

# John J. Hemmingson Center

The John J. Hemmingson Center showcases a 9,200 square-foot Grand Ballroom, in addition to 12,998 square feet of meeting and event spaces, two floors of resident dining and four food outlets including Starbucks, Einstein Bros. Bagels, The Bulldog, and The Marketplace. With 17 meeting areas available, we can place you in a space that will fit your specific meeting, event or social needs. Gonzaga's campus is located on the north bank of the beautiful Spokane River and is only a short walk on the Centennial Trail to the downtown Spokane area where a plethora of entertainment, sightseeing and dining experiences are waiting to be explored.

# Kelley Kulhanek

## Bee Your Best Beekeeper: Data-Recommended Best Beekeeping Management Practices:

The Bee Informed Partnership has been conducting loss and management surveys for 10 years. Learn about the management practices we have seen reduce colony mortality at an operational level, and how we've tested them for the last 3 years!

## Varroa Population Trends: Monitoring and Management:

Learn about how best to monitor for mites in your apiary, and how to treat for Varroa in a way that's healthy for you and your bees. Monitoring mite populations over long periods of time can help you predict when you'll need to treat in the future!

Kelley is a Ph.D. student studying honey bee health and management practices. She earned a B.S. in Molecular Environmental Biology from UC Berkeley, then spent a field season with the USGS in North Dakota studying honey bee health and landscape change. Her doctoral work focuses on learning about honey bee health on a nationwide scale through the Sentinel Apiary Program. She recently completed a 3-year field study on the efficacy of survey-derived best beekeeping management practices. Her next field season will focus on tracking inter-apiary Varroa transmission with a camera sensor she developed. For the rest of her degree, she plans to use Sentinel Apiary data to learn about long term Varroa population trends and how the efficacy of management practices varies across space.



# Zachary Lamas

**Winter Prep Begins Mid Summer** - We take very low winter losses on the Canadian border, often staying in the single digits for winter mortality, and we strive to have robust colonies each spring. This talk overviews the management we do beginning mid-summer through fall to prepare colonies for a successful winter.

**Requeening** - This talk is broken into several sections. It begins with finding and assessing a queen, why to requeen and three methods. The last method is a foolproof method for new beekeepers and one that we also use commercially.



Zac Lamas worked commercially as a queen breeder before joining the vanEngelsdorp Lab. Currently he is studying field effects of fungicides on honey bee colonies. Zac is interested in changes on the individual level can cause changes in social behavior.

# Dr. Steve Sheppard

## "What's in the Future for the WSU Bee Program"

- Steve Sheppard is the Thurber Professor of Apiculture at Washington State University. His interest in honey bees derives from early childhood days spent with beekeeping equipment and bee books in the workshop of his great grandfather, a beekeeper from Savannah Georgia. Steve's graduate research at the University of Illinois was on pollination biology, population genetics and evolution in honey bees. Prior to joining the faculty at WSU, Steve was a research scientist for USDA-ARS, conducting studies on Africanized honey bees and the genetic processes that accompany insect range expansions.
- Since 1996, Steve, his students, postdocs and research collaborators at WSU have conducted basic work on honey bee population genetics and evolution, a long-term breeding program to select honey bees that exhibit improved tolerance to mites and diseases and novel approaches to improve honey bee health. The laboratory has contributed a significant research effort on the use of fungal mycelium as a biocontrol agent for parasitic mites, of fungal extracts as antivirals for use in bees and the use of metabolic gas manipulation (controlled atmosphere storage) for indoor wintering and mite control.
- In collaboration with U.S. queen producers, his lab has been involved in the importation and distribution of honey bee genetics from Old World source populations. Release of honey bee germplasm to commercial queen producers resulted in a significant increase in overall genetic diversity of honey bee populations. Development of practical methods of honey bee semen cryopreservation in the Sheppard laboratory enabled WSU to establish the world's first honey bee germplasm repository. This repository currently houses samples of numerous Old World honey bee subspecies and domestic breeding stocks.



# Dr. Nick Naeger

## “Latest on Mushroom Research for Bee Virus ”

Dr. Nicholas Naeger is an entomologist and geneticist who has been researching honey bees for over half his life. He has worked with multiple queen breeding programs and has published numerous studies on honey bee behavior and health. Together with Jennifer Han, their current research includes studies on nutrition and physiology as it relates to the bee immune system, and the exploration of using fungi and fungal products to improve honeybee health.



