

# ADInstruments in Research Workshop Series for Scientists



## Two Day PowerLab Crash Course for Researchers

**ADInstruments North America Training Center**  
Colorado Springs, CO, Boston, MA, and San Francisco, CA locations

### Course Overview:

A workshop like no other, this course will put anyone in the driver's seat of their data acquisition and instrumentation strategy. Day one provides a solid foundation on PowerLab Hardware and Data Acquisition Basics. This is combined with hands-on instruction on the core features of LabChart, providing a thorough footing for advanced data analysis. Day two offers instruction on how to extend the reach of your research applications. Advanced LabChart Modules and Extensions are discussed to provide a level of post-hoc data analysis competency that would be difficult to match even after years going at it alone. Relevant applications will be introduced by specialists, with plenty of one-on-one instruction to bring your specific applications into the course curriculum. The North American Training Center facility provides everything needed for a first rate educational experience. Access to training rooms, lab space, and ADInstruments wide range of product offerings will provide the perfect environment for strengthening your software and hardware skills. Our staff of experts will cover applications in their respective areas of expertise. Plenty of time is provided for a pace of learning that matches each individual's needs. With a high staff-to-attendee ratio, our unique approach ensures you get the attention you need irrespective of your experience level or that of any other attendee.

### Benefits:

Attendees will effectively manage the data recording and analysis component of their experimental protocols. Learning-by-doing amongst dedicated trainers and your colleagues is the quickest method by which to master the PowerLab system. Exposing oneself to the wide range of applications discussed during this course will provide a much clearer perspective on future experimentation planning and implementation. Attendees can expect hands-on training sessions designed to develop primary and secondary skill sets, along with dedicated sessions focusing on data acquisition hardware, software, pre-amplifiers, signal conditioners, instrumentation and transducers. Master your existing experimental setup and learn how to extend the range of the PowerLab system to record those biological signals for future studies.

### Who Should Attend:

This seminar will be useful to all novice data acquisition users seeking a structured, intensive program to quickly master successful PowerLab integration in their research laboratory. Assuming no prior experience and designed specifically for the first-timer, this course is equally suitable for those laboratories with new staff or those needing to revisit PowerLab. Attendees will benefit from a solid foundation of PowerLab hardware and software knowledge that can be easily tailored to real-world experimental workflow.

### Registration Includes:

Two 8-hour days of hands-on-instruction and plenty of helpful take-home materials.

# ADInstruments in Research Workshop Series for Scientists

## Event Schedule:

If there is a specific topic you would like to cover outside of this schedule, one-on-one coaching sessions will be available. The agenda below is representative of the standard schedule but subject matter and times may change. Please note that there will be no animal handling, surgeries or other related animal training services provided at this event.

### Day 1: Data Acquisition Competency

#### PowerLab Hardware

- DAQ Hardware Basics
- PowerLab Features and Advantages

#### Data Acquisition Basics

- Digitization of Data
- Sampling Rates, Amplification, Filtering
- Dealing with Noisy Signals

#### Introduction to LabChart

- Recording Quality Data
- Hardware Settings and Sampling Dialogs
- Windowing and Data Visualization
- Navigating LabChart Files
- Usability Features
- Basic Data Analysis

#### LabChart Fundamentals

- Experiment Design
- Annotating with Comments
- LabChart Shortcuts

- Using Signal Conditioners
- Data Calibration
- Filtering and Smoothing
- Exporting for presentation/publication
- Data Analysis Fundamentals
- Basic Channel Calculation
  - Cyclic Measurements
  - Integral/Derivative
- Data Pad
- Saving and Exporting Data
- Managing LabChart File Systems
- Customizing LabChart Features

#### General Support Tools

- Help Center / Manuals / Configuration
- Website - Finding Support

#### One-on-One Instructor Time

NOTE: Training Center events will only focus on hardware and software equipment options along with research application theory. Animal surgical demonstrations will not be provided at ADInstruments' Training Centers. However, surgical training is available through ADInstruments Experimental Techniques Workshop Series. Noninvasive research applications will be demonstrated on humans where applicable (e.g. biopotentials, psychophysiology, NIBP, metabolic studies, etc.)

# ADInstruments in Research Workshop Series for Scientists

## Day 2: Application Integration

### Advanced LabChart: Extending your reach

- Macros
- OLE linking
- Data Pad
- Find Function
- Event Manager
- Fast Response Output
- Trigger and Stimulator
- Scheduling
- Spectrum
- Arithmetic
- Digital Outputs
- Multiple Devices/ Device Discovery
- Analysis Manager
- Scope View

### LabChart Modules and Extensions

- LabChart Extensions: Helpful LabChart tools
  - Visual
  - Export
  - Calibration
  - Analysis
- LabChart Modules
  - Blood Pressure

- ECG Analysis
- PV Loop
- HRV Analysis
- Circadian Analysis
- Peak Analysis
- Spike Histogram
- Dose Response
- Video Capture
- GLP - 21 CFR Part 11

### Application and Equipment Mastery

- Biopotentials
- Cardiovascular
- Tissue and Organ Baths
- Neurophysiology
- Psychophysiology
- Exercise Physiology
- Scope
- Telemetry
- Respiratory Physiology

### One-on-One Instructor Time

**Please Fill Out The Following Registration Form**

# ADInstruments in Research — Training Series for Scientists

Title: \_\_\_\_\_ First name: \_\_\_\_\_ Last name: \_\_\_\_\_

Name of additional attendees: \_\_\_\_\_

Company/Institution: \_\_\_\_\_ Department/Division: \_\_\_\_\_

Address for correspondence: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_

Zip: \_\_\_\_\_ Country: \_\_\_\_\_

Phone number: \_\_\_\_\_ Email address: \_\_\_\_\_

Emergency contact information: \_\_\_\_\_

Where did you hear about the workshop?  Email  Website  Sales Rep  Colleague  
 Other \_\_\_\_\_

I will be attending the PowerLab Crash Course beginning (mm/dd/yyyy) \_\_\_\_/\_\_\_\_/\_\_\_\_  
at (location) \_\_\_\_\_. The registration fee is \$495. \*Please initial

Please initial if you have any special needs or dietary restrictions we can plan for to make your day of participation  
more enjoyable. Details: \_\_\_\_\_

## Payment & Cancellation

**Training registration is not official until you have received an ADInstruments' invoice confirming your registration. Please do not make travel plans until you have received an enrollment confirmation from ADInstruments.** Deadline for registration is 14 days prior to the event. Cancellations must be received no later than 14 days prior to the event to receive a 50% refund of the registration fee. No refunds will be issued if cancellation is received less than 14 days prior to the event.

Advanced payment in full is required to reserve your space at this event. Attendee lists will be filled on a first-come, first-serve basis in the order that payment is received. \*Pricing valid for 2012 workshops.

\*Serial Number/Promo Code: \_\_\_\_\_

**Fax, email, or phone your credit card information with registration.** Tel: (719) 576-3970  
 Visa  MasterCard  American Express  Discover Fax: (719) 576-3971  
Email: workshop.na@adinstruments.com

Cardholder's name: \_\_\_\_\_

Card number: \_\_\_\_\_ Exp date: \_\_\_\_\_

Credit card billing address: \_\_\_\_\_