



# Eastern Apicultural Society



## [Eastern Apicultural Society \(EAS\)](#)

### **Electronic Hive Monitoring A Full Day Short Course Program Monday, 8/13/2018 in Hampton, Virginia**

The current high rate of colony loss, 30%-40% annually, presents beekeepers with a conundrum. More-frequent inspections might reduce these losses by revealing small problems before they become big ones, but every inspection disturbs the bees, and unnecessary inspections may themselves contribute to colony losses. Still, for many backyard beekeepers, the issue is not too many inspections but too few. How can beekeepers be alerted to small problems before they become big ones – avoiding either too many inspections or too few?

The solutions presented in this workshop all involve inserting sensors into hives to monitor colony health and productivity remotely. Like the many sensors in your automobile, sensors in your colonies can keep you informed of your colonies' well-being and alert you to problems early-on.

#### ***Sensor types***

- Weight: bees and honey (totals, rates of change), swarming, robbing
- Temperature: brood volume, winter cluster volume, queen quality
- Audio: flight, fanning, stress (parasites, diseases, queenless)
- Video: flight, pollen, swarms, predators, & entrance activity
- Odor: pheromones, diseases, nectar sources, pollutants...
- Other: CO<sub>2</sub>, humidity, electrical charge, vibration, Infra-red light, weather, hive location/damage/theft...

#### ***Presenters include:***

- Rafael Cabrera [SolutionBee](#)
- Joseph Cazier [Appalachian State, Boone NC](#)
- Huw Evans [Arnia](#)
- Jeff Groff [Shepherd U, Shepherdstown WV](#)
- William Meikle [USDA, Tucson, AZ](#)
- Rich Morris, Theo Hartmann [Broodminder](#)
- Kelton Temby [EyesOnHives](#)
- Paul Vonk [hivetool.org](#)
- James Wilkes [Hive Tracks](#)
- Andrew Wootton [RMIT U, Melbourne Australia](#)

Also, a number of organizations and individuals will have posters or demos of their colony monitoring technologies set up around the periphery of the hall where this track will take place. Colony monitoring products will be for sale during the main conference, August 15-17, 2018.

The EAS Short Course and Conference Registration is expected to open later this Spring- watch: <http://easternapiculture.org/conferences/eas-2018.html>

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*Subject to Change*