


36th Annual Meeting of the International Society of Chemical Ecology



Hosted virtually from
South Africa
5 - 10 September 2021

CHEMICAL ECOLOGY AND SUSTAINABLE DEVELOPMENT

Day 1: Sunday 5 September 2021

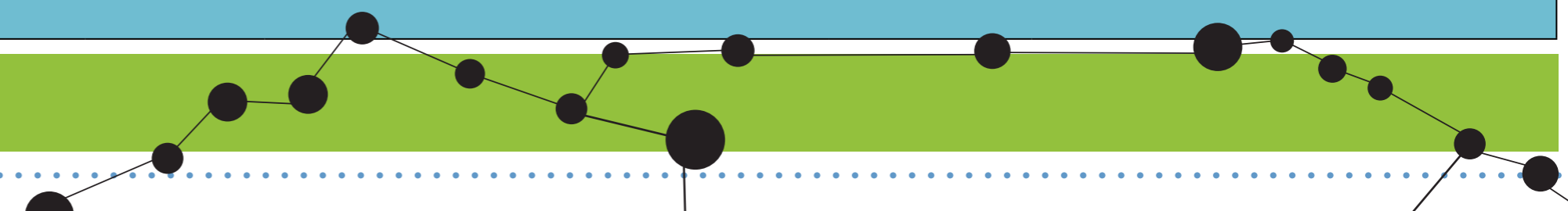
Time SAST	Time UTC						
16:30 - 16:40	14:30 - 14:40	Introduction and Welcome		Jeremy Allison, ISCE 2021 Organizing Committee Chair			
16:40 - 17:30	14:40 - 15:30	2020 Early Career Award		Tobias Zuest: Novel chemical defences as an escape from co-adapted herbivores			
17:30 - 17:35	15:30 - 15:35	Short break		Delegates navigate to session of choice			
17:35 - 18:50	15:35 - 16:50	Three concurrent sessions					
Time SAST	Time UTC	Session #1: Chemical ecology of disease vectors: from fundamental to applied research Symposium Chair: Marcelo Lorenzo		Session #2: Chemical ecology of marine holobionts Symposium Chairs: Catherine Leblanc & Soizic Prado		Session #3: Eusocial Insects: chemical ecology of social organisation at the genetic, behavioural and ecological levels Symposium Chair: Anne-Geneviève Bagnères-Urbany	
17:35 - 18:05	15:35 - 16:05	Baldwyn Torto	Insights into Use of Semiochemicals for Management of Disease Vectors in Kenya	Georg Pohnert	Infection and resistance in complex microbial communities of the plankton - small scale processes with global impact	Manfred Ayasse	The evolution of caste-specific chemical profiles and of queen pheromones in halictid bees.
18:05 - 18:20	16:05 - 16:20	David Tchouassi	Non-human primate and human-derived attractants for <i>Aedes</i> mosquitoes	Alexia Lourtie	Anthraquinones produced by crinoids allow host selection for the symbiotic snapping shrimp <i>Synalpheus stimpsonii</i>	Etya Amsalem	Reproductive signaling in bees – The mighty queen, the power of peers and the role of brood
18:20 - 18:35	16:20 - 16:35	Rickard Ignell	Malaria mosquitoes take the piss	Benoît Paix	A multi-omics approach deciphers how temperature and copper stress shape seaweed-microbiota interactions at the surface of <i>Taonia atomaria</i>	Christian Pirk	Reproductive dominance and the role of multiple pheromones sources in honey bees.
18:35 - 18:50	16:35 - 16:50	Sharon Hill	Age matters: gene regulation in the mosquito antenna during the first gonotrophic cycle	Bertille Burgunter-Delamare	Exploring the microbiota of <i>Saccharina latissima</i>	Fiona Mumoki	The role of the host queen in regulating reproductive parasitism in <i>Apis mellifera capensis</i> laying workers
