



NEWSLETTER

International Society of Chemical Ecology

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— Important Dates —

- ◇ **1 March 2019**
Deadline for abstract submission to the 2019 ISCE conference in Atlanta, USA and for Student/Post-doc Travel Awards.
- ◇ **1 April 2019**
Last day to submit ballots for the 2019 ISCE Officer Election
- ◇ **2-7 June 2019**
2019 ISCE Conference, Atlanta, USA

2019-20 ISCE Elections

All members are invited to vote in the 2019-20 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 serves as president in the following year. **Councilors** serve a three-year term and act in an advisory capacity to the Executive Committee. For additional information, please consult [the ISCE bylaws](#). Please [log in to your ISCE account](#) to vote at the society website.

Message from the President

These are exciting times. The 35th annual meeting of the [International Society of Chemical Ecology](#) will be held in Atlanta, Georgia, USA, from 2–7 June 2019. Please visit the [conference website](#) to register, explore the themed session topics, and submit your abstract for an oral or poster presentation. **The deadline for abstract submission is March 1, 2019**, but registration and accommodation reservations will remain open well beyond this date. **March 1 is also the deadline for submitting applications for the [Student and Post-doc Travel Award](#)**. Special thanks to our 2019 hosts, Professors [Mark Hay](#) and [Julia Kubanek](#), at the [Aquatic Chemical Ecology Center](#) at [Georgia Institute of Technology's School of Biological Sciences](#).

The ISCE Executive Committee (EC) and Councilors have been busy with several activities and two new initiatives. As usual for this time of year, the group has been active evaluating nominations for the [Early Career Award](#), [Silverstein-Simeone Lecture Award](#), and [Silver Medal Award](#). This is one of the most challenging and rewarding tasks, given the outstanding slate of nominations we have received. Thank you to all the nominators! In addition, the EC and Councilors have been preparing for evaluations of the [Student and Postdoctoral Travel Award](#) nominations/applications and assembling a judging panel for the [Student Presentation Awards](#).

A new initiative to strengthen ties between ISCE, ALAEQ and APACE

A central goal of the ISCE is “to promote the understanding of interactions between organisms and their environment that are mediated by naturally occurring chemicals”. Since its inception in 1983, the ISCE has endeavored to have a global reach through its flagship journal, the *Journal of Chemical Ecology*, conferences around the world, and by encouraging and supporting the participation of students and early career scientists from developing countries. In 2013, the first joint meeting of ISCE and the [Asia-Pacific Association of Chemical Ecologists](#) (APACE) was held in Melbourne, Australia, and in 2016 the first joint ISCE-ALAEQ ([Latin-American Association of Chemical Ecology](#)) meeting was held in Foz de Iguazú, Brazil. All three societies aspire to continue to convene joint conferences.

At the 2018 ISCE meeting in Budapest, the EC and Councilors were charged with developing mechanisms to strengthen ties between ISCE, ALAEQ and APACE. After extensive deliberations, the EC and Councilors developed and ratified two new initiatives:

ISCE-Sponsored ALAEQ and APACE Travel Awards: ALAEQ and APACE will identify highly deserving Ph.D. students, postdocs, or early career chemical ecologists who will be awarded ISCE travel awards to attend the next ISCE meeting.

ISCE Travel and Participation Award: ISCE will support the attendance of ISCE scientists at ALAEQ and APACE meetings.

ISCE-Sponsored ALAEQ and APACE Travel Awards:

The “**ISCE-ALAEQ Travel Award**” and the “**ISCE-APACE Travel Award**” will be awarded to deserving Ph.D. students, postdocs, and early career scientists who show promise to make outstanding contributions to chemical ecology. This award will be made by ISCE to ALAEQ and APACE scientists to attend ISCE meetings, as follows:

- ALAEQ meets in even years. [ISCE will make available to ALAEQ US\\$2,500 to support ALAEQ award winners to participate in the following \(odd year\) ISCE meeting.](#)
- APACE meets in odd years. [ISCE will make available to APACE US\\$2,500 to support APACE award winners to participate in the following \(even year\) ISCE meeting.](#)

Thus, the ISCE’s annual expenditures will be US\$2,500.

Eligibility criteria:

- Any current Ph.D. student, postdoc, or early career member of either ALAEQ or APACE is eligible to be considered by their respective society for this award.
- Award recipients are expected to become ISCE members before the ISCE conference they will attend.
- Award recipients must present an oral or poster presentation at the ISCE meeting.

ALAEQ and APACE will develop mechanisms for screening potential award recipients. This may include a presentation competition at their respective conferences, or a call for nominations, or any other mechanism that effectively identifies deserving award recipients based on demonstrated excellence and potential for future excellence of contributions. One or more award recipients may be supported. For example, multiple awards may be made when the ISCE meeting is near the APACE or ALAEQ regions.

The Presidents of ALAEQ and APACE, or their designees, will submit the names of the award winners to the Past President of ISCE. The deadline for submission will be the same as the deadline for general submission of ISCE Student and Postdoc Travel Awards.

To ensure transparency and high quality, ALAEQ and APACE will submit to ISCE all the materials required by ISCE for Student and Postdoc Travel Award applications/nominations, submitted electronically as a single file.

