

## Keng-Lou James Hung, PhD

Postdoctoral Fellow, University of Toronto

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### Academic history

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- 2017 PhD in Biology. University of California, San Diego, La Jolla, CA, USA.  
Advisor: Dr. David A. Holway  
Thesis: *Effects of habitat fragmentation and introduced species on the structure and function of plant-pollinator interactions.*
- 2010 BA in Biology, High Honors (GPA 3.91). Dartmouth College, Hanover, NH, USA.  
Advisors: Dr. Rebecca E. Irwin and Dr. Douglas T. Bolger  
Thesis: *The effects of habitat fragmentation on bee diversity in southern California.*

### Professional history

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- 2019-Present Postdoctoral Fellow. University of Toronto, Toronto, ON, Canada.  
Supervisor: Dr. James Thomson
- 2017-2019 Postdoctoral Researcher. The Ohio State University, Columbus, OH, USA.  
Supervisor: Dr. Karen Goodell

### Peer-reviewed publications (5 lead-author publications of 11 total)

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(Asterisks \*\* indicate undergraduate or Master's degree students mentored)

11. **Hung, K.-L.J.**, J.S. Ascher, J.A. Davids\*\* & D.A. Holway. 2019. Ecological filtering in scrub fragments restructures the taxonomic and functional composition of native bee assemblages. *Ecology* 100:e02654.
10. **Hung, K.-L.J.**, J.M. Kingston\*\*, A. Lee\*\*, D.A. Holway & J.R. Kohn. 2019. Non-native honey bees numerically dominate abundant floral resources in a global hotspot of pollinator diversity. *Proceedings of The Royal Society B* 286:20182901. [NOTE: **Hung and Kingston are equal-contribution authors.**]
9. **Hung, K.-L.J.**, J.M. Kingston\*\*, M. Albrecht, D.A. Holway & J.R. Kohn. 2018. The worldwide importance of honey bees as pollinators in natural habitats. *Proceedings of The Royal Society B* 285:20172140.
8. Nabors, A.J.\*\* , H.J. Cen\*\*, **K.-L.J. Hung**, J.R. Kohn & D.A. Holway. 2018. The effect of removing numerically dominant, non-native honey bees on seed set of a native plant. *Oecologia* 186:281–289.
7. **Hung, K.-L.J.**, J.S. Ascher & D.A. Holway. 2017. Urbanization-induced habitat fragmentation erodes multiple components of temporal diversity in a Southern California native bee assemblage. *PLoS ONE* 12: e0184136.
6. Schochet, A.B.\*\* , **K.-L.J. Hung** & D.A. Holway. 2016. Bumble bee species exhibit divergent responses to urbanization in a Southern California landscape. *Ecological Entomology* 41:685–692.
5. **Hung, K.-L.J.**, J.S. Ascher, J. Gibbs, R.E. Irwin & D.T. Bolger. 2015. Effects of fragmentation on a distinctive coastal sage scrub bee fauna revealed through incidental captures by pitfall traps. *Journal of Insect Conservation* 19:175–179.
4. Hanna, C, I. Naughton, C. Boser, R. Alarcón, **K.-L.J. Hung** & D.A. Holway. 2015. Floral visitation by the Argentine ant reduces bee visitation and plant seed set. *Ecology* 96:222–230.
3. Rightmyer, M.G., Y. Kono, J.R. Kohn & **K.-L.J. Hung**. 2014. A new species of *Triepeolus* (Hymenoptera: Apidae), with comments on *T. utahensis* (Cockerell) and *T. melanarius* Rightmyer. *Zootaxa* 3872:048-056.
2. LeVan, K.E., **K.-L.J. Hung**, K.R. McCann, J. Ludka & D.A. Holway. 2014. Floral visitation by the Argentine ant reduces pollinator visitation and seed set in the coast barrel cactus, *Ferocactus viridescens*. *Oecologia* 174:163–171.
1. Siepielski, A.M., **K.-L.J. Hung**, E.E.B. Bein & M.A. McPeck. 2010. Experimental evidence for neutral community dynamics governing an insect assemblage. *Ecology* 91:847–857.

### Manuscripts in preparation

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(Asterisks \*\* indicate undergraduate or Master's students mentored)

5. **Hung, K.-L.J.**, A. Lee\*\*, H.J. Cen\*\*, R. Alarcón & D.A. Holway. The structure of plant-pollinator interaction networks is robust to pollinator species loss in a fragmented pollinator diversity hotspot. In preparation.