# Dr. Jennifer Han

## “Latest on Mushroom Research for Bee Virus”

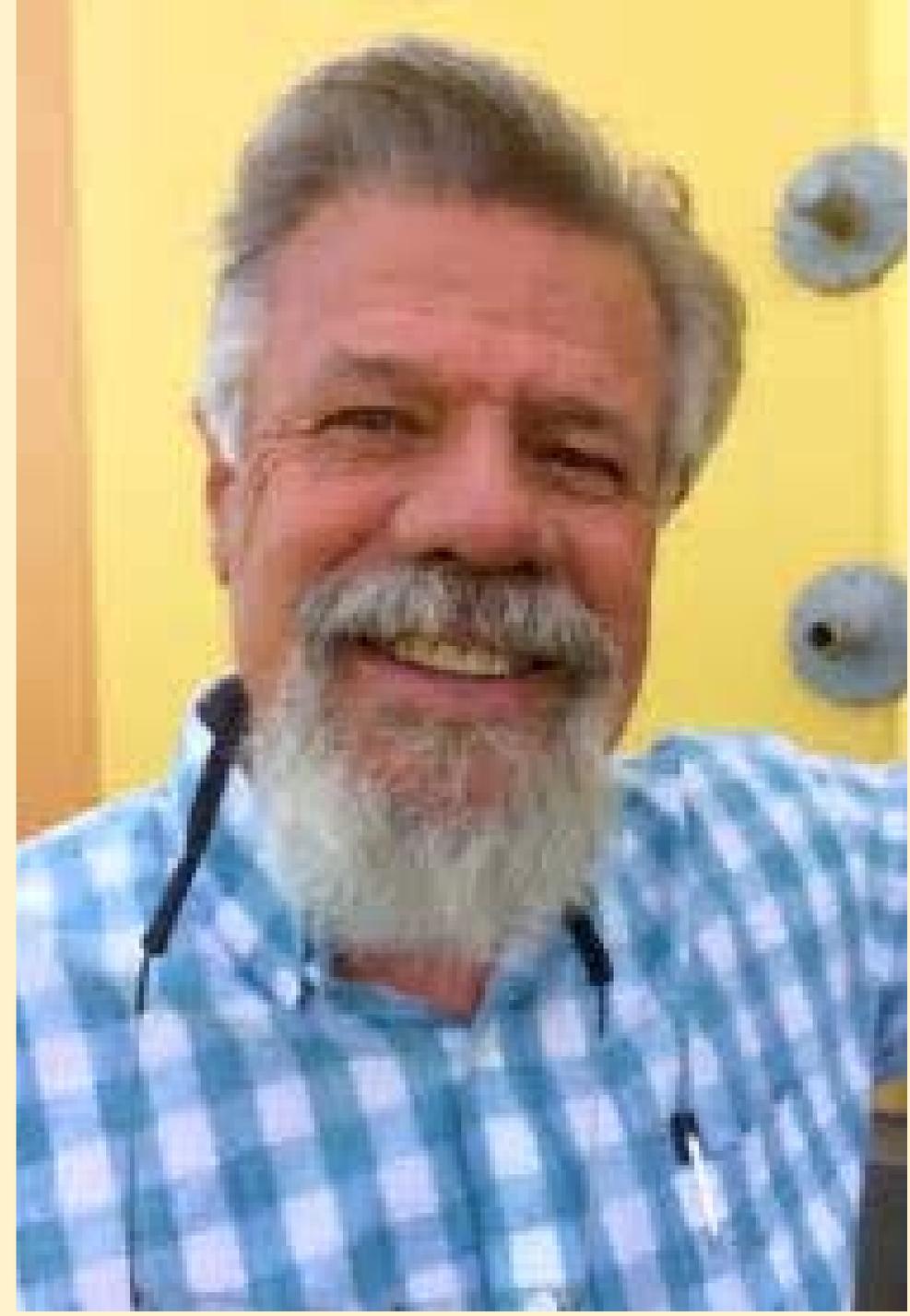
Dr. Jennifer Han is a molecular biologist with a diverse background including plants, fungi, animals, and microbes. Since joining the WSU bee team, she has applied her skills to studying the numerous pathogens and pests that harm bees. Together with Nick Naeger, their current research includes studies on nutrition and physiology as it relates to the bee immune system, and the exploration of using fungi and fungal products to improve honey bee health.



# Pat Heitkam

## “Heitkam Honey Bees, Packages, queens and what is happening to help Honey Bees”

- Project Apis m. Board Chairman Pat Heitkam has been keeping bees since he took a colony for payment at his bike shop. That was 35 years ago, and he is now a major queen breeder in Northern California, a honey producer and commercial pollinator. He owns Heitkam’s Honey Bees in Orland, California, with his son Russell. He has served the beekeeping industry on the Board and also as President of several organizations over the years, including the American Beekeeping Federation, the California State Beekeepers Association, and the California Bee Breeders Association. He is currently Vice President of Bee Informed Partnership, Inc. and is a cooperator with honey bee breeding and research projects, including projects to develop honey bee forage throughout the USA.





# Dr. Brandon Hopkins

## “What’s in the Future for the WSU Bee Program”

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Dr. Brandon Hopkins is an Assistant Professor at Washington State University in the Department of Entomology. He was a leader in the development of cryopreservation of honey bee germplasm for breeding and conservation, a discovery that enabled establishment of the world’s first honey bee germplasm repository at WSU. He also administers the WSU Disease and Diagnostic Laboratory, a facility that provides beekeepers with timely information on the health of their colonies. His research efforts have been focused on developing practical solutions for the beekeeping industry ranging from bee breeding to varroa control.

## Slava Strogolov

### "Microbials and Your Beehive"

- Scientist, Founder, CEO – Strong Microbials, Inc.
- Scientist – B. S. and M. S. in Biology from University of Wisconsin - Milwaukee. Always had great passion for bridging academia and industry by creating products from current brilliant discoveries. Specialization in immunology; cell, molecular and microbiology; Scanning Electron Microscopy and confocal microscopy.
- Founder of Strong Microbials Inc. in 2012 with intent to solve major agricultural issues with microbial applications. Specialization in liquid and solid-state microbial fermentation; aerobic and anerobic cultures.
- Inventor of world's 1<sup>st</sup> probiotic mix for honeybee gut health - SuperDFM.
- Strong Microbials, Inc. services honeybee health, animal production industries, soil root and seed health, as well as biological controls that are safe for pollinators and environment.