Evaluation of the Program:

The ISCE Executive Committee is charged with evaluating the effectiveness of this initiative and taking action to redirect the program to maximize its effectiveness. This includes monitoring the quality of award recipients, their participation in future meetings (ISCE, ALAEQ, APACE), “retention” of ISCE members, leadership in the three associations, etc.

ISCE Travel and Participation Award

ALAEQ and APACE routinely invite and provide partial support for ISCE members to attend their respective meetings, present talks, interact with the association, participate in forums, and often represent the ISCE. This award will bring leading chemical ecologists from the ISCE in contact with ALAEQ and APACE students and researchers with whom they might not normally interact at the ISCE meeting. This award complements the goals of the “ISCE-Sponsored ALAEQ and APACE Travel Awards” and “Student and Postdoc Travel Award”, but with potentially wider reach. To facilitate these interactions, the “**ISCE Travel and Participation Award**” will provide partial support to ISCE members identified by ALAEQ and APACE to attend an ALAEQ or APACE conference, as follows:

- ALAEQ meets in even years. [ISCE will make available US\\$1,500 to support the travel of ISCE members to the next ALAEQ meeting.](#) The ALAEQ President may request this ISCE award of US\$1,500 in preparation for the next ALAEQ meeting.
- APACE meets in odd years. [ISCE will make available US\\$1,500 to support the travel of ISCE members to the next APACE meeting.](#) The APACE President may request this ISCE award of US\$1,500 in preparation for the next APACE meeting.

Thus, ISCE’s annual expenditures will be US\$1,500.

Eligibility criteria:

- One or more awards, for a total of US\$1,500 will be made by ISCE to ISCE members who are invited by ALAEQ and APACE to participate in the ALAEQ or APACE meeting.
- Award recipients must present an oral presentation at the ALAEQ or APACE meeting.

To forge better collaborations among the three associations, ALAEQ and APACE are encouraged to invite members of the ISCE Executive Committee and Councilors. These individuals represent a broad cross-section of ISCE volunteers who are also in the best position to discuss governance issues and assess the effectiveness of this initiative. This mechanism also provides an incentive for volunteering to serve the ISCE.

Evaluation of the Program:

The ISCE Executive Committee is charged with evaluating the effectiveness of this initiative and taking action to redirect the program to maximize its effectiveness.

Conflict of Interest:

The current ISCE Vice President, President, and Past-President are not eligible for this award until they leave office. New

Message from the President, continued

incoming Executive Committee members and all Councilors are eligible to participate in this initiative.

I want to take this opportunity to thank the ISCE Councilors and Executive Committee for their thoughtful deliberations. This is a bold and potentially complicated initiative (e.g., joint meetings need to be considered separately), and it forms a strong foundation for greater collaboration among the three international associations that promote Chemical Ecology.

Respectfully,

Coby Schal
ISCE President



2019 ISCE Meeting: Atlanta, GA, USA Invitation and Call for Abstracts

Dear ISCE members,

The 35th annual meeting of the [International Society of Chemical Ecology](#) will be held in Atlanta, Georgia, USA, from 2-7 June 2019. Abstract submission is now open until March 1, 2019. Please visit the [conference website](#) to explore the themed session topics and submit your abstract for an oral or poster presentation by March 1. Registration and accommodation reservations will be available online within the next month, and stay open well beyond the abstract submission deadline.

The conference is organized by the [Georgia Institute of Technology's School of Biological Sciences](#) and Aquatic Chemical Ecology Center, hosted by Professors [Mark Hay](#) and [Julia Kubanek](#), with a Local Organizing Committee composed of: Charles Derby (Georgia State University), Nicole Gerardo (Emory University), Vinayak Agarwal, Brian Hammer, Mark Hay, Julia Kubanek, Frank Stewart, and Marc Weissburg (Georgia Institute of Technology). The conference will take place at the [Georgia Tech Hotel and Conference Center](#) on Georgia Tech's main campus in midtown Atlanta, near numerous entertainment and educational institutions (including the [Georgia Aquarium](#), [Atlanta Botanical Gardens](#), [Zoo Atlanta](#), [Fernbank Natural History Museum](#), [Center for Human and Civil Rights](#), [Martin Luther King Memorial and National Historic Site](#), [CNN](#), [High Museum of Art](#), [Atlanta History Center](#), and many more). The easiest, most convenient, and most central lodging will be at the conference venue, the [Georgia Tech Hotel and Conference Center](#). Atlanta's "MARTA" subway system runs from inside the Atlanta airport to within a five minute walk of the conference venue.

The theme of the conference, "Chemistry as the Language of Life", emphasizes that most of Earth's organisms lack eyes and ears, and so sense and

communicate with co-occurring organisms via chemical cues and signals. In this sense, chemically mediated interactions constitute an "instruction manual" for biotic interactions and for understanding and managing populations, communities, and ecosystems. The scientific program will offer themed sessions focused on emerging topics concerning inter- and intraspecific interactions, as well molecular structures, applications, and member-submitted symposia. Planned themed session topics along with session organizers are listed on the following page.

For up-to-date information about the conference, scientific program, and registration information, please visit <http://isce2019.biosci.gatech.edu>.