4. **Hung, K.-L.J.**, A. Lee \*\*, H.J. Cen \*\* & D.A. Holway. Joint effects of habitat fragmentation, non-native species, and pollination network structure on community-level pollination service quality. In preparation.
3. Etter, K., G. Junquera, J. Horvet, **K.-L.J. Hung**, R. Alarcón & D.A. Holway. Pollen transfer from non-native fennel to an island endemic buckwheat: the role of the pollinator assemblage. In preparation.
2. **Hung, K.-L.J.**, J. Ternest, T.J. Wood, E.H. Bloom, L. Ingwell, Z. Szendrei, I. Kaplan & K. Goodell. The relative effectiveness and risks of systemic versus foliar pesticides for pest control and pollination services in three cucurbit systems in Midwestern USA. In preparation.
1. **Hung, K.-L.J.**, L. Ingwell, I. Kaplan & K. Goodell. Response of wolf spiders (Araneae: Lycosidae) to systemic neonicotinoid insecticides and broad-spectrum foliar pesticides in pumpkin fields. In preparation.

### **Other academic products**

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3. **Hung, K.-L.J.**, M.G. Rightmyer, M. Wall, J. Berrian, J.S. Ascher, D. Yanega, J.A. Davids & D.A. Holway. 2015. An annotated checklist of the bees (Hymenoptera: Anthophila) of San Diego County, California. UC San Diego Library Digital Collections. URL: <http://dx.doi.org/10.6075/JOPN93HK>
2. **Hung, K.-L.J.**, J. Wade-Robinson, D.A. Holway & S. Glenn Lee. 2012. The Urban Pollinator Diversity Project: a hands-on ecological research learning module. High Tech High School, San Diego, CA, USA.
1. Dartmouth Studies in Tropical Ecology 2009-2010. Dartmouth College Press, Hanover, NH, USA.

### **Research grants (total: \$30,090 USD)**

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2015	Doctoral Dissertation Improvement Grant, National Science Foundation (DEB-1501566). \$18,092.
2014	Bloom-Hays Ecological Research Grant, Sea and Sage Audubon. \$500.
2014	Grant in Aid of Research, Anza-Borrego Desert Natural History Association. \$2,200.
2013	Educational Grant, California Native Plant Society. \$600.
2013	Mildred E. Mathias Graduate Student Research Grant, University of California. \$2014.
2011	Young Explorers Grant, National Geographic Society. \$4884.
2011	Grant In Aid of Research, Sigma Xi Society. \$400.
2011	Jeanne Marie Messier Memorial Fund Award, University of California, San Diego. \$1000.
2009	Honors Thesis Grant, Dartmouth College. \$400.

### **Research and academic fellowships (total: \$144,375 USD)**

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2019	Postdoctoral Fellowship, Natural Sciences and Engineering Research Council of Canada. \$67,800.
2016	Institute for the Study of Ecological and Evolutionary Climate Impacts Graduate Fellowship, University of California. \$13,175.
2016	Frontiers of Innovation Scholar Fellowship, University of California, San Diego. \$25,000.
2015	McElroy Fellowship, University of California San Diego. \$12,000.
2011	UC Academic Senate Bridge Fund Grant, University of California, San Diego. \$25,000.
2008	James O. Freedman Presidential Scholarship, Dartmouth College. \$1400.

### **Honors and awards**

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2016	Excellence in Teaching Award, UC San Diego: Top 8 graduate instructional assistants each academic year in the Division of Biological Sciences.
2015	Best Graduate Student Talk Award, UC San Diego and Salk Institute: Best graduate student dissertation research presentation at annual research retreat of the Division of Biological Sciences and Salk Institute for Biological Studies.
2015	Excellence in Teaching Award, UC San Diego: Top 8 graduate instructional assistants each academic year in the Division of Biological Sciences.
2013	Excellence in Teaching Award, UC San Diego: Top 8 graduate instructional assistants each academic year in the Division of Biological Sciences.
2008-10	Rufus Choate Scholar, Dartmouth College: Top 5% of class year.
2008	Francis L. Town Scientific Prize, Dartmouth College: Top 2 <sup>nd</sup> -year student in the Division of Biological Sciences.
2006-08	Second Honors Group, Dartmouth College: Top 15% of class year.