18:50 - 19:00	16:50 - 17:00	Break					
Time SAST	Time UTC	Session #1: Chemical ecology of disease vectors: from fundamental to applied research Symposium Chair: Rickard Ignell		Session #2: Chemical ecology of marine holobionts Symposium Chairs: Catherine Leblanc & Soizic Prado		Session #3: Eusocial Insects: chemical ecology of social organisation at the genetic, behavioural and ecological levels Symposium Chair: Robin Crewe	
19:00 - 19:15	17:00 - 17:15	Tristram Wyatt	Life scientists in chemical ecology can benefit from psychology's responses to its own 'reproducibility crisis'	Emilie Adouane; Soizic Prado	Deciphering the marine algal holobiont interactions for the discovery of new eco-compatible antifoulings	Brian Smith	Novelty seeking, attention and collective behavior in the honey bee, <i>Apis mellifera</i>
19:15 - 19:30	17:15 - 17:30	Marcelo Lorenzo	The ionotropic co-receptor IR8a is required for the expression of robust sexual behavior in males of the Chagas disease vector <i>Rhodnius prolixus</i>	Hendrikje Jorissen	Coral larval settlement preferences linked to crustose coralline algae with distinct chemical and microbial signatures	Robert Hanus	Queen pheromone(s) in higher termites: a long quest with a happy-end
19:30 - 19:45	17:30 - 17:45	Nicoletta Faraone	Tick Repellents: Modulators of Electrophysiological and Behavioural Activities	Joost Mansour	Carbon and nitrogen uptake and translocation between the single cell marine protist <i>Acantharia</i> and their symbionts	Margarita Orlova	Behavioral and social context is necessary for the full effect of queen semiochemicals in <i>Bombus impatiens</i>
19:45 - 20:00	17:45 - 18:00	Anaïs Tallon	Functional analysis of two odorant receptors related to host seeking in <i>Aedes aegypti</i>	Qikun XING	Studies of the oxylipin pathway regulation in brown algal kelps	Yusuf Abdullahi Ahmed	Eavesdropping into host communication: the bee louse <i>Braula coeca</i> selects its host using kairomones
20:00 - 20:15	18:00 - 18:15	Laura Pickett	Electrophysiological responses of <i>Ixodes scapularis</i> to host volatiles	Dolma Michellod	Exploring chemical diversity in the deep sea: linking bacterial symbionts to changes in mussel metabolome	Olabimpe Okosun	Insights into reproductive processes and hierarchies within social insect societies
Conclusion		Networking and socialize					
20:30 - 23:30	18:30 - 21:30	ISCE Executive Committee Meeting					

