



## 4<sup>th</sup> International Bee and Hive Monitoring Conference

**October 5-9, 2020**

**Program (subject to change)**

To register, visit: <https://colonymonitoring.com/events>

**MONDAY, OCTOBER 5, 2020 (Noon Eastern US Daylight time (GMT-4))**

Daily sessions are approximately 3 hours with a Q & A at the end of the day.

<b>Conference and Historical Overviews</b>	
<b>Title</b>	<b>Presenter</b>
The 4 <sup>th</sup> International Bee & Hive Monitoring Conference: Conference Overview	Frank Linton
Technological innovations in Beekeeping	Huw Evans

<b>Single Sensor Colony Monitoring Systems</b>	
<b>Title</b>	<b>Presenter</b>
AI-Powered Diagnosis and Mapping of Honey Bee Health	Jerry Bromenshenk
BeeScanning App Diagnoses Varroa and Brood Disorder	Björn Lagerman
Colony Monitoring Using Thermal Imaging	Scott Debnam
Eyesonhives: Can Computer Vision Monitoring See More Than Bees?	Kelton Temby
RF Doppler Sensor for Assessing Beehive Health	Herbert Aumann

The Bee Corp: Infrared Image of Colony Size Inspection	Ellie Symes
The Varroa Counter	Werner Toplak
Non-Invasive Beehive Monitoring through Acoustic Data	Yuwei Liao

**TUESDAY, OCTOBER 6, 2020 (Noon Eastern US Daylight time (GMT-4))**  
Daily sessions are approximately 3 hours with a Q & A at the end of each day

<b>Multi-Sensor Colony Monitoring Systems</b>	
<b>Title</b>	<b>Presenter</b>
ApisProtect	Fiona Edwards Murphy
Automating Catch Box Monitoring	Andrew Wootton
BeeHero - Pollinate & Prosper	Itai Kanot
Open Source Monitoring Platform BEEP Development in B-GOOD Project	Marten Schoonman
Hive Monitoring Systems and How They Save Beekeepers Time and Money	Rafael Cabrera
Honey Bee Colony State Detection by Temperature Data	Armands Kviesis
Monitoring Colony Status with a Temperature Sensor Grid	Frank Linton
Nectar Technologies: Update and Case Study	Maximilian Cherney
O'Keefe Electronics WIFI Hive Scale	Pat O'Keefe
Practical Hive Monitoring for the Serious Beekeeper	Etienne Tardif
Swarm Monitoring	Theo Hartman
What Are You Missing? Advances in Hive Monitoring	Rich Morris
BeeHeroX	Huw Evans

**WEDNESDAY, OCTOBER 7, 2020 (Noon Eastern US Daylight time (GMT-4))**  
Daily sessions are approximately 3 hours with a Q & A at the end of the day.

<b>Information Processing Systems for Colony Monitoring</b>	
<b>Title</b>	<b>Presenter</b>
A New Process for Simplifying and Visualizing Honey Bee Hive Scale data	Dick Rogers and Josh Williams

BeeXML: Standardizing the World's Bee Data	Joseph Cazier
BPractices: Correlating Good Beekeeping Practices with Data	Andrew Scott
Flight and Cluster Hours Model	Dick Rogers and Manuel Gutierrez
Got sensor, Now What? Extracting Information from Continuous Data	William G. Meikle
Sniffing out American Foulbrood: Volatile Biomarkers for Non-invasive Diagnosis	Jessica Moran
Monitoring Hives with SAS® Event Stream Processing	Anya McGuirk
Tools for Transforming Data into Knowledge	Andrew Dudley and Jerry Bromenshenk

<b>Apiary and Colony Management Software for Beekeepers</b>	
<b>Title</b>	<b>Presenter</b>
MyApiary- Data Driven Apiary Businesses	Darren Bainbridge
Open Source Precision-Beekeeping Platform for Beekeepers and Researchers	Lorenzo Pons
SAMS: Smart Apiculture Management Services	Florian Schroll

**THURSDAY, OCTOBER 8, 2020 (Noon Eastern US Daylight time (GMT-4))**  
 Daily sessions are approximately 3 hours with a Q & A at the end the day.

<b>Mapping for Colony Monitoring</b>	
<b>Title</b>	<b>Presenter</b>
AncGIS: An Open Source, Mobile and Web Geographic System for Resources Monitoring	Sylvain Galopin
Decimeter Resolution LIDAR for Mapping Forager Bees	Robert Seccomb
Game of Drones	Julia Mahood
Landscape-scale Flow/Dearth Monitoring: A Robust Method for Messy Data	Doug Sponsler
Technologies for Pollinator Surveillance in Field Studies and Intelligent Image Recognition: RFID, Rana and DAISY-II	Sara Barlow & Mark O'Neill

The INSIGNIA Project: Environmental Monitoring of Pesticide Use through Honey Bees	Norman Carreck
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<b>RFID &amp; Beehive Materials</b>	
<b>Title</b>	<b>Presenter</b>
Apimaye Insulated Bee Hives	Korhan Kaftanoglu
Beaver Plastics EPS Smart Brood Box with RFID	Paul O'Neil and Stuart Shim
RFIDs for Asset (Hive) Identification, Location, Tracking, and Inventory	Jerry Bromenshenk
Accuracy of Infra-Red (IR) Imaging to Assess Colony Population Size.	Colin Henderson and Jerry Bromenshenk

**FRIDAY, OCTOBER 9, 2020 (Noon Eastern US Daylight time (GMT-4))**  
 Daily sessions are approximately 3 hours with a Q & A at the end of each day.

<b>Research Updates</b>	
<b>Title</b>	<b>Presenter</b>
Bee Health Guru NSF I-Corps National Team	David Firth
OSU Varroa Research Updates	Ramesh Sagili
Viruses, Bacteria, Fungi, and Chemicals Affecting Your Bees	Dave Wick
Overview of Indoor Storage Research at WSU	Brandon Hopkins
Winter Beehive Storage	Kyle and Shannon Christensen

**Conference Wrap-Up: Final Speaker Q&A and Conference Business Meeting**