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ISCE Meeting 2017 in Japan – Invitation

Dear ISCE members,

It is our great pleasure to invite you to participate in the Joint Meeting of the 33rd Annual Meeting of ISCE and the 9th meeting of APACE in Japan during August 23-27, 2017. The aim of the meeting is to bring together young researchers and experienced leaders working on various aspects of chemical ecology. In addition to the plenary lectures, award lectures and keynote speeches, the meeting is designed to accommodate submitted oral presentations and poster presentations.

The venue of the joint meeting is the Ryukoku University Fukakusa Campus in Kyoto. For the schedule of the conference, please visit the conference website (<http://www.2017isce-apace.jp>). Please follow the website updates for student travel award applications. Registration and accommodation links will be opened in March. We recommend that you book a hotel through the conference website because Kyoto is one of the most popular sightseeing cities in Japan. Please also prepare for the high summer temperatures during the conference. August in Kyoto is generally very hot, humid and sunny. You may want to plan on spending time in Kyoto before the conference. The week before the conference is the most famous summer festival in Kyoto with the Daimon-ji Fire Festival held on the night of August 16th. Huge fires in the shapes of Chinese characters are set on the mountains surrounding the city. This is a very nice time to experience Kyoto.

Looking forward to meeting you in Kyoto during the summer of 2017.

Naoki and Junji

2017-18 ISCE Elections

All members are invited to vote in the 2017-18 ISCE Elections. This year, the membership will vote to select a vice president, a treasurer, a secretary, and four councilors. The **vice-president** serves one year in this position and then serves as president in the following year. The **treasurer** and the **secretary** serve for the period of three years. **Councilors** serve a three-year term, too, and act in an advisory capacity to the Executive Committee. 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:

- <http://chemecol.org/login.aspx>

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

2017-18 ISCE Elections: Candidate for Vice President

Coby Schall holds the Blanton J. Whitmire Distinguished Professorship at North Carolina State University (USA). He has a B.Sci. from the State University of New York at Albany, a Ph.D. from the University of Kansas (with W.J. Bell), and postdoctoral training at the University of Massachusetts (with R.T. Cardé). He was Assistant and then Associate Professor of Entomology at Rutgers University in New Jersey. Coby's chemical ecology projects include cockroach sex and aggregation pheromones, roles of microbes in mosquito and sand fly



oviposition, cuticular lipids in various insects, evolution of sex pheromones in moths, and the neuronal basis of sugar-aversions in cockroaches. Research on cockroach-produced allergens also includes their biology, intervention strategies to mitigate their pervasiveness, and studies on the impacts of environmental interventions on health outcomes in asthmatic children. The Schal lab has also been investigating the recent resurgence of bed bugs, through collaborative research in population genetics, chemical ecology and pest and resistance management. Coby's lab has published over 260 peer-reviewed papers, and he has mentored 35 graduate students and 36 post-doctoral researchers. He teaches graduate courses in Insect Behavior, Urban Entomology and Chemical Ecology. Coby has served as subject editor and on the editorial boards of 6 journals, including the Journal of Chemical Ecology, as councilor of the ISCE, and on the Entomological Society of America (ESA) Governing Board. Recent honors include the Silverstein-Simeone Award from the ISCE, Fellow of ESA, Fellow of AAAS, Holladay Medal (NCSU's highest faculty award), Outstanding Research Award, Outstanding Adviser Award, ESA's Recognition Award in Urban Entomology, and ESA's Nan-Yao Su Award for Innovation and Creativity in Entomology.

2017-18 ISCE Elections: Candidate for Treasurer

Jerry Zhu is a Research Chemical Ecologist/Entomologist at USDA-ARS. He is also an ADJ 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 universities, Industry, and Research Institutes in US and Europe. His research focuses on semiochemical-based pest management (from basic understanding to practical applications). He has published over 80 peer-reviewed journal papers, with 5 US patents and several developed commercial products from his inventions. He also served as a guest editor of Journal of Chemical Ecology and was involved with the recent special issue of JCE titled, "Semiochemicals in Pest Management: Development, Regulation Applications" with John Romeo, Tom Baker and Jocelyn Millar. He is a member of ISCE since 1992. He has been involved in organizing several ISCE conferences (including the present 2nd joint conference of ISCE and APACE in Japan) and attends ISCE meeting regularly. Currently, he serves as the President of Asia-Pacific Association of Chemical Ecologists and the President of Overseas Chinese Entomologists of America.