Day 2: Monday 6 September 2021

11:15 - 12:00	09:15 - 10:00	Morning Q&A		Opportunity for delegates to meet with and talk to speakers			
12:00 - 12:10	10:00 - 10:10	Introduction and Welcome		Orientation for delegates			
12:10 - 13:00	10:10 - 11:00	2019 Silver Medal Lecture		Stefan Schulz: The Interaction of Chemistry and Chemical Ecology			
13:00 - 13:05	11:00 - 11:05	Short break		Delegates navigate to session of choice			
Time SAST	Time UTC	Session #4: Insect Microbe Interactions Symposium Chair: Marko Rohlfs		Session #5: Insect Olfactory Neuroethology Symposium Chair: Bill Hansson	Session #6: Using chemical ecology in push-pull control of insect pests: from theory to implementation Symposium Chair: John Pickett		
13:05 - 13:35	11:05 - 11:35	Tobias Engl	Nutritional endosymbionts' Shikimate pathways are susceptible to glyphosate inhibition	Silke Sachse	Sensory processing in the fly brain	Zeyaur Khan	The success of the push-pull system for controlling lepidopterous pests and parasitic striga weeds in small-holder cereal farming
13:35 - 13:50	11:35 - 11:50	Jurgen Gross	Tritrophic interactions between plant pathogens and their vector insects mediated by primary and secondary plant metabolites	Wei Xu	Chemosensory Proteins (CSPs) in Cotton Bollworm <i>Helicoverpa armigera</i>	Islam Sobhy	Deciphering the chemical ecology of push-pull intercropping system in mitigating fall armyworm, <i>Spodoptera frugiperda</i> , herbivory
13:50 - 14:05	11:50 - 12:05	Marko Rohlfs	Insect-induced changes in fungal chemical exudate composition impact key properties of an experimental decomposer system	Bill Hansson	Alcohol boosts fly attractiveness	Christina Conroy	'Pushing' towards a new IPM strategy. <i>Drosophila suzukii</i> , the search for effective repellents
14:05 - 14:20	12:05 - 12:20	Paul Becher	Fruit, flies and fungi – studies of <i>Drosophila suzukii</i> ecology for pest control	David Ruel	Olfactory indolergic receptors in <i>Drosophila melanogaster</i>	Casper Nyamukondiwa	New opportunities for a push-pull system in brassica crop production
14:20 - 14:30	12:20 - 12:30	Comfort Break					
Time SAST	Time UTC	Session #4: Insect Microbe Interactions Symposium Chair: Marko Rohlfs		Session #5: Insect Olfactory Neuroethology Symposium Chair: Silke Sachse		Session #6: Using chemical ecology in push-pull control of insect pests: from theory to implementation Symposium Chair: John Pickett	
14:30 - 14:45	12:30 - 12:45	Almuth Hammerbacher	Bark beetle-associated fungi assist in the detoxification of host flavonoids and provide a fitness benefit the Eurasian spruce bark beetle	Thomas Baker	An OR having previously unrecognized wide-field ligand affinities explains the behavioral activity of a new, cryptic, redundant sex pheromone component in the moth, <i>Ostrinia nubilalis</i>	John Pickett	Exploiting Push-Pull pest insect management by biotechnology
