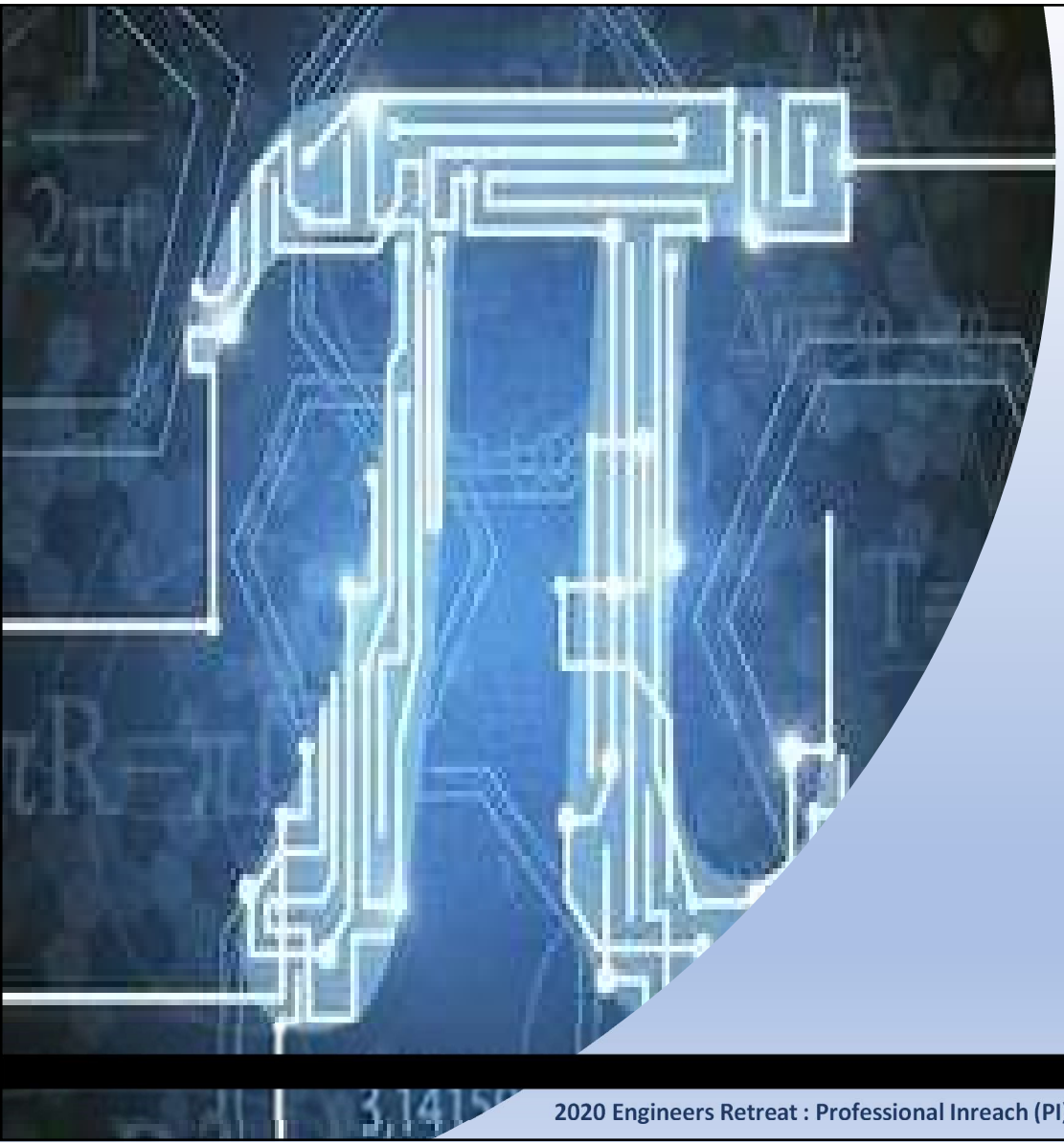

Arduino Hackathon

- **TIME:** Thursday Feb 20th @ 8:30am – 1:30pm
- **LOCATION**: Various small conference rooms in WH
- **LEVEL**: Beginner/ Intermediate
- **DESCRIPTION** : The foundation of robotics is the ability to interface electronic and mechanical systems. The Arduino is a low-cost, open source platform commonly used to develop inexpensive mechatronic and robotic systems quickly. In this timed challenge, up to 6 teams will attempt to build an Arduino-based, sensor-controlled thermometer. All hardware, software, and reference links to complete the project will be provided. Each team will be given an Arduino development kit and a 3D printed structure with a wheel on which numbers are printed. This wheel is attached to a stepper motor. A microswitch touches the outside of the wheel, and its roller tip will be used as a pointer for the temperature readout on the wheel. Proctors will be present to help the teams and provide sealed "clues" to help speed development within the given time frame.
- **REQUIREMENTS**:
    1. Familiarity with interfacing sensors, C/C++ programming, and basic circuit and mechanics theory
    2. Please note that each team will require at least one laptop to perform programming with. It is strongly recommended that all attendees bring a laptop with them to the hackathon if possible.
- **CONTACT**: Kris A. Anderson <kaa@fnal.gov>