## Teaching

### University of California, San Diego

2016 Winter	Head Instructional Assistant: Organismic and Evolutionary Biology (BILD 3)
2015 Fall	Head Instructional Assistant: Plant Ecology (BIEB 126)
2015 Summer	Head Instructional Assistant: Evolution (BIEB 150)
2015 Summer	Head Instructional Assistant: Introductory Ecology - Organisms and Habitat (BIEB 102)
2015 Winter	Instructional Assistant: Animal Behavior and Communication (BIEB 166)
2014 Fall	Head Instructional Assistant: Plant Ecology (BIEB 126)
2013 Fall	Instructional Assistant: Ecology Laboratory (BIEB 121)
2012 Fall	Head Instructional Assistant: Insect Ecology (BIEB 128)
2011 Fall	Instructional Assistant: Plant Ecology (BIEB 126)

## Master's degree students mentored

(Asterisks\*\* indicate underrepresented minority students)

### University of California, San Diego (8 students total)

2016-2017	<i>Exploring interactions between Apis mellifera and Peponapis pruinosa on Cucurbita pepo</i> : Sara Sandoval** (UC San Diego McNair Scholar)
2014-2017	<i>Pollination biology of native and cultivated Cucurbita species</i> : Jessica Davids**
2014-2017	<i>Response of honey bees and native pollinators to variation in floral abundances in a San Diego coastal scrub system</i> : Jennifer Kingston
2012-2016	<i>Complex effects of habitat fragmentation on the quantity and quality of pollination services within a scrub plant community</i> : Adrienne Lee
2013-2015	<i>Experimental removal of an introduced pollinator reduces reproductive success of California native clustered tarweed</i> : Annika Nabors
2013-2015	<i>Does pollinator diversity loss affect pollination? A test with the California poppy and clustered tarweed</i> : Henry Cen
2011-2014	<i>Pollination biology of the endangered Pogogyne abramsii</i> : Justin Scioli
2011-2014	<i>Bumble bee species exhibit divergent responses to urbanization in a Southern California landscape</i> : Amanda Schochet

## Undergraduate students mentored

(Asterisks\*\* indicate underrepresented minority students; lozenges<sup>◊</sup> indicate students now pursuing STEM careers)

### University of Toronto (1 student)

2019-Present	<i>Pollen carryover of apple orchard pollinators</i> : Sophia Fan
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### The Ohio State University (7 students total)

2018	<i>Role of pollen-producing weeds in pumpkin fields</i> : Elliot O'Flynn
2018	<i>Impact of foliar pesticides on major pumpkin pollinator species</i> : Hannah Van Zant <sup>◊</sup>
2017-2018	<i>Variation in spiders and pests in Ohio's pumpkin fields</i> : Taryn Cheney, David Chu <sup>◊</sup> , Kendra Harder <sup>◊</sup>
2017-2018	<i>Pollinator communities in ruderal habitats near pumpkin crops</i> : Amber Fredenburg <sup>◊</sup> , Erin Custer

### University of California, San Diego (48 students total)

2017	<i>Bee range and body size in response to habitat fragmentation</i> : Blaine Novack-Pilch <sup>◊</sup>
2016-17	<i>Effects of plant density on pollination network structure</i> : Victoria Apaldetti <sup>**◊</sup> , Pablo Arroyo <sup>**◊</sup>
2016	<i>Using alarm pheromone to disrupt honey bee foraging</i> : Danila Souza de Barros <sup>**◊</sup>
2015-2017	<i>Linking pollination networks to patterns of conspecific and heterospecific pollen deposition</i> : Anthony Alonso, Evelyn Brady, Ben Chong, Allison Deogaygay, Stephanie Hadimulia, Aleksandr Harutyunyan <sup>◊</sup> , Renz Ignacio, Stephanie Le, Joshua Mihalik, Brianna Nguyen, Kara Powell, Victoria Shi, Danielle Stearns, Kristin Varner, Ziyi Wang <sup>◊</sup> , Zhe Wei, Yutong Wu, Emma Zelus
2015-2017	<i>Effect of severe drought on native bee diversity</i> : Lindsay Rowe <sup>**</sup> , Brandy White <sup>◊</sup> , Yifei Wang <sup>◊</sup>
2013-2017	<i>Linking patterns of pollinator diversity and pollen deposition to plant reproductive output</i> : Robin Fong, Breana Garcia <sup>**</sup> , Kirk Hutchison <sup>◊</sup> , Jessica May, Michael McMahon, Elizabeth Moller, Yebin Park, Richard Samakapiruk

- 2013-2014 *Patterns of pollinator visitation on experimental plants in fragmented landscapes:* Kevin Borchers<sup>◊</sup>  
2012 *Variation in bee eye color across phylogeny and ecology:* David Dannecker<sup>◊</sup>, Alast Eisa, Ama Eisa  
2011-2017 *Diversity of native bees in San Diego County:* Jordan Arce<sup>\*\*◊</sup>, Anna Dipaola<sup>◊</sup>, Claire Johnson,  
Haebin Liew, Constance Lin<sup>◊</sup>, Stephanie Tosi, Winny Wen  
2011-2016 *Phenology of native bees and plants in San Diego:* Sunny Fung<sup>◊</sup>, Alexander Sinclair<sup>◊</sup>  
2011-2013 *Response of pollinators to predators on flowers:* Spencer Huey<sup>◊</sup>  
2011-2012 *San Diego Native Bee Barcoding Project (BOLD Systems):* Rachel Graham<sup>◊</sup>

