



# NEWSLETTER

## International Society of Chemical Ecology

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### — Important Dates —

- ◇ **15 April:** Officer Elections Close
- ◇ **15 April:** Deadline for student travel award applications
- ◇ **30 April:** Deadline for ISCE Meeting abstract submission
- ◇ **12-18 August:** 2018 ISCE Meeting in Budapest, Hungary  
<http://isce2018.premium.shp.hu/>

### Message from the President

Of the 34 presidents ISCE has had since 1984, I am the fourth woman to hold the title. I was honored to be elected president because I am a fervent supporter of our field and wish to nurture it in any way I can. It is for this reason that I want to take the opportunity to encourage our society to promote women who are doing quality research in chemical ecology. Our field can only benefit from recruiting and retaining excellent women researchers. Over the past decade, it has also struck me that ISCE is getting younger—students and young researchers have given some remarkable talks at our meetings. We should also give them our encouragement. In the same breath, I must thank the older, more established ISCE members who have helped mentor this next generation and who are therefore also responsible for the wave of new energy our society is experiencing.

I extend my sincerest thanks to our society's officers, who volunteer their time to keep our organization functioning properly. I am very grateful to our secretary, Irena, our treasurer, Jeremy, and our webmaster, Rob, who all stay on year after year as presidents and vice presidents change. Each year, we need new volunteers to fill different roles and new names to be nominated for our awards. Bringing in new faces is an important way of renewing ISCE's vitality.

Over the past years, I have relished the enthusiasm I see in certain members, who step up to organize our conferences. This contribution is vital. Each year, the number of participants in our annual meeting grows. However, the size always remains just right—small enough that we still feel like a community but large enough to be intellectually diverse. This is in no small part thanks to the efforts of our various meeting organizers, who have done outstanding work.

In closing, I wish you all the best for 2018, and I look forward to seeing you in Hungary in August. I am sure that we will have a stimulating meeting as usual. Keep up the great research and papers, and I strongly encourage you to submit your work to our journal. Finally, please promote our field everywhere in the world. We are still young, and we face many challenges!