2017-18 ISCE Elections: Candidate for Secretary

Irena Valterová is the Head of the Research Group of Infochemicals of the Institute of Organic Chemistry and Biochemistry, Academy of Sciences of the Czech Republic in Prague. She graduated in organic chemistry at the Faculty of Natural Sciences of the Charles University in Prague. As a PhD student, she worked on isolation and structure elucidation of defense substances of termite soldiers under the supervision of Dr. Jan Vrkoč. As a postdoctoral research fellow, she



spent two years (1990-1992) at the Royal Institute of Technology in Stockholm, Sweden. She worked in the group of Prof. Torbjörn Norin on enantioselective separations using a two-dimensional gas chromatography. She applied this technique in the determination of enantiomeric purity of monoterpene hydrocarbons isolated from insects and plants.

Her current research includes chemical communication in bumblebees and biosynthesis of male marking pheromones. She published 147 original papers, 4 review articles, and 4 patents, mainly in the field of chemical ecology. As a principal investigator of a successfully solved project “Pollinators as a Crucial Factor in Agriculture“, she was awarded the Prize of the Technology Agency of the Czech Republic and the Prize for Usefulness of Solution in 2015.

Irena is an active member of the Czech Chemical Society where she works in the Executive Committee. Furthermore, she is a member of the Board for Alfred Bader Prize awarding outstanding Czech young scientists in bioorganic and bioinorganic chemistry. Irena became an ISCE member in 1993 where she served as councilor in 2002-2004 and as Secretary since 2014 until now. She has been nominated for a second three year term by the current Past-President, Kenneth Haynes.

2017-18 ISCE Elections: Candidates for Councilors

Vincas Būda is a professor of animal ecology at Vilnius University, Lithuania. He obtained his PhD at Moscow State University for his work on pheromone communication in codling moth and degree of dr. *habilitus* at Institute of Ecology (Vilnius) for work on chemical communication in moths: biological, ecological and chemical aspects. For few years he has been Visiting Scientist at Lund University (Sweden), Prof. C. Löfstedt's pheromone group, and for one year at Iowa State University with Prof. T.C. Baker. In the State Scientific Research Institute of Ecology (Vilnius) he established his own group to study chemical and behavioral ecology of insects. He prepared and published textbook for university students on chemical ecology (part on intraspecific interactions by means of semiochemicals). Later his research program was expanded from insects to certain mammals, their pheromones and behavior, as well as to animal-plant interactions. Vincas with co-authors published numerous papers in international journals and won several prizes, including Fulbright Foundation award (USA) and Lithuanian award for science (National award for outstanding achievements). During 2008-2013 he was appointed a member of Research Council of Lithuania and since 2008 became fellow of the National Academy of Sciences in Lithuania. Vincas hosted ISCE annual meeting in Vilnius, 2012.



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*.

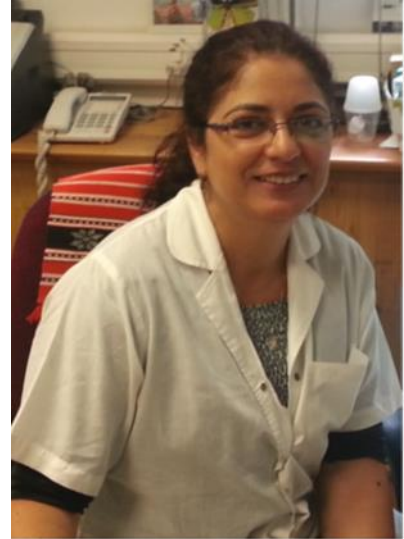
Anna Jirošová is a junior group leader at the Czech University of Life Sciences in Prague, Czech Republic. She is involved in the project Extemit-K lead by Fredrik Schlyter (Sweden). Anna completed her PhD in chemistry of natural product at the Institute of Chemical Technology in Prague under the supervision 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.