Looking forward to meeting you in Atlanta in June 2019,

Julia Kubanek and Mark Hay
2019 ISCE Conference Organizers

Call for Student Travel Awards

The ISCE is now accepting applications for student and postdoctoral travel awards to the [2019 ISCE Meeting](#) in Atlanta, Georgia, USA. These awards will provide partial assistance toward total travel costs and a one-year ISCE membership. Travel award applications must be submitted to the chair of the awards committee by **March 1st, 2019** and we will notify applicants by mid-March, allowing time before the deadline for registration.

Application Materials:

- Name, address, email, degrees awarded (including University, country, and year)
- Travel budget (with quotes, if possible)
- Other sources of travel funds (obtained and applied for)
- Applicant's signature and date
- Dated and signed letter of support from the applicant's senior adviser
- Title and abstract of the presentation, max. 1500 characters
- CV including publications and presentations

Eligibility:

- Undergraduate/graduate student or postdoc (within three years of graduation from Ph.D.)
- Present a paper or poster at the meeting
- Not have previously received an ISCE travel award
- Non-members of the ISCE welcome to apply

Questions/Submissions: Applications should be submitted to the chair of the student awards committee (Anne-Geneviève Bagnères; past.president@chemecol.org) and abstracts **must also be submitted** on the [ISCE 2019](#) website.

ISCE 35th Annual Meeting

June 2-7, 2019 | Atlanta, Georgia, USA

Themed Sessions

Chair and Co-Chair(s)

| | |
|--|--|
| The Chemical Ecology of Host and Mate Selection | Jiangqiang Wu, Julia Bing |
| Application and Manipulation of Plant Volatiles for Crop Protection | Ted Turlings, John Pickett |
| The Chemical Ecology of Stress, Warning Signs and Fear | Erik Selander, Monika Hilker |
| Natural Product Application in Insect Pest Control | Aijun Zhang, Jian Chen |
| Insect-Microbe Chemical Communication | Almuth Hammerbacher |
| Language of Life Under Climate Change | Mahasweta Saha, Joerg Hardege, Christina Roggatz |
| Anthropogenic Impacts on Chemical Cues, Signals and Chemoreception | Robbie Girling, Kathy Van Alstyne |
| Microbe-Driven Chemical Communication across Ecosystems and Hosts | Dana Ulanova, Ruth Schmidt, Vartika Mathur |
| Molecular Mechanisms in Terrestrial and Aquatic Chemical Ecology | Wei Xu, Scott Cummins |
| Secondary Metabolites and other small Molecules as the Language in Microbiome Interactions | Brian Hammer, James Lyles |
| Metabolomics in Chemical Ecology | Neha Garg, Remington Poulin |
| Integrated Approaches for Structure Determination in Chemical Ecology | Serge Lavoie, Anne Marie Sweeney-Jones, Bhuwan Chhetri |
| Chemically Ecology of Social Parasitism | Rachelle Adams |
| Biosynthesis of Secondary Metabolites in Chemical Ecology | Eric Schmidt |
| Chemical Biology Approaches for Interactions among Organisms | TBD |
| Chemically-Mediated Consumer-Prey Interactions | TBD |
| Ecology, Biology and Chemistry of Pheromones | TBD |
| Chemical Indices of Quality and Health Guiding Foraging and Host-Choice | TBD |

APACE Meeting 2019

Announcement of Conference Participation Awards for ALAEQ and ISCE students and young scientists to attend the 10th APACE Conference

To encourage and support the participation of students and early career scientists from three chemical ecology societies, representatives from the three societies, Coby Schal (**ISCE**, International Society of Chemical Ecology), Paulo Zarbin (**ALAEQ**, Latin America Association of Chemical Ecology) and Jerry Zhu (**APACE**, Asia-Pacific Association of Chemical Ecologists) at the 5th **ALAEQ** conference in Chile, proposed to establish the Inter-society travel awards to young members from each society to attend their respective conferences. After discussion with APACE executive committee, APACE decides to provide financial support to one candidate each selected from **ISCE** and **ALAEQ** to join the 10th APACE Conference this fall in Hangzhou, China (Oct. 9-13, 2019).

APACE will provide financial supports to **ALAEQ** and **ISCE**'s highly deserving Ph.D. students, postdocs or early career chemical ecologists to attend the 2019 APACE conference in Hangzhou (<http://www.pace2019.org>). This award will include **a round trip flight ticket** (Max. \$2500), with **waiver of the conference registration fee** by the support of the local organizing committee.

Eligibility criteria and nominations:

- Any current Ph.D. student, postdoc or early career member of either **ALAEQ** or **ISCE** is eligible to be nominated for this award. Awardees will be expected to become **APACE** members before the APACE conference they will attend.
- **ALAEQ** and **ISCE** will develop mechanisms for screening potential nominees. This may include a competition at their respective conferences, or a call for nominations, or any other mechanism that effectively identifies deserving nominees based on demonstrated excellence and potential for future leadership for their societies.
- The Presidents of **ALAEQ** and **ISCE**, or their designees, will submit their nominees to the Past President of APACE (Jerry Zhu). The deadline for submission will be **April 15, 2019**.
- Nominations submitted to **APACE** will include all the materials of the top three award nominations. Nominations will consist of a SINGLE PDF file submitted electronically.