14:45 - 15:00	12:45 - 13:00	Martin Kaltenpoth	Outsourcing immunity: Evolution, chemical ecology, and genomics of protective insect-bacteria symbioses	Sonja Bisch-Knaden	Neuroethology of odor-guided behavior in the hawkmoth <i>Manduca sexta</i>	Vincent Jacob	Chemical interaction between the sugarcane spotted borer <i>Chilo sacchariphagus</i> (Lepidoptera: Crambidae) and a dead-end trap plant
15:00 - 15:15	13:00 - 13:15	Dineo Mailula	Catabolism of branched chain and aromatic amino transferases, route to fusel alcohols and acetates by the Ceratocystidaceae	Victoria Ivey	Molecular and neural plasticity in the sex pheromone response of the corn earworm (<i>Helicoverpa zea</i>)	Jimmy Pittchar	Socio-economic issues of developing push-pull technologies
15:15 - 15:30	13:15 - 13:30	Anna Jirošová	Biosynthesis of aggregation pheromone component in spruce-killing bark beetle <i>Ips typographus</i>	Erika Plettner	Gypsy Moth Pheromone-Binding Proteins: Kinetic, Structural and Functional Aspects of Interaction with Pheromones	Frank Chidawanyika	Controlling the Fall armyworm, <i>Spodoptera frugiperda</i> , using the push-pull system: an update
15:30 - 15:45	13:30 - 13:45	Refreshment Break					
Time SAST	Time UTC	Session #7: Chemical Mimicry Symposium Chairs: Andreas Jürgens & Katherine Goodrich		Session #8: Commemorating Prof. Kenji Mori - Synthesis and Chemical Ecology Symposium Chair: Stefan Schulz		Session #9: Evolution of Plant Chemical Defenses Symposium Chair: Shuqing Xu	
15:45 - 16:15	13:45 - 14:15	Steven Johnson	Long-horned beetles and single orchids: discovery of a new class of sexual mimicry in plants	Karl Gademann	NONO compounds: A New Chemical Language in Bacteria?	Shuqing Xu	Did plant chemical defences evolve like the spandrels of San Marco?
16:15 - 16:30	14:15 - 14:30	Thomas Rupp	Scent-mediated deceptive strategies in fly-pollinated <i>Aristolochia</i>	Yunfan Zou	Identification and synthesis of a novel sesquiterpene from several species of leafhopper bugs	Priscila Mezzomo	Herbivore order and life stage, but not specialization, drive defensive responses in the crack willow
16:30 - 16:45	14:30 - 14:45	Annemarie Heiduk	Revolver flowers fool freeloaders – pollination strategies of trap and non-trap flowers in Stapeliinae (Apocynaceae)	Hirosato Takikawa	Synthesis of semiochemicals with the guidance of Professor Kenji Mori	Bianka Siewert	Light-activated Defense Strategies in Mushrooms
16:45 - 17:00	14:45 - 15:00	Katherine Goodrich	Flies, flowers, and fermentation	Robert Britton	Total Synthesis of Tetrahydrofuran-Containing Marine Macrolides	Valentin Gfeller	Impact of benzoxazinoid-dependent plant-soil feedbacks on plant performance and food quality within a crop rotation
17:00 - 17:15	15:00 - 15:15			Richmond Sarpong (30 min)	Strategies for Chemical Synthesis Inspired by Complex Natural Products	Maria da Silva	Synthesis of Ruthenium and Magnesium-Flavonoid Complexes and their effect <i>in vivo</i> on Citrus with CVC
17:15 - 17:45	15:15 - 15:45	Dinner Break		Dinner Break (only 15 minutes here)		Dinner Break	
17:45 - 18:35	15:45 - 16:35	2020 Silver Medal Lecture		Gerhard Gries: Thirty Years of Entertainment in Chemical Ecology Research			