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.



Gabrielle Nevitt is a Professor in the Department of Neurobiology, Physiology and Behavior at UC Davis who is fascinated by the sensory worlds of animals. She received her BS and MS Stanford University, and a PhD in Zoology from the University of Washington, where she studied olfactory imprinting and homing in Pacific salmon. She did postdoctoral work at Cornell University where she was highly influenced and encouraged by Professor Tom Eisner to “just keep doing what you are doing.” In response to his suggestion, she has spent most of her career engaged in questions elucidating how behavior is shaped by interactions with chemical signals and landscapes in natural (field) contexts. Career-wise she went out on a limb to conduct pioneering studies into the sense of smell in birds at a time when they were thought to be mostly anosmic. She has worked extensively in the sub-Antarctic to better understand how petrels and albatrosses use odor landscapes to find patchily distributed prey in a seemingly featureless ocean. Discoveries include 1) that dimethyl sulphide is not only a global climate regulator but also serves as a keystone foraging cue in marine ecosystems, and 2) that birds can discriminate each other using scent cues alone. Her publications have appeared in leading journals (Science, Nature, PNAS) and, she has been a regular contributor to ISCE meetings over the years. She would welcome the privilege of serving the society as an ISCE councilor.



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 multi-disciplinary 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.

Sandra Steiger is Assistant Professor at the University of Ulm, Germany since 2012. She received her PhD at the University of Freiburg, Germany, where she studied chemically mediated recognition processes in burying beetles. She was awarded the Horst Wiehe Prize of the German Zoological Society for her outstanding PhD thesis and the presentation award of the ISCE conference in 2007. Supported by a Feodor Lynen Fellowship of the Alexander von Humboldt Foundation, she spent two years in the US at the Illinois State University working on the role of cuticular lipids in mate choice of crickets. After a short stop in the group of Prof. Joachim Ruther at the University of Regensburg, she moved on to the Chemical Ecology Section headed by Prof. Manfred Ayasse at the University of Ulm. Her research interests lie in the intersection of the fields of Chemical Ecology, Behavioral Ecology and Evolutionary Ecology. The focus of Sandra's research is to investigate the evolution of chemical traits and how sexual selection shapes chemical profiles. Moreover, she is particularly interested in how pheromones regulate family life and coordinate the interaction between the different members of a family. Her main model system are burying beetles, which show an elaborate form of biparental care. As burying beetles breed on dead vertebrates and treat it with antimicrobial secretions, she is also interested in the topic of internal and external immune defenses and the role of microbial symbionts. Sandra has published numerous articles in international journals like Nature Communication, Current Biology, Ecology Letters, Molecular Ecology, Proceedings Royal Society B, Evolution and Journal of Chemical Ecology.



Sybille B. Unsicker is a Group Leader at the Max Planck Institute for Chemical Ecology (MPI-CE) in Jena and an associated member of the Chair for Terrestrial Ecology at the Technical University Munich (Germany) where she teaches courses in Chemical Ecology. Sybille obtained

her Master Degree in Tropical Ecology at the University of Würzburg in 2002 and earned her PhD in Ecology at the University of Jena in 2007. After a one-year postdoc at the MPI for Chemical Ecology Sybille established her own project group in 2008 to study the chemical ecology of poplar trees. She is particularly interested in the role of volatiles and phenolics in tree defense against insects and pathogens. Sybille published numerous papers in international journals like *Ecology*, *Current Opinion in Plant Biology*, *Oecologia*, *The Plant Cell*, *Journal of Chemical Ecology* etc. In 2016 Sybille co-chaired the Gordon Research Seminar on Plant Volatiles. She is a member of ISCE since 2008.



Short course in Insect Chemical Ecology (ICE 17)

The Penn State's Center for Chemical Ecology announces the 2017 short course in Insect Chemical Ecology, May 31 - June 14th, 2017. The course is organized by Tom Baker and Jim Tumlinson. It is devoted to chemical communication among insects, plants, animals, and pathogens interactions of evolutionary importance at the molecular, biochemical, neurophysiological, behavioral, and ecological levels with special emphasis on plant-insect and microbe-insect interactions, olfaction, insects and disease, pollination, pheromones and their applied uses, and techniques in chemical ecology research. For more details and registration go to <http://agsci.psu.edu/ice>. Early bird registration will be March 31, 2017.

