

Multi-Disciplinary Experiment-Centric Pedagogy (ECP) Workshop

14-15 January 2020

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Troy, NY**Tuesday - 14 January 2020**

- 8:15 - Breakfast (Schaefer 102 - Eng. Library)
- 9 - 9:30 Intro to ECP and a Little History
- 9:45 - 10:45 Intro to M2K Activity
- 10:45 - 11:00 Break
- 11:00 - 12:30 M2K Activity
- 12:30 - 1:15 Working Lunch
 - Discussion of ECP Module Instructional Design form
- 1:15 - 1:45 Discussion
- 1:45 - 3:00 M2K Activity
- 3:00 - 3:15 Break
- 3:15 - 4:30 M2K Activity
- 4:30 - 5:00 Discussion and Clean Up

ADALM2000 aka M2K**Wednesday - 15 January 2020**

- 8:15 - Breakfast (Schaefer 102 - Eng. Library)
- 9 - 9:30 Discussion and A Little More History
- 9:30 - 10:45 Intro to M1K Activity
- 10:45 - 11:00 Break
- 11:00 - 12:30 M1K or M2K Activity
- 12:30 - 1:15 Working Lunch
 - Discussion of Assessment Problems
- 1:15 - 1:45 Discussion
- 1:45 - 3:00 M1K or M2K Activity
- 3:00 - 3:15 Break
- 3:15 - 4:30 M1K or M2K Activity
- 4:30 - 5:00 Discussion and Clean Up

**ADALM1000 aka M1K**

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Notes for participants

Each activity will include short presentations and discussions.

Please ask questions, offer comments and suggest ideas for topics to cover at any time ... before, during or after the workshop. Some examples:

- What resources are required to incorporate this activity into my lecture or my lab course?
- Do students like this approach?
- What do you find is the most fun about this approach?
- That activity seems too easy/difficult for my students.
- What problems have you encountered? How have you solved them? What solutions are you still looking for?
- What about electronics topics like measuring transistor characteristics?
- What are the relative advantages and disadvantages of M2K with respect to other options, including standard desktop instruments?
- I am teaching about (...) soon. Do you have a simple activity that I could use on this topic?
- When do you teach students how to use more traditional desktop instrumentation?

Hands-On Activities (there is no fixed time for the activities ... we will spend as much or as little time on each as group interest indicates). We plan to address the following as representative examples of what can be done.

- Voltage Divider
- Wheatstone Bridge
- Light-Emitting-Diodes
- Cantilever Beam
- RLC Harmonic Oscillator
- Exponential Functions in Circuits
- Filters
- Op-Amps
- Optical Sensors
- Temperature Sensors
- Digital Logic