### **Invited academic seminar presentations**

- Hung, K.-L.J.** May 2018. “Effects of habitat fragmentation and introduced species on the structure and function of plant-pollinator interactions.” Departmental Seminar, Department of Wildlife, Sustainability, and Ecosystem Sciences, Tarleton State University, TX, USA.
- Hung, K.-L.J.** April 2018. “Effects of habitat fragmentation and introduced species on the structure and function of plant-pollinator interactions.” Departmental Seminar, Entomology Department, The Ohio State University, Wooster, OH, USA.
- Hung, K.-L.J.** February 2018. “Native bee biodiversity in a landscape fragmented by urbanization.” State of Biodiversity Symposium 2018, San Diego Natural History Museum, San Diego, CA, USA.
- Hung, K.-L.J.** October 2017. “Effects of habitat fragmentation and introduced species on the structure and function of plant-pollinator interactions.” Departmental Seminar, Department of Evolution, Ecology, and Organismal Biology, The Ohio State University, Columbus, OH, USA.
- Hung, K.-L.J.** May 2014. “Native Bees of San Diego: biology and conservation status.” Geisel Library Lecture Series, University of California San Diego, La Jolla, CA, USA.

### **Academic conference presentations**

- Hung, K.-L.J.**, J.M. Kingston, A. Lee, M. Albrecht, D.A. Holway & J.R. Kohn. August 2019. “Global- and local-scale impacts of the western honey bee (*Apis mellifera*) on plant-pollinator mutualisms in natural habitats.” Contributed Oral Presentation, BeeCon 2019, Toronto, ON, Canada.
- Hung, K.-L.J.**, L. Ingwell, I. Kaplan & K. Goodell. November 2018. “Relative roles of pesticide management and landscape context in determining pest pressure, predator abundance, and pollinator visitation in pumpkin fields.” Member Symposium Oral Presentation, Entomological Society of America 2018, Vancouver, BC, Canada.
- Hung, K.-L.J.**, J.M. Kingston, D.A. Holway & J.R. Kohn. August 2018. “Dynamics of honey bee use of native floral resources in San Diego County, CA, USA.” Contributed Oral Presentation, Ecological Society of America 2018, New Orleans, LA, USA. **[Presented by J.R. Kohn]**
- Hung, K.-L.J.**, J.S. Ascher, J.A. Davids & D.A. Holway. August 2018. “Ecological filtering in scrub fragments reduces taxonomic and functional diversity of native bees, but does not homogenize bee assemblages.” Contributed Oral Presentation, Ecological Society of America 2018, New Orleans, LA, USA.
- Hung, K.-L.J.**, H.J. Cen, A. Lee & D.A. Holway. August 2017. “Plant-pollinator interaction networks in fragmented habitats retain structural robustness in spite of pollinator diversity loss.” Contributed Oral Presentation, Ecological Society of America 2017, Portland, OR, USA.
- Nabors, A.J., H.J. Cen, **K.-L.J. Hung**, J.R. Kohn & D.A. Holway. August 2017. “The effect of removing numerically dominant, non-native honey bees on seed set of a native plant.” Contributed Oral Presentation, Ecological Society of America 2017, Portland, OR, USA. **[Presented by D.A. Holway]**
- Sandoval, S.S., **K.-L.J. Hung** & D.A. Holway. November 2016. “Impact of drought and habitat fragmentation on native bee assemblages.” Contributed Poster Presentation, Southern California Conferences for Undergraduate Research, University of California, Riverside, CA, USA. **[Presented by S.S. Sandoval]**
- Davids, J.A., **K.-L.J. Hung** & D.A. Holway. November 2016. “The San Diego Bee Diversity Project.” Contributed Poster Presentation, Colorado Desert Natural History Research Symposium, Borrego Springs, CA, USA. **[Presented by J.A. Davids]**
- Hung, K.-L.J.**, J.M. Kingston, M. Albrecht, D.A. Holway & J.R. Kohn. October 2016. “A meta-analysis of the role of the western honey bee (*Apis mellifera*) in plant-pollinator interaction networks worldwide.” Contributed Oral Presentation, International Congress of Entomology 2016, Orlando, FL, USA.
- Hung, K.-L.J.**, J.M. Kingston, M. Albrecht, D.A. Holway & J.R. Kohn. August 2016. “A meta-analysis of the role of the western honey bee (*Apis mellifera*) in plant-pollinator interaction networks worldwide.” Contributed Oral Presentation, Ecological Society of America 2016, Fort Lauderdale, FL, USA.