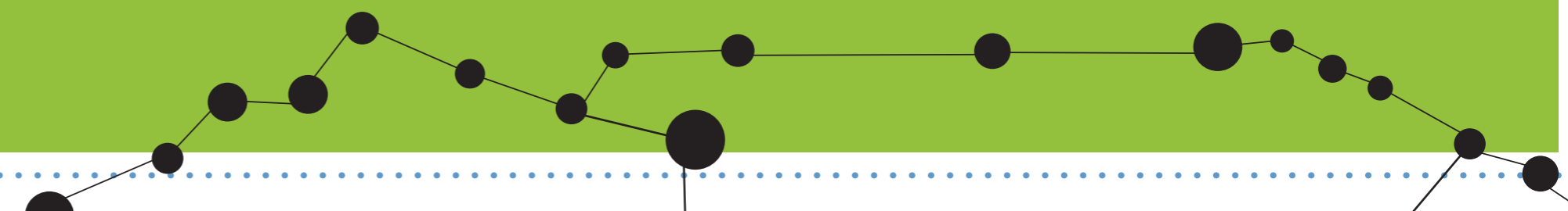
Day 3: Tuesday 7 September 2021

11:15 - 12:00	09:15 - 10:00	Morning Q&A						
12:00 - 12:10	10:00 - 10:10	Introduction and Welcome			Orientation for delegates			
12:10 - 13:00	10:10 - 11:00	2019 Silverstein-Simeone Lecture SPRINGER NATURE			Ales Svatos lecture and discussion, Modern mass spectrometry methods for chemical ecology			
13:00 - 13:05	11:00 - 11:05	Short break			Delegates navigate to session of choice			
13:05 - 14:50	11:05 - 12:50	Three concurrent sessions						
Time SAST	Time UTC	Session #10: Insect pest management - Part I Symposium Chair: Aijun Zhang			Session #11: Plant-pollinator interactions - Part I Symposium Chair: Stefan Dötterl		Session#12: Recent discoveries and new approaches to the study of plant volatiles and their roles in plant communication - Part I Symposium Chair: Andrea Clavijo-McCormick	
13:05 - 13:20	11:05 - 11:20	Anat Levi-Zada	Pheromone identification by SSGA – an analytical method using circadian rhythms of volatile emissions	Manfred Ayasse	Sexual dimorphism in floral scents of the neotropical orchid <i>Catasetum arietinum</i> and its possible ecological and evolutionary significance	Velemir Ninkovic	Plant-Plant Communication via Volatiles Triggers Growth and Defense Synchronization among Plants	
13:20 - 13:35	11:20 - 11:35			Adam Shuttleworth	Composition and EAD-active components of the scents of flowers pollinated by <i>Hemipepsis</i> (Pompilidae) wasps			
13:35 - 13:50	11:35 - 11:50	Bruna Czarnobai de Jorge	Nanofibers as carrier of push substances against pear psyllids	Yudai Okuyama	Pollinator-mediated speciation in endemic flora of Japan associated with dynamic changes of floral scents	James Blande	Perception and Response in Hybrid Aspen: Volatile-Induced Defence Traits	
13:50 - 14:05	11:50 - 12:05	Salvatore Guarino	Volatiles of <i>Capsicum annum</i> L. as attractant source for <i>Lasioderma serricorne</i> F. (Coleoptera: Anobiidae)	Magali Proffit	Chemical signal is in the blend: bases of plant-pollinator encounter in a highly specialized interaction	Mirian Michereff	Differential defence responses of Neotropical maize genotypes to Fall Armyworm, Green Belly Stink bugs, herbivore-induced volatiles and the plant elicitor indole	
14:05 - 14:20	12:05 - 12:20	Tugcan Alinc	Host sex discrimination by egg parasitoids of stink bugs	James Ryalls	Diesel exhaust and ozone pollution reduce insect-mediated pollination services	Anne Jones	<i>Helicoverpa zea</i> Caterpillars Manipulate Volatile Emission from Maize Through Salivary Glucose Oxidase Activity	
14:20 - 14:35	12:20 - 12:35	Elisa Pal	Characterization of the alarm pheromone of <i>Bathycolia distincta</i> (Pentatomidae), a major pest of macadamia	Isabel Alves dos Santos	Nocturnal bee pollination systems mediated by floral scents	Po-An Lin	Silencing the alarm: An insect salivary enzyme closes plant stomata and inhibits volatile release	
14:35 - 14:50	12:35 - 12:50	Johannes Joubert	Bioassay and mass spectrometry-guided identification of constitutive plant metabolites associated with the feeding preference of the <i>Eucalyptus</i> snout beetle, <i>Gonipterus</i> sp. n. 2.			Amanuel Tamiru	Fall Armyworm Oviposition Suppresses Volatile Emission in Maize: Effects on Recruitment of Egg Parasitoid	
14:50 - 15:20	12:50 - 13:20	Meal Break						
15:20 - 16:05	13:20 - 14:05	Poster session #1 (3 minute pre-recorded posters presentations)						
16:05 - 17:10	14:05 - 14:10	Short Break						
17:10 - 17:55	14:10 - 14:55	Poster session #2 (3 minute pre-recorded posters presentations)						
17:55 - 18:05	14:55 - 15:05	Short Break						
18:05 - 18:55	15:05 - 15:55	Applied Chemical Ecology Lecture		John Borden lecture and discussion, New Award Old Story: The World's Longest-Running Semiochemical-Based IPM Program				
Conclusion		Networking and socialize						