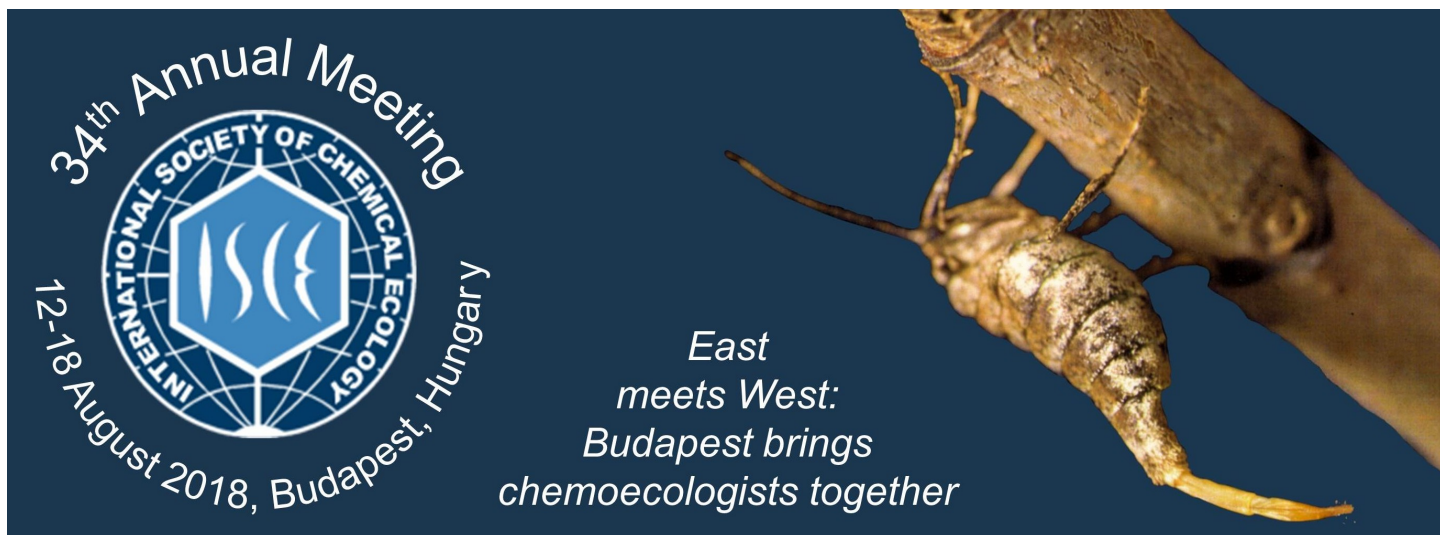
Anne-Gen Bagnères

### 2018-19 ISCE Elections

All members are invited to vote in the 2018-19 ISCE Elections. This year, the membership will vote to select a vice president and four councilors. The **vice-president** serves one year in this position and then serves as president in the following year. **Councilors** serve a three-year term and act in an advisory capacity to the Executive Committee. Last year, Junwei Zhu was elected as **treasurer**. Unfortunately, his employer (USDA) did not allow him to take this position. Therefore, Jeremy Allison serves one more year and a new treasurer will be elected next year. For additional information, please consult the ISCE bylaws, available online at the society website.

The online ballot is available for all paid members. Please log in to your ISCE account to vote at the society website (<http://chemecol.org/login.aspx>).

After reviewing the biographies below, please vote for your candidates: **ONE (1)** for Vice President and **FOUR (4)** candidates for Councilors. Please submit this information via the electronic ballot. **Voting will close at midnight (EDT) on April 15, 2017.**



## Invitation to the 2018 ISCE Meeting (Budapest, Hungary)

Dear ISCE members,

We are happy to invite you to participate in the 34th Annual Meeting of ISCE in Budapest, Hungary, which will take place August 12-18, 2018. The objective of the meeting is to bring together young and „forever young“ scientists studying all aspects of chemical ecology. Because of Hungary’s geographic position, we believe the conference will be an ideal place to bring together scientists from the East and West.

As usual, there will be a number of plenary lectures from outstanding scientists of the field, award lectures and some keynote presentations. Several offers from members also came in for the organization of specific symposia within the framework of the four general sessions, New Chemical Structures, Interspecific Relationships, Intraspecific Relationships and Practical Applications. Registration to the conference already started in January.

The conference will take place at Budapest Congress Center within the building of the four-star Novotel Budapest City Hotel (accommodation is also available in the hotel). The venue is on the hilly Buda side of Budapest, which is greener with parks, but the city is only at some minutes’ travel by public transport. There is a great Shopping Mall nearby the hotel for people interested in doing some shopping while here. The organizers did their utmost to assure the highest quality of service for conference participants at a still acceptable price (<https://isce2018.premium.shp.hu/>).

If you plan to stay some days longer in Budapest after the conference, you will have the opportunity to watch the August 20 Fireworks above the Danube in Budapest. This day is the most important national holiday in Hungary, commemorating our first Christian King, Saint Stephan, who founded the Christian Kingdom of Hungary at roughly one thousand years ago. There are numerous happenings during the day, followed by the fabulous Fireworks in the evening. Of course, the countryside of Hungary also offers many interesting and unique sites; you are most welcome to explore them.

The ISCE is accepting applications for student travel awards to the 2018 ISCE Meeting. These awards will provide partial assistance toward total travel costs. Travel award applications must be submitted to the chair of the awards committee ([past.president@chemecol.org](mailto:past.president@chemecol.org)) by **April 15th, 2018**.

Looking forward to meeting you in Budapest in August 2018,

Miklós and Zoltán



Hungarian Academy of Sciences

### Candidates for Councilors

**John Beck** is a Research Leader of the Chemistry Research Unit located at the USDA-ARS Center for Medical, Agricultural and Veterinary Entomology, in Gainesville, FL. He received his BS in Chemistry from the University of California, Riverside and his PhD in Natural Products and Organic Chemistry from Colorado State



University. Prior to joining the Agricultural Research Service (ARS) in 2006, John was an Associate Professor of Chemistry working on the isolation, characterization and bioassay of bioactive components from terrestrial plant sources. Since joining the ARS as a Research Chemist, he has worked primarily on chemical communications of plants and insects, and over the last five years has expanded his interests to include microbial emissions and their contributions to plant-insect interactions. John's work with agriculturally-related insect pests, their host plants and related fungal spores led to the discovery of a synthetic blend of volatiles that attract male and female navel orangeworm moths. The synthetic blend is currently undergoing licensing for commercialization. Other recent work includes the investigation of nectar-microbe emissions and their role in plant-pollinator interactions. John has broad experience as a member of journal editorial boards, as a former associate editor, and as an organizer of several semiochemical-related symposia. He has numerous publications in a wide variety of chemistry, plant and chemical ecology journals, four patents, and maintains several national and international collaborations centered around chemical ecology.