The organizers are excited about the lineup of guest lecturers and about hosting this course again, which rotates each year between SLU Alnarp, Sweden, the Max Planck Institute for Chemical Ecology in Jena, and Penn State in the U.S. This two-week-long course has proven to be an enjoyable, once-in-a-lifetime, "total immersion" experience in all areas of insect chemical ecology for past student and postdoc attendees who came to Penn State in 2010 and 2014.

Invited speakers

Jared Ali, Penn State University

Etya Amsalem, Penn State University

Tom Baker, Penn State University

Teun Dekker, Swedish Agricultural University, Alnarp

Gary Felton, Penn State University

Ewald Grosse-Wilde, Max Planck Institute for Chemical Ecology, Jena, Germany

Christina Grozinger, Penn State University

Bill Hansson, Max Planck Institute for Chemical Ecology, Jena, Germany

David Hughes, Penn State University

Rickard Ignell, Swedish Agricultural University, Alnarp

Emmanuelle Jacquin-Joly, French National Institute for Agricultural Research, Versailles

Markus Knaden, Max Planck Institute for Chemical Ecology, Jena, Germany

Greg Krawczyk, Penn State University

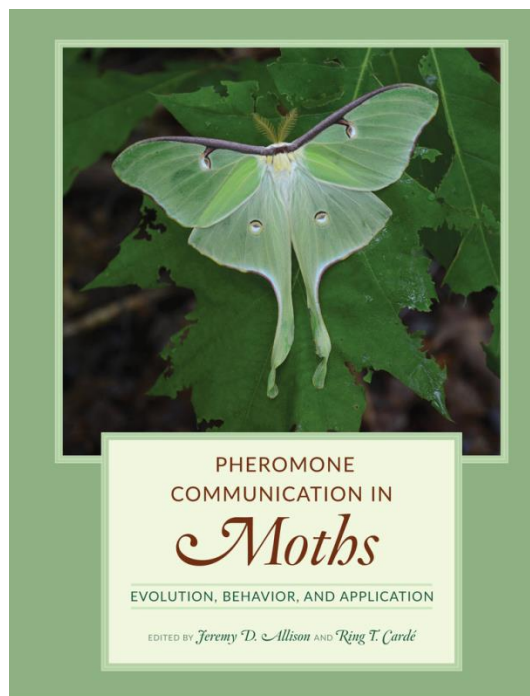
Christer Löfstedt, University of Lund, Sweden

Jocelyn Millar, University of California, Riverside

John Pickett, Dept. Biol. Chemistry, Rothamsted Research, England
Robert Raguso, Cornell University
Andrew Read, Penn State University
Silke Sachse, Max Planck Institute for Chemical Ecology, Jena, Germany
Matt Thomas, Penn State University
John Tooker, Penn State University
Baldwin Torto, Intl. Centre of Insect Physiology and Ecology, Kenya
Jim Tumlinson, Penn State University
Peter Witzgall, Swedish Agricultural University, Alnarp

New Book in Chemical Ecology

“Pheromone Communication in Moths: Evolution, Behavior, and Application” edited by the ISCE members Jeremy Allison and Ring Cardé. The book summarizes moth pheromone biology, covering the chemical structures used by the various lineages, signal production and perception, the genetic control of moth pheromone traits, interactions of pheromones with host-plant volatiles, pheromone dispersal and orientation, male pheromones and courtship, and the evolutionary forces that have likely shaped pheromone signals and their role in sexual selection. Also included are chapters on practical applications in the control and monitoring of pest species as well as case studies that address pheromone systems in a number of species and groups of closely allied species.



Hardcover, 416 pages; ISBN: 9780520278561; published in October 2016

Please visit the publisher's website for more information:
<http://www.ucpress.edu/book.php?isbn=9780520278561>