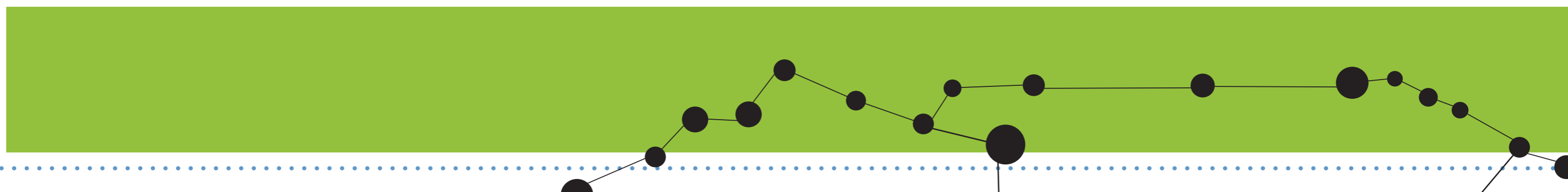
Day 4: Wednesday 8 September 2021

11:15 - 12:00	09:15 - 10:00	Morning Q & A	Opportunity for delegates to meet with and talk to speakers				
12:00 - 12:10	10:00 - 10:10	Introduction and Welcome	Orientation for delegates				
12:10 - 12:55	10:10 - 10:55	Poster session #3 (3 minute pre-recorded posters presentations)					
12:55 - 13:00	10:55 - 11:00	Short break	Delegates navigate to session of choice				
13:00 - 14:45	11:00 - 12:45	Three concurrent sessions					
Time SAST	Time UTC	Session #13: Insect Pest Management - Part II Symposium Chair: Jian Chen		Session 14: Plant-pollinator interactions - Part II Symposium Chair: Steve Johnson		Session #15: Recent discoveries and new approaches to the study of plant volatiles and their roles in plant communication - Part II Symposium Chair: Andrea Clavijo-McCormick	
13:00 - 13:15	11:00 - 11:15	John Byers	Field experiments and simulations of semiochemical-based mass trapping and push-pull of <i>Euwallacea fornicatus</i> , an ambrosia beetle pest of avocado	Hannah Burger	Attractants and filters in a wasp- and a bee-pollinated <i>Gomphocarpus</i> species	R. Andres Hayes	Using Plant Odours for Early Detection of Disease: A Case Study in Bananas
13:15 - 13:30	11:15 - 11:30	Marc Bouwer	The sex pheromone of the pine brown-tail moth, <i>Euproctis terminalis</i> (Lepidoptera: Erebidiae)	Katharina Brandt	Unravelling the olfactory biases of male euglossine bees: Species-specific antennal responses and their evolutionary significance for perfume flowers	Cong van Doan	Tissue-specific volatile-mediated defense regulation in maize leaves and roots
13:30 - 13:45	11:30 - 11:45	Sean Moore	Detection of infested fruit: a dog's nose and a wasp's antenna	Markus Knaden	Learning of feeding and oviposition cues in a hawkmoth	Meredith Schuman	Towards Spatial Analyses of Community Composition: What Role for Plant Volatiles?
13:45 - 14:00	11:45 - 12:00	Wayne Kirkman	Postharvest detection of infested fruit: The solution is hanging in the air	Rebecca Hofer	Effects of water stress on floral scent, morphology and reproductive success	Carla Arce	Plant-Associated CO ₂ Mediates Long-Distance Host Location and Foraging Behaviour of a Root Herbivore
14:00 - 14:15	12:00 - 12:15	Cesar Rodriguez-Saona	Potential novel sources of repellents/oviposition deterrents for spotted-wing drosophila management	Karin Gross	Why so variable? Polyploidy and floral volatiles in the coevolving, nursery pollinated <i>Lithophragma bolanderi</i> (Saxifragaceae)	Andrea Clavijo McCormick	Plant Volatiles in Invasion Scenarios
14:15 - 14:30	12:15 - 12:30	Falko Drijfhout	Cuticular hydrocarbons (CHC) as recognition cues in thrips (Thysanoptera: Thripidae)	Robert Raguso	Moths in flowers: volatile mediated interactions from obligate mutualism to seed predation		
14:30 - 14:45	12:30 - 12:45						
14:45 - 15:15	12:45 - 13:15	Meal Break					
15:15 - 16:00	13:15 - 14:00	Posters session #4 (3 minute pre-recorded posters presentations)					
16:00 - 16:05	14:05 - 14:55	Short Break					
16:05 - 16:55	14:05 - 14:55	2020 Silverstein-Simeone Lecture	SPRINGER NATURE	Paulo Zarbin lecture and discussion			