Proposed mechanism for evaluation and funding:

- This will be a stand-alone program with **APACE** funds (approved by the Treasurer).
- The selection of awardees will be by **ALAEQ** and **ISCE**. The role of **APACE** will be to ensure a process that satisfies the goal of the awards and minimizes conflict of interest.

Evaluation:

The APACE Executive Committee will be charged with

evaluating the effectiveness of this nomination and taking action to redirect the program to maximize its effectiveness. This will include monitoring the quality of awardees, participation in future meetings of **ISCE**, **ALAEQ** and **APACE**, "retention" of society members, leadership in all three associations, etc.

Jerry Zhu

ISCE Vice-President



2019 ISCE Officer Elections

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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 and **FOUR (4)** candidates for Councilors. Please submit this information via the electronic ballot. **Voting will close at midnight (EDT) on April 1, 2019.**

Candidates for Vice President (in alphabetic order)

Stefano Colazza is full professor of Agricultural Entomology at the University of Palermo, Department of Agricultural, Food and Forest Sciences (SAAF). He graduated at University of Perugia where he became lecturer and teaching assistant in 1986. Thereafter, in 1987 he was a one-year postdoctoral in professor Brad Vinson's group at Texas A&M University. Then, in 1998 he moved at University of Palermo as associated professor, and full professor in 2006 and serves as Head of the Department since 2015. He has conducted research as a visiting scientist in France, USA, Brazil, Argentina, and New Zealand. He spent one-year sabbatical in the laboratory of Professor Jocelyn Millar at UCR in 2003 which strongly influenced his research interest. Stefano's research focuses on infochemicals and behavioural ecology of plant-insect herbivores-insect parasitoid interactions in a multitrophic



Candidates for Vice President, continued

context, and on chemical ecology of plant VOCs in a multitrophic context. He was elected as a fellow of the Italian Academy of Entomology, and the Academy of Georgofili. He is associated editor of the Journals BioControl, and speciality chief editor of the journal Chemical Ecology of Frontiers in Ecology and Evolution. Over the last two decades he settled international collaborations, led research groups, supervised the activity of undergraduate and post-graduate students, and taught undergraduate and postgraduate modules in a range of subjects. He has various publications and edited one books on different aspects of insect chemical ecology. He has been a member of ISCE since 1992, attends ISCE annual meetings regularly, and served as councilor from 2009-12.

Statement of motivation, Stefano Colazza

Why I am interested in assuming the responsibility of a position in a scientific society when all of us are already extremely busy? I believe that being part of a global, communicating, and collaborating community of researchers in a discipline such as Chemical Ecology is both stimulating and challenging, and indeed, chemical ecology is one of the most active and rapidly developing fields in contemporary science. But scientific communities do not progress without effort and contributions from all of us. Therefore, I am happy to have the opportunity to stand for this position, and hopefully help to shape the future of the ISCE. Following in the footsteps of those who preceded me, one of my top goals is to work on improving the participation and inclusion of our younger members, mainly by increasing collaboration and building capacity in regions where chemical ecology is not yet well established, in order to improve demographic diversity. Semiochemicals that enhance the efficacy of natural enemies, the characterization of natural products that mediate behaviour and physiology, and the development of environmental metabolomics are just a few examples of both more traditional and new frontiers to excite new research interests within the community of the ISCE. In this scenario, and in close collaboration with the executive officers and councilors, I hope to make a solid contribution to ISCE and to ensure that the ISCE becomes an organization increasingly capable of facing the future challenges facing our planet and all its myriad species.



Andrés González Ritzel is an Associate Professor at the Chemistry Department of Universidad de la República in Montevideo, Uruguay. He earned a Chemistry degree in Uruguay in 1993, and a PhD in Neurobiology & Behavior from Cornell University (1999), working on insect chemical defense with Prof. Thomas

Eisner. He then went back to his home country to start a research group in Chemical Ecology, which he still runs together with his life partner, Carmen Rossini.

Andrés' research interests include several topics related to Chemical Ecology, from insect pheromones to plant-insect interactions. He has published over 50 papers in which he combines chemical analysis with functional and behavioral questions, merging basic and applied approaches in various study systems, mostly insect pests relevant to Latin America. His research work includes a strong component of student training, both at the undergraduate and graduate levels, promoting the interdisciplinary work of chemistry, agronomy and biology students. In this sense, he has taught Chemical Ecology courses, lectures and seminars in Uruguay, Argentina, Brazil, Colombia and Venezuela.

His long-term goal of promoting Chemical Ecology in his country and in Latin America led him to be co-founder of ALAEQ, the Latin American Association of Chemical Ecology, and to co-host ALAEQ's first meeting in Uruguay in 2010. He has been an active participant and symposia organizer in all ALAEQ meetings, and regularly attends the Brazilian Meetings of Chemical Ecology since 2003. He has served as Councilor and President of ALAEQ, and now as Treasurer, and promotes this Association as a strategic tool for the fruitful interactions of Latin American research groups in the field.