**Matthew Ginzel** is an Associate Professor in the Departments of Entomology and Forestry & Natural Resources at Purdue University where he is also a member of the Hardwood Tree Improvement and Regeneration Center. He earned a MS and PhD with Larry Hanks at the University of Illinois at Urbana-Champaign, and then went on to spend two and a half years as a post-doctoral fellow with Gary



Blomquist at the University of Nevada before coming to Purdue in 2006. Matt's research focuses on the chemical ecology of native and invasive beetles that threaten the health and productivity of forests. Through collaborative and interdisciplinary studies, current work by his research team focuses on i) characterizing

contact and aggregation pheromones of longhorned beetles and determining the extent to which chirality affects their bioactivity; ii) understanding the chemical ecology of bark and ambrosia beetles affecting native hardwoods; and iii) exploring mechanisms of ash resistance to the invasive emerald ash borer and increasing the efficacy of its biological control agents.

Matt is also committed to mentoring undergraduate and graduate students and has an established track record of publishing with them. He has authored over 30 articles in peer-reviewed journals, including nine in the *Journal of Chemical Ecology*. Recently, he has also published book chapters ranging in topics from the contact sex pheromones of longhorned beetles to the biochemistry and ecology of insect hydrocarbons. Matt has been a member of ISCE since he was a graduate student, has attended annual meetings of the society, and is a regular reviewer for the *Journal of Chemical Ecology*.

**Anna Jirošová** is a junior group leader at the Czech University of Life Sciences in Prague, Czech Republic. She is involved in the project Extemit-K lead by Fredrik Schlyter (Sweden). Anna completed her PhD in chemistry of natural product at the Institute of Chemical Technology in Prague under the supervision of Aleš Svatoš and Irena Valterová. She studied biosynthesis of marking pheromones of the bumblebee males and the biosynthesis of the tobacco hornworm sex pheromone. During her PhD studies, Anna spent one year in the laboratory of Anna-Karin Borg-Karlson at the Royal Institute of Technology in Stockholm, where she performed chiral analyses of the bumblebee pheromone components. In 2004 she got a two-year NATO-funded postdoctoral position in the laboratory of Steven Seybold at UC Davis, California, USA. There she worked on identification and biosynthesis of the bark beetle pheromones. Between 2007 and 2016, Anna worked as the chemical ecologist at the Institute of Organic Chemistry and Biochemistry in the group of Irena Valterová and later in the group of Robert Hanus where she focused on chemical ecology of termites. She has been an active collaborator with the Max Planck Institute of Chemical Ecology (Jena, Germany).



Anna's research interest is predominantly isolation and identification of the insect communication compounds by the analytical techniques, their biosynthesis and biological function. In the Extemit-K project she investigates semiochemical system of the host tree - bark beetle interaction, particularly the level of tree attraction for bark beetles in relation to the tree physiology and genetics, forest diversity, and landscape characteristics.

**Christopher I. Keeling** is a Research Scientist in Forest Genomics at the Laurentian Forestry Centre, Canadian Forest Service, Natural Resources Canada, in Quebec, Canada. He received his MSc and PhD in Chemistry at Simon Fraser University, Canada, under the supervision of Prof. Keith N. Slessor. His PhD thesis was the identification of new components of the queen honey bee retinue pheromone. With a Canadian NSERC postdoctoral fellow-