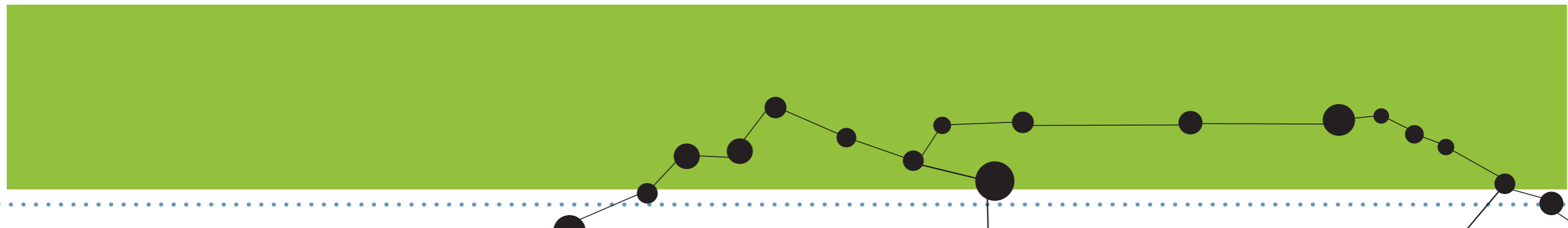
Day 5: Thursday 9 September 2021

11:15 - 12:00	09:15 - 10:00	Morning Q&A	Opportunity for delegates to meet with and talk to speakers				
12:00 - 12:10	10:00 - 10:10	Introduction and Welcome	Orientation for delegates				
12:10 - 13:55	10:10 - 11:55	Three concurrent sessions					
Time SAST	Time UTC	Session #16: Insect pest management - Part III Symposium Chair: Jian Chen		Session #17: Sexual Communication in the Hymenoptera - Part I Symposium Chair: Tamara Pokorny			
12:10 - 12:25	10:10 - 10:25	Wei Xu	Electroantennogram responses of the parasitoid wasp, <i>Diadegma semiclausum</i> , to host-related odours	Joachim Ruther	Pheromones in the <i>Nasonia</i> group – behavior and biochemistry		
12:25 - 12:40	10:25 - 10:40	Md Mostafiz	Insecticidal efficacy of three benzoate derivatives against <i>Aphis gossypii</i> and its predator <i>Chrysoperla carnea</i>				
12:40 - 12:55	10:40 - 10:55	Mary Angelique Tavera	Semiochemical based approach for the control of <i>Helopletis bakeri Poppius</i> (Hemiptera:Miridae)	Hao Xu	How parasitic wasps use a combination of plant volatiles and sex pheromones to locate mates		
12:55 - 13:10	10:55 - 11:10	Divina Amalin	On Farm Trial of Cacao Pod Borer Sex Pheromone Trapping System in the Philippines	Tamara Pokorny	Similar, but not the same - mate recognition based on cuticular hydrocarbons		
13:10 - 13:25	11:10 - 11:25	Raimondas Mozūraitis	(S)-(-)- δ -Heptalactone, an aggregation pheromone of fruit fly <i>Rhagoletis batava</i> , a <i>Hippophae rhamnoides</i> berries pest	Aidan Williams	<i>Doublesex</i> regulates pheromone communication and odour-guided behaviour in <i>Nasonia</i> wasps		
13:25 - 13:40	11:25 - 11:40	Chales Kwadha	Sub-Saharan Africa, a new home for <i>Drosophila suzukii</i>	Alejandro Ibáñez	Chemical characterization and interspecific variation assessment of sexually dimorphic mental glands in three species of turtles (family Geoemydidae)		
13:40 - 13:55	11:40 - 11:55			Li Chen	How ants efficiently stabilize their mutualism with aphids? A cross-species function of ant's trail pheromones		
13:55 - 14:05	11:55 - 12:05	Comfort Break					
Time SAST	Time UTC	Session #18: Insect pest management - Part IV Symposium Chair: Jian Chen		Session #19: Chemical ecology in the Anthropocene - Part I Symposium Chair: Shannon Olsson		Session #20: Insect physiological responses to plant toxins - Part I Symposium Chairs: Susanne Dobler & Franziska Beran	
14:05 - 14:20	12:05 - 12:20	Aijun Zhang	Green Pesticide: Methyl Benzoate and its Analogs	Shannon Olsson	Chemical ecology as inspiration for global change	Georg Petschenka	Evolutionary Physiology of Insect-Plant Interactions on a Tritrophic Scale
14:20 - 14:35	12:20 - 12:35	Gadi Reddy	Application of pheromones for the management of insect pests in Montana	Robbie Girling	Field-scale effects of air pollution on invertebrate community composition in wheat		
14:35 - 14:50	12:35 - 12:50	Jian Chen	Toxicity and Repellency of Naturally Occurring Isothiocyanates against Red Imported Fire Ants	Candice Dubuisson	Effect of ozone pollution on the chemical signal emitted by a Mediterranean tree to attract its specific pollinator	Felix Feistel	The role of quinolizidine alkaloids from <i>Genista</i> plants (Fabaceae) in aphid-plant interactions
14:50 - 15:05	12:50 - 13:05	Matthew Ethington	Benzaldehyde mediates host colonization by the peach bark beetle, <i>Phloeotribus liminaris</i>	Joyshree Chanam	Impact of elevation and global warming on plant-pollinator relationships in the Eastern Himalayas	Marlena Winter	Functional characterization of Na,K-ATPase subunit combinations reveals the adaptive strategy of cardenolide-resistant large milkweed bugs
15:05 - 15:20	13:05 - 13:20	William Morrison	Improving semiochemical resources and behaviorally-based management strategies for stored products: from the laboratory to food facilities	Florian Straub	Land-use stress and pesticides alter the chemical communication of wild bees	Nikolaos Deligiorigis	Convergent recruitment of detoxification enzymes: The flavin-dependent monooxygenases of <i>Longitarsus jacobaeae</i>
15:20 - 15:35	13:20 - 13:35			Maryse Vanderplanck	Impact of ozone on the perception of olfactory signal by generalist pollinators	Prayan Pokharel	Dietary cardenolides enhance growth and change the direction of the fecundity-longevity trade-off in specialized sequestering milkweed bugs (Heteroptera: Lygaeinae)
15:35 - 16:00	13:35 - 14:00	Comfort Break					



Day 5: Thursday 9 September 2021 (continues)