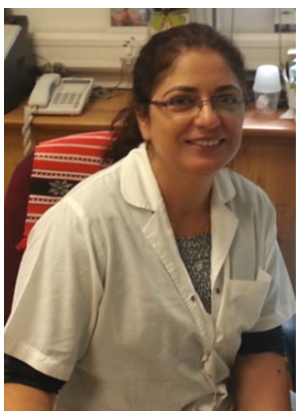
Andrés has participated in several ISCE meetings since 1994, when he attended as a first-year graduate student, receiving later on, in 1999, a Student Travel Award. He has served as Councilor for the society during the 2015-2018 term, and as a member of the Editorial Board of the Journal of Chemical Ecology since 2011. He is also Section Editor for Neotropical Entomology since 2016, managing manuscripts that deal with Chemical Ecology.

Statement of motivation, Andrés González Ritzel

I would be honored to serve the ISCE as Vice-President. This is a well-established scientific society with more than 35 years of history, and many important tasks, both academic and administrative, run very smoothly and are well organized and distributed among the members of the Executive Committee (EC). My first goal would be to blend with this working scheme and with the rest of the EC, so that the day-to-day tasks of our Society continue to be successfully achieved. However, as I have witnessed during my term as Councilor, the members of the Society have raised concerns and suggestions that point to a continued progress of the society. Among these, the degree of involvement of the Society in the organization of meetings, the truly international character of the Society, and the renovation of the membership with young students and researchers, taking into account all types of diversity. The society has been working on many of these issues, and as part of the EC, I would like to be receptive to these and other concerns, and to do my best to continue providing answers to them. Finally, I believe that working together with regional Associations is key to achieve a strong international character for the Society, and I hope to continue this current trend.

Candidates for Vice President, continued

Anat Levi-Zada is a Senior Research Scientist in the Department of Entomology, Chemistry Section, of the Agricultural Research Organization, Volcani Center, 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 Univ, 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 automated sequential SPME-GCMS analysis (SSGA) that has allowed her to focus on specific insect volatiles exhibiting a circadian rhythm of release. This method has aided in the identification of pheromones of certain moths, mealybugs, fruit flies and other pests that had previously remained unidentified using traditional methodologies because of background contamination, trace chemical amounts, and difficulties in rearing sufficient insects. She has pioneered environmentally safe sol-gel dispenser technology and is currently working on a project to develop new microcapsule time-released dispenser technologies. On the applied side, she conducts research in mass-trapping control methods and semiochemical monitoring of populations for several insect pests of fruit orchards and date plantations. In 2015, Anat received the Israeli Growers Plant Council Award for Excellency 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.

Statement of motivation, Anat Levi-Zada

Anat has been a member of the ISCE since she began her career in chemical ecology. If she would be elected as Vice President of the ISCE, Anat would like, along with the president, the executive committee and councilors, to continue advancing the society by promoting young talented researchers and more women from all regions of the world in presenting their works at the annual society meetings. Basic research in chemical ecology will lead with foundational knowledge, but we must also emphasize the significance of studies in applied chemical ecology in order to ensure future public and industry support of our field.

Candidates for Councilors (in alphabetic order)

Since his PhD **Gen-Ichiro Arimura** worked on induced defenses in plants. Already one of his first publications has



become a milestone in Chemical Ecology, since this represented the first combination of Ecology with molecular Biology concerning induced volatiles. After his PhD he joined the lab of Jörg Bohlmann in Canada, followed by a period in Wilhelm Boland's group of the MPI of Chemical Ecology in Jena. In 2008 he returned to Japan and became an Assistant Professor at the Ecology Center at the Kyoto University, Japan. Since 2013 he is an Assistant Professor at Kyoto

University, where he will advance to a full Professor in April 2019. His scientific interest are still focused on the physiology and control of induced plant defense, but more and more the complexity of the defense regulation comes into his interest. Gen was co-organizer of the ISCE meeting in Kyoto 2017 and has published a number of seminal papers in the field. He has a perfect overview of the field and we can expect significant input from him for the future of the Society.

Michael Eisenring earned his M.S. degree in Ecology at ETH Zurich (Switzerland) and his Ph.D. in the group of Jörg Romeis, at the University of Bern (Switzerland) and the Swiss Federal Research Station "Agroscope". During his Ph.D., Michael studied how different inherent and genetically engineered plant defense mechanisms affect plant-herbivore interactions in the cotton agroecosystem. He conducted a large part of his work at the USDA-ARS in Arizona (USA) where he was supervised by Steve Naranjo.



Following graduation, he joined the group of Rick Lindroth at the University of Wisconsin-Madison (USA). Michael's current work focuses on how intraspecific genetic variation and environmental stress shape the expression of poplar tree chemistry and how this affects plant-herbivore interactions in forest ecosystems.

Yunhe Li is a professor and a research group leader in the Department of Biotechnology in Plant Protection at the Institute of Plant Protection, Chinese Academy of Agricultural Sciences (IPP-CAAS) in Beijing, China. He received his PhD in biology from the University of Bern, Switzerland. Prior to

joining the IPP-CAAS in 2010, Yunhe worked for one year in the Department of Entomology at Cornell University as post-doctoral fellow with Tony Shelton.