ship, he went to the University of Nevada, Reno, where he explored the genomics of pheromone biosynthesis in bark beetles with Prof. Claus Tittiger and Prof. Gary Blomquist. After returning to Canada, he became a research associate at the University of British Columbia, Canada, with Prof. Joerg Bohlmann. There, he explored both conifer and bark beetle functional genomics, particularly in terpenoid host defences and bark beetle pheromone biosynthesis. Christopher also participated in genome sequencing projects for the white spruce tree and the mountain pine beetle. Before starting his present position in Sept. 2017, he was a University Research Associate for two years at Simon Fraser University with Prof. Allison Kermode, investigating the morphology and chemical ecology of the resin vesicles on conifer seeds. He has published more than 50 peer-reviewed publications in a variety of journals including *PNAS*, *Genome Biol.*, *BMC Genomics*, *Plant J.*, *BMC Plant Biology*, *J. Biol. Chem.*, *Ins. Biochem. Mol. Biol.*, *J. Chem. Ecol.* and *Naturwissenschaften*. His current research uses a multi-pronged approach encompassing chemistry, biochemistry, molecular biology, and genomics to understand plant-insect interactions at the molecular level in forest systems. Christopher became an ISCE member in 1996 and has attended and co-organized symposiums at several ISCE meetings since then. His experiences have included many of the diverse disciplines that the field of chemical ecology now encompasses and he would welcome the opportunity to serve this community as a councillor.

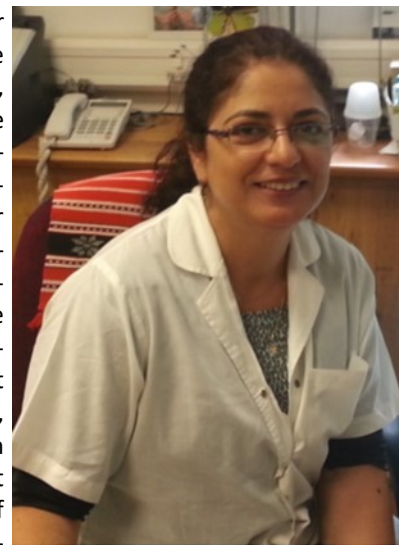


**Jonas Kuppler** is a Scientific Assistant at the University of Ulm, Germany. He conducted his doctoral research at the Heinrich-Heine-University, Duesseldorf, Germany and the University of Salzburg, Austria, under the supervision of Dr. Robert R. Junker. During this time, he investigated how floral scent in combination with other floral traits influence flower-visitor interaction networks. After receiving his PhD in 2016, he continued his work in Salzburg as a postdoctoral researcher, before moving to the Chemical Ecology Group of Prof. Manfred Ayasse at the University of Ulm in 2017. His main research focus is to understand the linkage of complex floral phenotypes (i.e. scent emission, morphology, coloration and resources) to plant-animal interactions and plant performance at organismal to community level. He is now expanding this research to experimental research studies investigating the effect of environmental conditions and anthropogenic disturbance on floral scent emission and flower-visitor interactions. Additional-



ly, he explores if plants may use floral scent to communicate with conspecific neighbouring plants. Jonas authored several articles in international peer-reviewed journals like *New Phytologist* or *Functional Ecology*. As early career researcher, it would be a great opportunity to actively engage in society and policy issues and participate in the further development of chemical ecology.

**Anat Levi-Zada** is a Senior Research Scientist in the Department of Entomology, Chemistry Section, of the Volcani Institute of the Agricultural Research Organization, Israel. She received her BSc., MSc. and Ph.D. degrees in Organic and Polymer Chemistry from the Hebrew University of Jerusalem. After a postdoc at Loughborough University, U.K., she began working in 2000 with entomologists at Volcani on a wide range of insect pest problems in agriculture that included identification of insect pheromones and their application. She has collaborated in identifying aggregation pheromones of a bark beetle infesting fruit trees, sex pheromones of several mealybugs infesting grapes and citrus trees, sex pheromones of several moth species infesting fruit and date palms, a sex pheromone of a scarab infesting wheat, and sex pheromones of two polyphagous plant bugs. She developed a new method of sequential SPME analysis with GCMS that has allowed her to focus on specific insect components exhibiting a circadian rhythm of release. This method has aided in the identification of moth, mealybug, fruit fly and other pest pheromones that have long remained unidentified because of the inherent difficulties. She has pioneered sol-gel dispenser technology and is currently working on a project to develop new time-released dispenser technologies. On the applied side, she is involved in mass-trapping and monitoring research for several pests of orchards and plantations. In 2015, Anat received the Israeli Growers Plant Council Award for Excellence in Research. She has published over 50 papers in scientific journals. Anat most enjoys when her research on a pest pheromone is adopted by growers.