- Schochet, A.B., **K.-L.J. Hung**, C.J. Fariss & D.A. Holway. August 2014. "Correlates of bumble bee persistence in an urbanized Southern California landscape." Contributed Poster Presentation, Ecological Society of America 2014, Sacramento, CA, USA. **[Presented by A.B. Schochet]**
- Hung, K.-L.J.** & D.A. Holway. March 2014. "Effects of habitat fragmentation on native bee assemblages and pollination services in a Southern California scrub ecosystem." Contributed Oral Presentation, Mathias Scholars Symposium 2014, University of California Natural Reserves System, Bodega Bay, CA, USA.
- Hung, K.-L.J.** & D.A. Holway. August 2013. "Habitat fragmentation reduces bee taxon richness and temporal beta-diversity in a hotspot of bee biodiversity." Contributed Poster. Ecological Society of America 2013, Minneapolis, MN, USA.
- Hung, K.-L.J.**, J.S. Ascher, J. Gibbs, R.E. Irwin, D.T. Bolger & D.A. Holway. August 2012. "Examining the effects of habitat fragmentation on a southern California native bee assemblage." Contributed Poster, Ecological Society of America 2012, Portland, OR, USA.

### **Invited educational seminar presentations**

- Hung, K.-L.J.** March 2018. "Natural history and conservation of native bees." Wildlife Symposium 2018, Muskingum Soil and Water Conservation District, Zanesville, OH, USA.
- Hung, K.-L.J.** November 2016. "Patterns and consequences of pollinator diversity loss in San Diego's scrub ecosystems." Ecology, Behavior, and Evolution Club Monthly Meeting, UC San Diego, La Jolla, CA, USA.
- Hung, K.-L.J.** August 2016. "Diversity and conservation needs of bees in San Diego County." Summer Seminar Series, San Diego Zoo Institute for Conservation Research, Escondido, CA, USA.
- Hung, K.-L.J.** May 2016. "Diversity and natural history of San Diego's native bees." Cabrillo BioBlitz and Biodiversity Festival, Cabrillo National Monument, San Diego, CA, USA.
- Hung, K.-L.J.** August 2015. "The not-so-secret life of bees: ecology and conservation of San Diego's native bees." Special Lecture Series, Cabrillo National Monument, San Diego, CA, USA.
- Hung, K.-L.J.** March 2015. "Native bees of San Diego County: biology, diversity, and conservation." 43<sup>rd</sup> Desert Lecture Series, The Anza-Borrego Desert Natural History Association, Borrego Springs, CA, USA.
- Hung, K.-L.J.** November 2014. "Pollen, pollination, and pollinators: a look at San Diego's native bees." Educational Lecture, The Anza-Borrego Desert Natural History Association, Borrego Springs, CA, USA.
- Hung, K.-L.J.** November 2014. "Native bee diversity and conservation in San Diego community gardens." Roger's Community Garden, La Jolla, CA, USA.
- Hung, K.-L.J.** August 2014. "The life of pollinating insects." Faith Community Church, Annual Children's Science Camp, San Diego, CA, USA.
- Hung, K.-L.J.** July 2014. "Native bee research in San Diego: rationale, progress, and frontiers." Inaugural Monthly Meeting, San Diego Arthropod Scientists Group, San Diego, CA, USA.
- Hung, K.-L.J.** June 2014. "Biology of native bees of San Diego." Elfin Forest Reserve Educational Lectures, Escondido, CA, USA.
- Hung, K.-L.J.** March 2014. "Ecological importance and conservation of native bees in Southern California." Monthly Meeting, San Diego Chapter of the California Native Plant Society, San Diego, CA, USA.
- Hung, K.-L.J.** March 2014. "Pollen, pollination, and pollinators: an introduction to plant reproduction and the important ecological role of bees." Educational Lecture, Torrey Pines State Reserve Docents Society, Del Mar, CA, USA.
- Hung, K.-L.J.** October 2013. "Diversity, biology, and conservation of native bees in San Diego." Educational Lecture, San Diego Natural History Museum Canyoneers, San Diego, CA, USA.
- Hung, K.-L.J.** September 2013. "Diversity, biology, and conservation of native bees in San Diego." Educational Lecture, Mission Trails Regional Park Trail Guides, San Diego, CA, USA.
- Hung, K.-L.J.** October 2013. "Pollen, pollination, and pollinators: an introduction to plant reproduction and the important ecological role of bees." Annual Botany Festival Natural History Lecture, The Anza-Borrego Foundation, Borrego Springs, CA, USA.
- Hung, K.-L.J.** August 2013. "Introduction to the insects." Boys' Club: Faith Community Church, San Diego, CA, USA.
- Hung, K.-L.J.** June 2013. "Diversity and natural history of San Diego bee species." National Pollinator Week hike at San Diego National Wildlife Refuge, Otay-Sweetwater Unit, Spring Valley, CA, USA.
- Hung, K.-L.J.** May 2013. "Diversity and natural history of bee species with a focus on San Diego." Saturday Speaker Series, Tijuana River National Estuarine Research Reserve, Imperial Beach, CA, USA.