Yunhe's current research interests mainly focus on insect chemical ecology with the objective to understand the



chemical communications of plants (focus on rice), pests and natural enemies and the plant (including insect-resistant transgenic plants)-mediated intraspecific and interspecific interactions of herbivores. In addition, he works on the development of sound methods and procedures for environmental risk assessment of insect-resistant transgenic crops. So far, he has supervised over 20 master or PhD

students and published over 80 scientific papers with more than 60 papers in international peer-reviewed journals including *Proceeding B*, *Plant Biotechnology Journal*, *Nature Biotechnology*, *BMC in Plant Science*, *Environmental Pollution*. He served as a guest editor for *Frontiers in Plant Science* and an associate editor of *Agricultural GM Biosafety Branch, 3rd Edition of Chinese Encyclopedia*. In 2018, Yunhe was selected as the leading talent of Young and Middle-aged Scientific and Technological Innovation by the Ministry of Science and Technology of China. Yunhe is keen to serve the ISCE as a councillor.

Marcelo G. Lorenzo is the leader of the Vector Behavior and Pathogen Interaction Group at IRR-FIOCRUZ, in Belo Horizonte, Brazil. He graduated in Biological Science at University of Buenos Aires and got his Ph.D. in Science at the same university under the supervision of Prof. Claudio Lazzari. Subsequently he developed postdoctoral experiences in UBA (Argentina), CPqRR-FIOCRUZ (Brazil) and SLU (Sweden). He became associate researcher at CPqRR in 2002 and senior researcher of the same institute in 2006. Marcelo's main scientific experience is on



insect physiology, with an emphasis on behavioral physiology. His research includes studies on the behavior, pheromones, kairomones, electrophysiology and, more recently, the functional genomics of sensory processes of triatomines and culicids. He keeps a series of collaborations with colleagues from diverse countries through which his research is clearly multidisciplinary. He has been an active supervisor of undergraduate and graduate students through most of his career. Marcelo is a member of the editorial boards of PLOS ONE, *Frontiers in Ecology and Evolution* and *Neotropical Entomology*, while he also acts as a reviewer for many peer-

reviewed journals. Finally, Marcelo has published more than 60 papers on diverse topics related to insect neuroethology in a variety of peer-reviewed journals including the *Journal of Chemical Ecology*.

Yonggen Lou is a distinguish Professor at the Zhejiang University located in Hangzhou, China. He received his PhD (infochemicals in host selection behavior of *Anagrus nilaparvatae*) in 1995. He completed his postdoc training in Max-Planck Institute of Chemical Ecology (Molecular Ecology) in Jena, Germany, then worked as a visiting scientist in the Laboratory of Prof. Ted Turlings at the University of Newchatel, Switzerland. Currently he is the Department head of Plant Protection at Zhejiang University. Prof. Lou primarily works on molecular interactions between plants and insects including molecular mechanisms of plant defense responses; plant hormone signaling; direct and indirect defenses; tritrophic interactions and rice insect pest management. He has published over 120 research papers in some high impact scientific journals, such as *Nature Plants*, *PNAS*, *Ecology Letters*, *eLife*, *Plant journal*, *Plant Physiology*, *New Phytologists*, and *Molecular Plant*, etc. He has been an APACE councilor and serves as the 2019 APACE conference Chair. He also serves as the President of Chinese Chemical Ecologist Association. During his career, he has received numerous national and international awards, with 15 patents granted from his research. He also serves as editorial board members for PLOS One, *Insect Science* and *Journal of Integrative Agriculture*, etc.



Shigeru Matsuyama is an Associate Professor in the Graduate School of Life and Environmental Sciences at University of Tsukuba, where he had conducted his doctoral research under the supervision of Dr. Yasumasa Kuwahara among colleagues such as Dr. Walter Leal and Dr. Naoki Mori in the same laboratory. At that time, he worked on kairomones of a monophagous moth, *Glyphodes pyralis*, identified a phytoalexin of the host plant as an oviposition stimulant. Through this work, he learned basic techniques of bioassay-guided fractionation and isolation of biologically active substances, spectroscopic analyses, and organic synthesis. While teaching basic organic chemistry and chemical ecology at the university, he is an adviser of jazz playing club activity and



Newsletter of the International Society of Chemical Ecology

known as a bass player. Throughout his research career, he has worked in the field of chemical ecology with a broad range of insects such as those in Hymenoptera, Coleoptera and Lepidoptera. He is currently serving as an Editorial Board

Member of Applied Entomology and Zoology, the official journal of the Japanese Society of Applied Entomology and Zoology. He is a member of seven academic societies including ISCE and APACE, and actively engaged in academic activities. He also served as the treasurer of APACE for 1998-2000, and is currently serving as a councilor of APACE, hoping to act as a bridge between ISCE and APACE.

