately \$12,000; the ISN investment portfolio is held at Charles Schwab; the ISN does not hire an accountant, as the ISN Treasurer prepares our tax filings; \$23,050 was expended in 2018 on awards for members, with an additional 12 Heiligenberg Student Travel Awards supported by the US National Science Foundation.



Ana Silva presents her plenary lecture at the Brisbane Congress.



2018 ISN FELLOWS

Newly elected ISN Fellows were announced by Past-President Peter Narins at the Brisbane Congress.

ISN Fellows are nominated by members and are recognized for meritorious efforts to advance neuroethology. Any of the following contributions are eligible: a significant corpus of published research that

forms a distinct and important contribution to neuroethology; leadership in neuroethology education and outreach; extraordinary service that promotes science, particularly neuroethology. There is also a requirement for a continuing association with the ISN: candidates for Fellow must have been a member of the ISN continuously for at least the six years prior to nomination and must currently be a member of the ISN.

The ISN Fellows announced at the Brisbane Congress join a distinguished list of current ISN Fellows: **Robert Capranica, Thomas Collett, Thomas Cronin, John Hildebrand, Franz Huber, Darcy Kelley, Mazakazu Konishi, Edward Kravitz, Michael Land, Eve Marder, Randolph Menzel, Peter Narins, James Simmons, and Rüdiger Wehner.**

The 2018 ISN Fellows Committee was chaired by **Thomas Cronin**. Committee members were **Bruce Carlson, Michael Dickinson, Daphne Soares, and Lidia Szczupak**. The new ISN Fellows are highly visible members of the ISN, and all three are honored for a combination of their outstanding science and loyalty to the society.



Catherine Carr is Professor of Biology at the University of Maryland, College Park. She earned her BS and first-class honors in Zoology from the University of Cape Town in 1977, her MA in Biology from the State University New York at Buffalo in 1978, and her Ph.D. in Neuroscience from University of California San Diego in 1984, where she studied temporal processing in weakly electric fish under the supervision of Walter Heiligenberg. She received the ISN Young Investigator Award in 1984 and completed a postdoctoral fellowship at the California Institute of Technology in 1987 with Mark Konishi, where she worked on sound localization in barn owls. She received an Alfred P. Sloan Research Fellowship in 1988. She joined the Zoology Department at the University of Maryland, College Park in 1990. There, she and her students work on temporal coding in birds and reptiles. Catherine has also worked at the Marine Biological Laboratory, beginning as an instructor in the Neural Systems and Behavior course in 1990. She was appointed to the faculty of the course in 1995 and was Co-Director from 2000-2004. From 2005-2008 she served as the Grass Foundation Lab Director. She received a Humboldt Senior Research Prize (2004, 2011), was a fellow of the Hanse-Wissenschaftskolleg in 2011 and became a fellow of AAAS in 2012. In 2015, she was named *Doctoris Honoris Causa* by the University of Southern Denmark

and Distinguished University Professor at the University of Maryland. Dr. Carr was elected Chair of the Grass Foundation for 2018-2020.



Alison Mercer (center) with Past-President and ISN Fellow Peter Narins and Past-President Catherine Rankin.

Alison Mercer is Professor of Zoology at the University of Otago in Dunedin, New Zealand. Her interest in the structural and functional plasticity of the nervous system has resulted in a significant body of work encompassing multiple approaches in several invertebrate systems. As a Humboldt Research Fellow working in the laboratory of Randolph Menzel at the Free University of Berlin, Alison began the work for which she is most well-known, uncovering the functions of the biogenic amines in the brain of the honey bee and characterizing the function and expression of biogenic amine receptors. Her groundbreaking work on the actions of queen mandibular pheromone on a specific subtype of dopamine receptor has led to a shift in our understanding of the actions of pheromones. Embodying the philosophy of using the best system to answer the question, in parallel with her research in honey bees, Alison used electrophysiology and pharmacological tools to investigate the role of serotonin in synaptic plasticity in *Aplysia*. She also developed a long-term collaboration with colleagues at the University of Arizona examining plasticity in the antennal lobes of the moth *Manduca sexta*. Alison has advanced the cause of neuroethology as a mentor for numerous students and postgraduate researchers, and through her ongoing engagement with the general public as well as the beekeeper community. She is a Fellow of the Royal Society of New Zealand and received the award of Officer of the New Zealand Order of Merit in 2008. Alison served as the President of the ISN from 2010 to 2014.