### **Invited extension presentations**

- Hung, K.-L.J.** May 2019. “Global and local ecology of honey bees” California Master Beekeepers Program, University of California Cooperative Extensions, Davis, CA, USA. **[Webinar presentation]**
- Hung, K.-L.J.** March 2019. “Ecology of honey bees and native bees in San Diego.” San Diego Chapter of the California Master Beekeepers Program, University of California Cooperative Extensions, San Diego, CA, USA.
- Hung, K.-L.J.** & K. Goodell. January 2019. “Ohio pumpkins: cucumber beetle control and pollinator management.” The Ohio Produce Network, the Ohio Produce Growers & Marketers Association, Dublin, OH, USA.
- Bergefur, B. & **K.-L.J. Hung**. January 2018. “Pumpkin production and cultivar evaluations, and updates from the Ohio SCRI pumpkin project.” The Ohio Produce Network, the Ohio Produce Growers & Marketers Association, San Dusky, OH, USA.
- Hung, K.-L.J.**, J.S. Ascher & D.A. Holway. October 2015. “Habitat fragmentation erodes multiple components of diversity in a Southern California native bee assemblage.” Monthly Coordination Meeting and Seminar, San Diego Management and Monitoring Program, San Diego, CA, USA.
- Hung, K.-L.J.** November 2014. “Native bee in San Diego: natural history and conservation research.” Educational Seminar, Helix Environmental Planning Inc., La Mesa, CA, USA.
- Hung, K.-L.J.** July 2014. “Connectivity strategic plan: native bees of San Diego.” US Geological Survey, Connectivity Strategic Plan for Western San Diego County. San Diego, CA, USA.
- Hung, K.-L.J.** June 2012. “Diversity, importance, and conservation of native bee species.” San Diego Beekeeping Society, San Diego, CA, USA.

### **Extension workshops led**

- Hung, K.-L.J.**, A.J. Nabors, L.M. Taylor & L. Corkidi. February 2018. “Pollinator ecology and identification.” University of California Cooperative Extensions, San Marcos, CA, USA.

### **Invited guest lectures for undergraduate courses**

- Hung, K.-L.J.** December 2018. “Global and community-level impacts of non-native western honey bees on plant-pollinator mutualisms.” Biology: Plant Evolution and Reproduction (BIOL 326): Denison University, Granville, OH, USA.
- Hung, K.-L.J.** November 2017. “How genes work.” Biological Sciences: Energy Transfer and Development (BIO 1113): The Ohio State University, Columbus, OH, USA.
- Hung, K.-L.J.** November 2012. “Plant-insect interactions: mutualisms.” Insect Ecology (BIEB 128): University of California, San Diego, CA, USA.
- Hung, K.-L.J.** & B.R. Park. November 2011. “Pollination ecology: bees.” Plant Ecology (BIEB 126): University of California, San Diego, CA, USA.

### **Invited guest lectures for primary and secondary school courses**

- Hung, K.-L.J.** February 2016. “Native bees of San Diego and the Urban Pollinator Diversity Project.” High Tech Middle School, Chula Vista, CA, USA.
- Hung, K.-L.J.** February 2016. “Native bees of San Diego and the Urban Pollinator Diversity Project.” High Tech Elementary School, San Marcos, CA, USA.
- Hung, K.-L.J.** & C. Eutizi. July 2015. “The Living Lab: plot study.” Eutizi Homeschool Group, San Diego, CA, USA.
- Hung, K.-L.J.** June 2015. “Native bees: ecology, diversity, and conservation.” University City High School, San Diego, CA, USA.
- Hung, K.-L.J.** and S. Glenn Lee. May 2014. “Science, bees, and the Schoolyard Biodiversity Project.” Rincon Middle School, Escondido, CA, USA.
- Hung, K.-L.J.**, J. Wade-Robinson, M. Schultz & S. Glenn Lee. January 2013. “Pollinator declines and the Urban Pollinator Diversity Project.” High Tech High School, San Diego, CA, USA.
- Hung, K.-L.J.** May 2012. “Diversity, life cycle, and importance of native bee species.” Faith Community Elementary School, San Diego, CA, USA.
- Hung, K.-L.J.** October 2011. “Diversity, importance, and conservation of native bee species.” Serra High School, San Diego, CA, USA.