**Christian Pirk** is a Professor in the Department of Zoology and Entomology at the University of Pretoria and a member of the Academy of Science of South Africa. Christian did his PhD from 2000-2002 under the supervision of Prof R. Hepburn at Rhodes University (Grahamstown, South Africa). Thereafter, he was a postdoctoral fellow in Professor Tautz's group at the University of Würzburg followed by joining Professor Moritz's group at Halle University. In 2005 he joined Professor Crewe's lab at the University of Pretoria and in 2006 he was rated as one of the TOP50 German researchers in the field of Behavior. In 2009 he accepted a faculty position in the Department of Zoology and Entomology, two years later he was promoted to Associate Professor and he has been a full Professor since 2015. In the same year, he

was elected to the Academy of Science of South Africa. He is actively involved in the COLOSS and SUPERB networks, European Union (EU) funded networks consisting of several international institutes investigating the underlying reasons for colony collapse disorder and pollinator decline observed around the world.



His main research focus is on social insects, using a multidisciplinary approach by combining mathematics, chemistry, behavioral studies, population analysis and molecular ecology. His focus lies in the reproductive division of labor in social insects, especially honeybees and the resulting potential conflicts among members of an insect colony and the role of chemical ecology in resolving these conflicts. The role of chemical communication and the use of chemical cues play a crucial role in his work on mosquitoes together with International Centre for Insect Physiology and Ecology in Kenya. Moreover, researching self-organization in social insects, the organization of groups, mechanisms of coordination and task allocation and the role and means of communication in achieving coherent collective behavior, has applications in industrial processes. Another field of interest is the interaction and co-evolution between hosts and parasites/pathogens for example those between the honeybee and small hive beetle/brood diseases. Christian leads the Social Insects Research Group, which is a vibrant group of more than 20 members including faculty members, post docs and post graduates.

**Zainulabeuddin (Zain) Syed** is Assistant Professor in Biological Sciences at the University of Notre Dame, Indiana, USA. He has been working in insect chemosensation for over 21 years, with a broad objective to understand the evolutionary and functional biology of olfaction, and how such understanding can be exploited for the management of arthropod pest/vector populations. During his PhD and since, he has gained specific



training and expertise in developing and/or integrating the chemical-analytical and neuroethological methods to study insect chemosensation from both the signaling and reception perspectives. A solid publication record over the years, esp. since establishing his own research laboratory in 2011 at the University of Notre Dame demonstrates his continued fascination to the field of insect olfaction. His research group uses the insect olfactory system and its cellular and molecular components as biological detectors to isolate and identify volatile organic compound (VOCs) that mediate insects' critical life traits, such as finding suitable hosts and mates, and avoiding predators. These inte-

grated approaches to understand and exploit the remarkable chemical communication in insects offers him novel tools in the fight against world's deadliest crop pests and insect that vector diseases.

## Candidate for Vice President

**Dr. Jerry (Junwei) Zhu** is a Research Chemical Ecologist and Entomologist at the USDA-ARS (US Department of Agriculture, Agricultural Research Service). He has also been an Adjunct Professor of Entomology at the University of Nebraska since 2010. He received his PhD in Chemical Ecology with Prof. Christer Löfstedt at Lund University, Sweden. Since 1995,



he has worked in various industry and research institutes and universities in US and Europe. His research focuses on semiochemical-based pest management (particularly in discovering and developing practical uses for novel natural repellent/attractant compounds). He has published over 100 scientific papers and holds 6 US patents, some of which have been developed into commercial products from his inventions. He served as a guest editor of *Journal of Chemical Ecology* for the special issue titled, "Semiochemicals in Pest Management: Development, Regulation Applications" with John Romeo, Tom Baker and Jocelyn Millar. He is also a subject editor of the ESA (Entomological Society of America) journal "*Journal of Insect Science*" and serves on editorial boards of several international journals. He has been a member of ISCE since 1990 and has organized several ISCE conferences (including two joint conferences of ISCE and APACE in Japan, 2017 and Australia, 2013) and attends ISCE meetings regularly. Currently, he is a Past-President of Asia-Pacific Association of Chemical Ecologists and the Overseas Chinese Entomologists of America.