**Don't forget:
members may
vote for up to
four councilors**

Andrea Clavijo McCormick is a Senior Lecturer at the School of Agriculture and Environment at Massey University, in New Zealand, where she also leads the Chemical Ecology group. During her Master's studies, she developed a mating



disruption programme for the Guatemalan Potato moth (*Tecia solanivora*) in a collaborative project between the Colombian Corporation for Agricultural Research (CORPOICA) and the Swedish University of Agricultural Sciences (SLU), under the supervision of Dr. Alba Marina Cotes and Prof. Peter Witzgall. In her Ph.D., Andrea investigated the direct and indirect defences of Poplar trees (*Populus nigra*) at the

Max Planck Institute for Chemical Ecology in Germany, under the supervision of Prof. Jonathan Gershenzon and Dr. Sybille Unsicker, in collaboration with Dr. Tobias G. Köllner, Dr. Andreas Reinecke, and Prof. Bill S. Hanson. She then obtained a Plant Fellows Scholarship for a postdoctoral position at the Swiss Federal Institute of Technology in Zurich (ETH Zurich), in the Biocommunication group led by Prof. Consuelo De Moraes, where she investigated the relationship between flightlessness and olfaction in the Gypsy moth (*Lymantria dispar*) in collaboration with Dr. Ewald Grosse-Wilde. She has authored several peer-reviewed publications in journals such as Trends in Plant Science, Frontiers, Plant, Cell & Environment, The Plant Cell, The Plant Journal, Journal of Chemical Ecology, and Ecology and Evolution. Her current research aims to explore the mechanisms underlying ecological interactions in New Zealand's endemic, native and endangered species, and to apply this knowledge to the development of sustainable agricultural methods and the conservation of vulnerable species and their habitats. Some flagship projects include: investigating communication between an invasive (*Calluna vulgaris*) and a native plant species (*Leptospermum scoparium*) in competition scenarios, understanding the role of microorganisms in plant-pollinator interactions in native Mānuka plants (*L. scoparium*), and exploring plant-insect interactions in New Zealand's native ferns.

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.

Magali Proffit is a young researcher at the National Centre for Scientific Research, France. She received her PhD in 2007 on the "Chemical mediation and community structure of hymenoptera parasite of fig and pollinating fig wasp mutualism". She worked as a post-doc fellow at the University of KwaZulu-Natal, in South Africa, and then at the Swedish University of Agricultural Sciences, in Sweden. She is currently working at Centre for Functional and Evolutionary Ecology (CEFE), in Montpellier, France. She has published more than 20

research articles publications in some high-ranking journals, such as *Ecology Letters*, *Proceedings of the royal society-B* or *Scientific Reports*.



Her research activities are essentially oriented in the area of chemical ecology and build bridges between different disciplines (*i. e.* chemistry, behavioral ecology, evolutionary ecology and physiology) in order to understand the processes underlying plant-insect chemical communication. Recently, she has expanded her research interests to investigate the impact of environmental variation on plant-insect chemical communication, and as a consequence on the maintenance of biotic interactions. In addition to chemical ecology, she has strong theoretical and technical experience in pollination biology, phenotypic plasticity of insect olfaction and adaptation to environmental variation.

Christelle AM Robert is a senior research associate and group leader at the University of Bern, Switzerland. After a MSc in Ecology, Ethology and Evolution at Rennes (France), which she passed with distinction, she embarked on a PhD with Prof. Ted Turlings at the University of Neuchâtel, Switzerland. Her award-winning thesis unraveled how volatile and non-volatile plant metabolites shape the behavior and damage of the western corn rootworm, the most damaging maize pest on the globe. She then obtained



funding from the Swiss National Science Foundation to continue her research at the Max Planck Institute for Chemical Ecology in Jena, Germany. She combined her model system with biochemical approaches to investigate how the western corn rootworm processes plant secondary metabolites for its own benefits. In 2014, she joined the group of Biotic Interactions of the University of Bern, Switzerland, as a project leader. She extended her work

to higher trophic levels and demonstrated that the herbivore sequesters and reactivates the plant secondary metabolites upon attack by its enemies. Since 2018, Christelle is leading the “Chemical Ecology” group at the Institute of Plant Sciences at the University of Bern. Her research is interdisciplinary and combines plant genetics, molecular biology, behavior and ecology to advance the state-of-the art in multitrophic interactions and provide possible bases for the development of new strategies to solve imminent challenges, such as food

production and climate change. Despite a one year career break for family reasons, she published over 40 manuscripts since 2012, including papers in *Science*, *Nature Communications*, *Ecology Letters* and *PLOS Biology*.

Christelle is committed to mentoring the next generation of scientists through interactive and original teaching methods. She supports the scientific community by serving as reviewer and as a member of the advisory board of the *New Phytologist*. She strongly believes that scientific curiosity combined with strong inference and empirical approaches will help to push the frontiers of knowledge in chemical ecology.

Fredrik Schlyter is a naturalist by genes and environment, trained in Animal Ecology/Zoology and Lund University, Sweden. He received his PhD in chemical ecology on *Ips typographus* aggregation pheromone system in 1984. His focus



soon shifted from pheromone attractants to density-regulation cues with practical implications, verbenone, and release rate systems, but at first with weak results in practical terms. Not until he was up and running with non-host volatiles (NHV) effects got practically relevant. His review paper of 2004 established the rich phenomena of NHVs and supported the idea of Semiochemical Diversity Hypothesis as a functional

aspect of biodiversity, particular in forest insects. The emerging effects of Global Warming prompted EU projects on bark beetles as well on pine processionary moths for applications and more importantly gave a lasting European network.