### **Other academic presentations**

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- Hung, K.-L.J.**, A.T. Suresh, D.A. Holway & A. Orlitsky. October 2016. "Elucidating patterns of biodiversity using information theory: Getting the most out of finite ecological data." Frontiers of Innovation Scholars Program 2<sup>nd</sup> Annual Research Symposium, UC San Diego, La Jolla, CA, USA.
- Kingston, J.M., **K.-L.J. Hung**, D.A. Holway & J.R. Kohn. June 2016. "How important are honey bees as pollinators to natural plants?" UC San Diego Division of Biological Sciences Student Research Symposium, La Jolla, CA, USA. [Presented by J.M. Kingston]
- Sandoval, S.S., **K.-L.J. Hung** & D.A. Holway. May 2016. "Impact of drought and habitat fragmentation on native bee assemblages." UC San Diego Faculty Mentorship Program Research Symposium, La Jolla, CA, USA. [Presented by S.S. Sandoval]
- Hung, K.-L.J.**, J.S. Ascher & D.A. Holway. September 2015. "Habitat fragmentation erodes multiple components of diversity in a Southern California native bee assemblage." UC San Diego Division of Biological Sciences and Salk Institute Retreat, Lake Arrowhead, CA, USA. [Winner of Best Graduate Student Talk Award]
- Hung, K.-L.J.** & D.A. Holway. May 2015. "Effects of habitat fragmentation on a diverse coastal sage scrub bee assemblage." UCSD Natural Reserves System 50th Anniversary Research Symposium, La Jolla, CA, USA.

### **Journal review panels served (Publons profile at <https://publons.com/author/1085601>)**

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*Apidologie; American Journal of Botany; Biological Invasions; Diversity and Distributions; Ecological Monographs; European Journal of Entomology; Functional Ecology; Global Change Biology; Insects; International Journal of Biodiversity and Conservation; Journal of Applied Ecology; Journal of Insect Conservation; Journal of Pollination Ecology; Oecologia; PLoS ONE; Proceedings of the Royal Society B; Sustainability; Western North American Naturalist (18 journals total).*

### **Broader impacts and professional service**

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- 2018-Present San Diego County Pollinator Alliance (Scientific consultant)
- 2017-Present Nationwide Collaborative Research Project: Protecting Pollinators with Economically Feasible and Environmentally Sound Ornamental Horticulture (Scientific consultant, San Diego team)
- 2017 The Ohio Valley Entomological Association (Student research competition judge)
- 2017 Wittenburg University Bioblitz at George Rogers Clark Park (Professional scientist)
- 2016-2017 The Species Restoration Project: Bee habitat restoration project (Scientific consultant)
- 2016 National Parks BioBlitz at Cabrillo National Monument (Bee survey team leader)
- 2015-Present Bees of San Diego County Project, iNaturalist.org (Project manager)
- 2014-2017 San Diego Management and Monitoring Program (Contributor)
- 2014-2015 Anza-Borrego Desert Natural History Association (Scientific consultant)
- 2014 San Diego BioBlitz at Lake Hodges (Bee survey team leader)
- 2012-Present Bugguide.net (Contributing editor)
- 2011-2017 San Diego Natural History Museum (Contributor and volunteer entomologist)
- 2011-2017 UCSD Educational Outreach Program at High Tech High School (Educator and project coordinator)
- 2011-2016 San Diego County Department of Agriculture, Weights & Measures (Scientific consultant)
- 2010-2017 American Museum of Natural History (Contributor)

### **Departmental service**

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- 2017-2018 Sigma-Xi Society, Ohio State University Chapter (Grant proposal reviewer)
- 2015-2017 UCSD McNair Scholars Program (Research mentor for undergraduate scholar)
- 2015 UCSD Summer STEM Academy (Guest lab instructor)
- 2014-2015 Graduate Student Seminar Series, UC San Diego (Section coordinator)
- 2014 UCSD Environmental Systems Major Student Symposium (Student research competition judge)
- 2012-2015 Graduate Teaching Assistant Assignment Committee, UC San Diego (Section representative)
- 2012-2013 Graduate Admissions Committee, UC San Diego (Section representative)
- 2012 EBE Section Faculty Search, UC San Diego (Student representative)
- 2011-2014 Biology Graduate Students Peer Mentorship Program, UC San Diego (Mentor)
- 2011-2012 EBE Section Weekly Breakfast Discussion, UC San Diego (Host)
- 2010-2012 Graduate Recruitment Committee, UC San Diego (Section representative)