### ***Why I am interested in this position and what I can contribute to ISCE?***

I have been with ISCE since I was a PhD student in Lund University (1990), and have witnessed some significant improvement of this society with great efforts from current and previous executive officers and councilors, as well as our long-time supporting members. In the meantime, I also see some further improvement needed in ISCE, in areas such as, to recruit new members, particularly from graduate students (future chemical ecologists) who will be the hope of ISCE; to gain more support from industries as new semiochemical-base companies emerge quickly with increasing demands of non-traditional pest management technologies, as well to use ISCE's combined wisdom and knowledge to help them succeed. Research in Chemical Ecology has been fast growing in regions of Asia-Pacific and Latin-America with over 400 members of APACE and another few hundred of members in ALAEQ, ISCE should continue working hard

to ensure membership diversity and further establish strong connections with these two sister societies, encouraging more international collaborations, which ultimately will benefit all members of three societies. Last but not least, ISCE is an international organization, and ISCE's leadership reflects that diversity. I will work with ISCE executive officers and councilors to do everything possible to encourage and improve the diversity in various aspects within ISCE community. With my broad experience and management skills developed from previous service to various scientific organizations, I hope that I can make a unique contribution to ISCE and make ISCE become an organization that every chemical ecologist will love to join and find pride in being a part of.

**Jerry (Junwei) Zhu**

## Society News:

### In Memoriam José Roberto Trigo (1956-2017)

During the night of 28<sup>th</sup>-29<sup>th</sup> November José Roberto Trigo, professor of Chemical Ecology at the Universidade Estadual de Campinas (UNICAMP), died unexpectedly at the age of 61 at his home in Paulínia, São Paulo. Trigo, as he was known, will be remembered for his ground-breaking contributions to the understanding of sequestration of plant metabolites by insects.

Trigo grew up in São Paulo city and in 1982 he obtained his degree in biological sciences from the Universidade de São Paulo (USP), Ribeirão Preto Campus. He then carried out his Master's between 1984 and 1988 under the supervision of Keith S. Brown Jr. in the Ecology Programme at UNICAMP. His project focussed on sequestration of plant metabolites by Ithomiine butterflies, and began what would become Trigo's major contribution to chemical ecology: the interaction between plant secondary metabolites, insect defence and insect pheromonal communication. He then moved across the road to the Institute of Chemistry at UNICAMP to carry out his doctoral studies under the supervision of Lauro E. Soares Barata, in collaboration with Keith Brown. This would give Trigo a unique profile, at least in Brazil, as an ecologist who thoroughly understood chemistry and



therefore had the chemical tools to rigorously test ecological hypotheses. After a postdoctoral placement in Thomas Hartmann's laboratory at the Technische Universität Braunschweig, Germany, in 1997 he became a lecturer in Animal Ecology, and leader of the Chemical Ecology laboratory at UNICAMP, following Keith Brown's retirement.

Trigo's initial work on sequestration of Solanaceae metabolites by Ithomiinae gradually expanded to other Nymphalids and plant groups and then to moths, in particular Arctiinae. More recently he became interested in other mechanisms of chemical defence such as chemical camouflage. During the last 15 years he began a major line of research on plant defence, in particular asking how different plant defences affect generalist and specialist herbivores. He was one of the few people researching plant defence in native Neotropical systems.

Over his career he supervised or co-supervised over 30 Master's and doctoral students. in the Ecology, Plant Biology, Animal Biology and Molecular and Functional Biology programmes at UNICAMP

Trigo will not only be remembered for his contributions in chemical ecology but also as a passionate educator and a tireless faculty member. His passing is a huge loss for Brazilian ecology.

Martín Pareja  
Universidade Estadual de Campinas - UNICAMP  
São Paulo, Brasil

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## International Society of Chemical Ecology

<b>President</b>	Anne-Geneviève Bagnères	<a href="mailto:president@chemecol.org">president (at) chemecol.org</a>
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