Moving to Swedish Agriculture Uni (SLU), Alnarp in 1995, a general interest in plant-insect relations involved him in studies on *Drosophila*, *Hylobius*, and moths, in particular *Spodoptera*. The modulation of insect behaviour at time scales of ethology, ecology, and evolution was the broad topic of the Linnaeus project ICE³ at SLU, 2006 -2016, where Fredrik was leader the last three years.

In 2015 the Czech Uni of Life Sciences (CULS) in Prague invited him to draft the scientific part of a project proposal of similar size as ICE3 for 6 years, EXTEMIT-K to mitigate effect of climate change on conifer forest. Since 2017 Fredrik is the scientific leader for the project working on levels of gene, tree, and landscape with a keen eye on bark beetle chemical ecology. Transcriptomic studies on beetle chemosensory proteins and in moth digestive diversity and OR deorphanisation, together with the recent successful genome sequencing of *Ips typographus* by Pac-Bio, points to the future.

Wei Xu is a senior lecturer in Entomology in Murdoch University, Western Australia. He has been studying insect chemosensory systems for over 15 years, with a broad objective to understand the molecular mechanisms and

evolution of insect chemosensory systems and their functions in insect-host interactions. His long-term goal is to develop more efficient and environmentally friendly pest control strategies.

During his PhD study on insect olfactory genes with Professor Walter Leal at UC Davis, he explored the molecular mechanism of moth and mosquito olfactory proteins including odorant binding proteins, odorant receptors and odorant degrading enzymes. Then he came to Australia with an Office of the Chief Executive (OCE) Fellowship to join CSIRO Ecosystem Sciences in Canberra, where he



continued his postdoctoral studies on insect gustatory systems by using functional genomics and molecular techniques. He joined Murdoch University from 2015 as a lecturer and built his

insect chemical ecology lab in Perth, Western Australia. In 2016, He received Discovery Early Career Researcher Award (DECRA) from Australia Research Council (ARC) for his research on insect chemical ecology. His research is trying to answer the questions: how insects detect their host; why they prefer one host to another; how hosts defence themselves and how to apply insect-host interaction study into insect control? He has published over 30 peer reviewed papers in journals including *PNAS*, *BMC Biology*, *Scientific Reports*, *BMC Genomics*, *J Chem Ecol* and *Insect Biochem Mol Biol*. He has established strong collaborations with chemical ecologists from Australia, Europe, US, and Asia. Wei Xu became an ISCE member in 2012 and has attended and co-organized symposiums at several ISCE meetings since then. He is also an ordinary member in Australasian Association for *ChemoSensory Science* (AACSS) and a member in Asia-Pacific Association of Chemical Ecology (APACE). In the 35th ISCE annual conference in Atlanta, US, he will chair a session "Molecular Mechanisms in Terrestrial and Aquatic Chemical Ecology" with Professor Scott Cummins.



Related Meeting of Interest

LE STUDIUM CONFERENCES TOURS | 2019
21-23 May 2019
New avenues for the behavioral manipulation of disease vectors

LOCATION
CCI Touraine - La Halle aux Draps
4 Rue des Sales Femmes
37000 Tours

CONVENORS
Dr Marcelo Lorenzo
LE STUDIUM/FARE GALICOWSKA-CIURE
POSTDOCTORAL FELLOW
Fellow Director/Chief Coordinator (Health Action Research Center) - BR
INSTITUTO DE FARMACOLOGIA E QUIMICA DE FARMACIA (IFQ), University of Turku / CNRS - FR

Prof. Claudio Lazzari
Insect Biology Research Institute IRIIS
University of Turku / CNRS - FR

PROGRAM - REGISTRATION
www.lestudium.com

A conference entitled "New avenues for the behavioral manipulation of disease vectors" will take part in Tours, France, on May 21-23rd, 2019. Most of the program has topics covering different aspects of chemoreception-mediated behavior. The conference is co-organized by Marcelo Lorenzo and Claudio Lazzari.

Website:
<http://www.lestudium-ias.com/event/new-avenues-behavioral-manipulation-disease-vectors>

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Trending

in the Journal of Chemical Ecology

Most downloaded articles from Sep. — Dec. 2018:

- ◇ **Female Chemical Signalling Underlying Reproduction in Mammals.**
September 2018. Holly A. Coombes, Paula Stockley, and Jane L. Hurst. [\[link\]](#)
- ◇ **Advances in the Chemical Ecology of the Spotted Wing *Drosophila (Drosophila suzukii)* and its Applications.**
October 2018. Kevin R. Cloonan, John Abraham, Sergio Angeli, Zainulabeuddin Syed, and Cesar Rodriguez-Saona. [\[link\]](#)
- ◇ **Identification of the Aggregation-sex Pheromone of the Cerambycid Beetle *Phymatodes pusillus* ssp. *pusillus* and Evidence of a Synergistic Effect from a Heterospecific Pheromone Component .**
November 2018. Mikael A. Molander and Mattias C. Larsson. [\[link\]](#)
- ◇ **Differential Impact of Herbivores from Three Feeding Guilds on Systemic Secondary Metabolite Induction, Phytohormone Levels and Plant-Mediated Herbivore Interactions.**
December 2018. Michael Eisenring, Gaetan Glauser, Michael Meissle, and Jörg Romeis. [\[link\]](#)



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