## **Professional and academic affiliations**

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2018-2019	The Ohio Produce Network (Member)
2017-2018	The Ohio Valley Entomological Association (Member)
2015-Present	Entomological Society of America (Member)
2014-2017	San Diego Arthropod Society (Founding member)
2014-2017	Sea and Sage Audubon Society Chapter (Student member)
2014-2017	Anza-Borrego Desert Natural History Association (Student member)
2014-2017	California Native Plant Society (Student member)
2013-2016	Community Gardens at Mesa Student Housing Complex, UC San Diego (Senior coordinator)
2012	Barcode of Life Data Systems (Contributor)
2011-Present	Ecological Society of America (Member)
2010-Present	Phi Beta Kappa Society (Member)

## **Media appearances and features**

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- Williams, S. 24 February 2019. "When honey bees cause a buzz for the wrong reasons." Article, Politics column, *Care2*. URL: <https://www.care2.com/causes/when-honey-bees-cause-a-buzz-for-the-wrong-reasons.html>
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URL: <https://ucsdnews.ucsd.edu/pressrelease/foreign-bees-monopolize-prize-resources-in-biodiversity-hotspot>
- Salerno, H. September 2018. "Buzzworthy: one-of-a-kind expert is king of the bees." Article, Pursuit column, *Dartmouth Alumni Magazine*. URL: <https://dartmouthalumnimagazine.com/articles/buzzworthy-0>
- Margetta, R. & T.C. Bracken. 5 July 2018. "Pollinator biodiversity: what's all the buzz about?" Article, Discovery column, *National Science Foundation News*.  
URL: [https://www.nsf.gov/discoveries/disc\\_summ.jsp?cntn\\_id=295868](https://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=295868)
- DeBoer, A., L. Haig, U. Wright, I. Messer & A. Melathopoulos. 26 February 2018. Episode 42: "Research retinue – honey bees and conservation." Podcast, *PolliNation*.  
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- John, J. 2 February 2018. "Honey bees pollinate a lot more than just crops." Article, *The Wildlife Society*.  
URL: <http://wildlife.org/honey-bees-pollinate-a-lot-more-than-just-crops/>
- Lengyel, K. 23 January 2018. "Honey bees: world's most important species of pollinator." Article, *American Veterinarian*.  
URL: <http://www.americanveterinarian.com/news/honey-bees-worlds-most-important-species-of-pollinator>
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URL: <https://www.acsh.org/news/2018/01/16/honey-bees-1-pollinator-both-crops-and-wild-plants-12426>
- Aguilera, M. 10 January 2018. "Worldwide importance of honey bees for natural habitats captured in new report." Article, *UC San Diego News Center*.  
URL: <https://ucsdnews.ucsd.edu/pressrelease/worldwide-importance-of-honey-bees-for-natural-habitats-captured-in-new-report>
- Sterman, N. et al. 26 May 2017. Episode 506: "Wild and wooly – native bee pollinators." Television program, *A Growing Passion*. URL: <http://agrowingpassion.com/episode-506-wild-wooly-native-bee-pollinators/>
- Brennan, D.S. 08 June 2014. "A bee of a different color." Article, Environment column, *San Diego Union Tribune*.  
URL: <http://www.sandiegouniontribune.com/news/2014/jun/08/environment-bee-diversity-james-hung/>
- McDonald, K. 20 March 2014. "Lord of the bees." *UC San Diego News Center*.  
URL: <http://ucsdnews.ucsd.edu/feature/lord-of-the-bees>

## **Relevant skills**

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- Sampling, curation, and species-level identification of arthropods, especially bees (Hymenoptera: Anthophila)
- Manipulating plant floral structures for estimating plant reproductive fitness
- Designing and optimizing of research equipment and methodology
- Collaborating with farmers to perform basic and applied ecological research on commercial farms
- Constructing analytical and simulation models using program R
- Manipulating, managing, and extracting data using Excel, VBA, and ArcGIS
- Mentoring and supervising students pursuing undergraduate and graduate level research
- Experience with basic molecular biology and biochemistry methods (e.g., PCR, gel electrophoresis, QuEChERS)

## **Relevant Coursework**

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### **The American Museum of Natural History**

2011 Summer The Bee Course

## **Professional References**

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### **Prof. James Thomson; Universtiy of Toronto**

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