Time SAST	Time UTC	Session #21: Insect Pest Management - Part V Symposium Chair: Jian Chen		Session #22: Chemical ecology in the Anthropocene - Part II Symposium Chair: Shannon Olsson		Session #23: Insect physiological responses to plant toxins - Part II Symposium Chairs: Susanne Dobler & Franziska Beran	
16:00 - 16:15	14:00 - 14:15	Andrés González	Effect of <i>Drosophila suzukii</i> on blueberry VOCs: chemical cues for a pupal parasitoid	Guaraci Cordeiro	Highly diverging effects of increased temperatures on floral scents of crop species	Franziska Beran	The horseradish flea beetle selectively absorbs glucosinolates across the foregut
16:15 - 16:30	14:15 - 14:30	Junwei Zhu	New discoveries of natural products for controlling agricultural, medical and veterinary pests	Conxita Avila	Natural products from Antarctic marine benthic invertebrates		
16:30 - 16:45	14:30 - 14:45	Emily Lemke	Communication ecology of pest <i>Limonius</i> species (Coleoptera: Elateridae) in North America			Anshika Singh	Sponge Watch Program- An initiative towards 'one ocean-one health' approach in the age of Covid-19
16:45 - 17:00	14:45 - 15:00	Kendal Catherine Singleton	Identification of candidate sex-pheromone components of two Nearctic <i>Agriotes</i> species (Coleoptera: Elateridae)	Gabrielle Nevitt	Anthropogenic influences on marine food webs: the case of plastic ingestion		
17:00 - 17:15	15:00 - 15:15	Wim van Herk	Use of sex pheromones for wireworm (Coleoptera: Elateridae) management in Canada			Joerg Bohlmann	
17:15 - 17:30	15:15 - 15:30	Kyle Arriola	Identification of Brassicadiene, a Diterpene Hydrocarbon Attractive to the Invasive Stink Bug <i>Bagrada hilaris</i> , from Volatiles of Cauliflower Seedlings, <i>Brassica oleracea</i> var. <i>botrytis</i>				
17:30 - 17:45	15:30 - 15:45						
17:45 - 18:15	15:45 - 16:15	Short break					
18:15 - 19:30	16:15 - 17:30	Q & A	Time to network: Opportunity to interact with speakers who presented on Sunday, Monday and Tuesday				
Conclusion		Networking and socialize					



Day 6: Friday 10 September 2021

13:45 - 14:30	11:45 - 12:30	Drop in Q&A for speakers	Opportunity for delegates to meet with and talk to speakers
14:30 - 14:40	12:30 - 12:40	Introduction and Welcome	Orientation for delegates
14:40 - 15:30	12:40 - 13:30	2021 Early Career Award 	Ricardo Machado: Engineering bacterial symbionts of nematodes improves their biocontrol potential to counter the western corn rootworm
15:30 - 15:35	13:30 - 13:35	Short break	Delegates navigate to session of choice
15:35 - 16:50	13:35 - 14:50	Two concurrent sessions	
Time SAST	Time UTC	Session #24: Insect Pest Management - Part V Symposium Chair: Jian Chen	Session #25: Sexual communication in the Hymenoptera - Part II Symposium Chair: Joachim Ruther
15:35 - 15:50	13:35 - 13:50	Bradley Higbee Success in progress; mating disruption for navel orangeworm (<i>Amyelois transitella</i>) is becoming part of the foundation for IPM in California nut crops	Falko Drijfhout Next-generation cuticular hydrocarbon analysis in insects
15:50 - 16:05	13:50 - 14:05	Larry Gut (Peter McGhee) Pheromone-based mating disruption: From conceptualization to commercialization	Nathan Derstine Using sublethal pesticide exposure to examine honest signaling properties of sexual communication in bees
16:05 - 16:20	14:05 - 14:20	Qing-He Zhang Semiachemical-based Traps and Repellents for Pestiferous Social Wasps	Andreas Fischer Sexual signalling in a widow spider – Unravelling contact and airborne pheromone components and the role of an enzyme in their dissemination
16:20 - 16:35	14:20 - 14:35	Gary Judd (Don Thomson) Codling Moth Mating Disruption and the Mechanistic Principles Underpinning its Success	Gerhard Gries Sex pheromone components and potential sex recognition cuticular hydrocarbons of yellowjackets
16:35 - 16:50	14:35 - 14:50	Don Thomson Codling Moth: A Look Back with an Eye on the Future	Jocelyn Millar Interspecific variation in the sex pheromones of slave-making ants in the genus <i>Polyergus</i>
16:50 - 17:05	14:50 - 15:05	Pavlina Kyjakova Do we choose our partner based on smell?	David Sillam-Dussès Courtship behavior confusion in the invasive termite species <i>Coptotermes formosanus</i> and <i>C. gestroi</i>
17:05 - 17:35	15:05 - 15:35	Short Meal Break	
17:35 - 18:35	15:35 - 16:35	Q & A	Time to network: Opportunity to interact with speakers who presented on Wednesday, Thursday and Friday
18:35 - 18:45	16:35 - 16:45	Short break	Preparation for closing business meeting
18:45 - 19:45	16:45 - 18:45	ICSE Closing Business Meeting	