Cynthia F. Moss is Professor in Psychological & Brain Sciences, Neuroscience & Mechanical Engineering at the Johns Hopkins University. She received a BS from the University of Massachusetts, Amherst, where she completed an honors thesis with Vincent Dethier. She earned her Ph.D. from Brown University under the mentorship of Andrea Simmons. Cindy was a postdoctoral fellow with Uli Schnitzler at the University of Tübingen and later with Jim Simmons at Brown University, before accepting a faculty appointment at Harvard University. At Harvard, Cindy received the Phi Beta Kappa teaching award and was named Morris Kahn Associate Professor. After six years at Harvard Cindy moved to the University of Maryland, where she was a Professor in the Department of Psychology and the Institute for Systems Research until 2014, when she joined the faculty of Johns Hopkins University. As a junior faculty member, she received an NSF Young Investigator Award and was twice awarded Fellowships at the Berlin Institute for Advanced Studies. Cindy has dedicated her career to investigating the mechanisms of the spatial perception systems used by humans and other animals to direct their actions and navigate in the natural environment. She and her colleagues have developed methods that permit the collection of multi-channel wireless neural recordings from free-flying echolocating bats. In 2001, Cindy was elected to the rank of Fellow of the Acoustical Society of America and in 2012, she was elected Fellow of the American Association for the Advancement of Science. She received the Hartmann Prize in Auditory Neuroscience in 2017 and the James McKeen Cattell Award in 2018.

2018 YOUNG INVESTIGATOR AWARDS

The ISN is pleased to recognize the winners of the 2018 Young Investigator Awards. The titles of the talks they presented at the 2018 ICN are also provided.

Anna Stöckl, Universität Würzburg, Germany: Spatial summation in hawkmoth lamina monopolar cells

Eva K. Fisher, Stanford University, USA: A comparative approach to parental care

Lena Veit, University of California at San Francisco, USA: Context-dependent learning in the song system of songbirds

Nicholas Kathman, Case Western Reserve University, USA: Coding and integrating multisensory motion information in the insect central complex



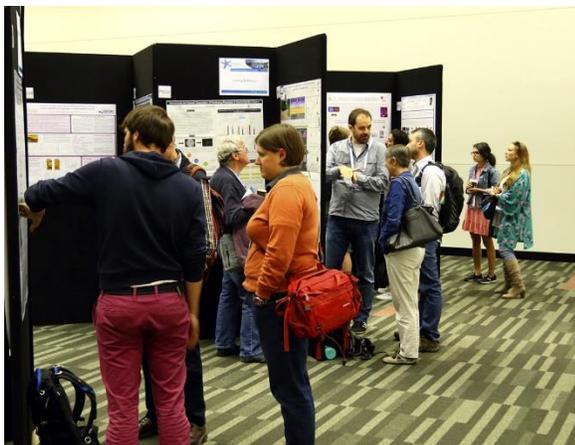
2018 ART AWARDS

In what is likely to become an ISN tradition, photographs representing neuroethological themes were presented at the Brisbane Congress. The following winners were announced at the Business Meeting.

ICN 2018 Panel Winner. *Mantis Shrimp: Benthic Navigators* (submitted by Rickesh Patel)

People's Choice Winner. *Ant Carrying Ant* (submitted by Barbara Webb)

Runner-Up (Honorable Mention). *Curiosity Overrides Fear* (submitted by Nico K. Michiels)



The lovely Brisbane waterfront on a lovely spring day

FUTURE CONGRESSES

2020: Lisbon, Portugal

2022: Berlin, Germany



A short stroll from the Brisbane Convention & Exhibition Centre