Thank you for your interest in our Pressure-Volume Techniques Workshop, to be held on 19-20 May 2015 at the Faculty of Medicine, University of Porto, Portugal. In this information pack you will find:

- The course time, dates and fee schedule - page 1
- Complete descriptions and agendas for the courses - pages 2 - 4
- The course location details - page 5

**Course Dates & Times**

**Tuesday May 19, 2015**

13:00 — 17:00: Plenary Talk and Hardware Overview
Learn about the principles of in-vivo pressure-volume measurements from an experienced user. Become familiar with Millar MPVS hardware as well as LabChart data acquisition & analysis software for extracting haemodynamic parameters. Read the complete Pressure Volume techniques Workshop agenda on page 3 of this document.

**Wednesday May 20, 2015**

09:00 — 17:00: Surgical Demonstration and Data Analysis
Using Millar MPVS Ultra Pressure-Volume units and catheters with PowerLab data acquisition systems, you can learn how to record and plot left-ventricular pressure and volume signals against each other in real time while generating characteristic pressure-volume (PV) loops. You will also learn how to analyse your data to evaluate the mechanical properties of the heart. Read the complete Pressure Volume techniques Workshop agenda on page 4 of this document.

**Course Dates & Times**

Pressure Volume Techniques Workshop
Commencing on Tuesday May 19 and Wednesday May 20, 2015, two day course, includes catered dinner, lunch and refreshments on both days. All other meals, accommodation and transport not included.

**Registration**

- To pay using a credit card online: [https://cardiovascularworkshops2015-adiltd.eventbrite.co.uk](https://cardiovascularworkshops2015-adiltd.eventbrite.co.uk)
- To pay via a purchase order, please contact us at training.eu@adinstruments.com

For more information (including accommodation and travel suggestions), please contact us at training.eu@adinstruments.com, or on Tel: 01865 332 054.
Pressure Volume Techniques Workshop

Gain skills and confidence using the preferred method for cardiac cycle assessment in intact hearts at our Pressure-Volume training course.

Using Millar MPVS Ultra Pressure-Volume units and catheters with PowerLab data acquisition systems, you can learn how to record and plot left-ventricular pressure and volume signals against each other in real time, generating characteristic pressure-volume (PV) loops. You will also learn how to analyse your data and extract haemodynamic parameters to evaluate the mechanical properties of the heart.

ADInstruments application scientists will be joined by a panel of expert pressure-volume researchers, including our hosts Prof. Dr. Adelino Leite-Moreira, Prof. Dr. André Lourenço and Dr. Pedro Ferreira.

To ensure you and your research receive individual attention, the course is limited to 8 participants.

Who should attend?
This course has been designed for cardiovascular scientists who are new to pressure-volume techniques, including:

- New members of pressure-volume research groups who need to better understand the underlying theory, experiment protocols and techniques
- Researchers who are considering or have recently purchased a pressure-volume system who need to start producing valid results quickly

Learning Outcomes
At the end of this training course you will be able to:

- Successfully install and maintain a pressure-volume system
- Calibrate Mikro-Tip pressure-volume catheters
- Position catheters within the heart for optimal data recording
- Configure LabChart software settings for accurate pressure and volume recording
- Generate PV loops, and extract relevant haemodynamic parameters from your recordings
Agenda: Day 1 (Tuesday 19 May)

Afternoon Session

13:00 Plenary Introductory Talk
- Introduction to haemodynamic measurements using pressure-volume analysis
  Prof. Dr. André Lourenço

14:00 MPVS Ultra Hardware and Control Software
- Connections and integration with PowerLab hardware
- Control software settings

15:00 LabChart for Pressure-Volume Measurements
- Optimal recording settings
- Calibrating pressure and volume channels
- Display options for PV loop generation
- Measuring parallel conductance
- Occlusion data
- Signal processing and data extraction
- Export options and file management

17:00 End
**Agenda: Day 2 (Wednesday 20 May)**

**Morning Session**

09:00 Surgical Demonstrations
- Catheter placement
- Acquiring baseline data
- Acquiring saline bolus data
- Acquiring occlusion data

13:00 Lunch

**Afternoon Session**

14:00 Data Analysis
- The PV Loop Module for analysis
- Parallel conductance compensation
- Baseline analysis and haemodynamic parameter extraction
- Analysis of occlusion data
- Additional analysis tools for PV data

16:00 Open Discussion
- Common pitfalls when recording and analysing pressure-volume data
- Troubleshooting

17:00 End
Course Location

Date: May 19 - May 20, 2015.

Location: Centro de Investigação Médica
Dep. de Fisiologia e Cirurgia Cardiotorácica
Universidade do Porto - Faculdade de Medicina
Rua Dr. Plácido da Costa
Ed. Poente – 6th Floor
4200-450 Porto

For more location details please visit the EMCC website.

Guest Instructors: Prof. Dr. Adelino Leite-Moreira, Dr. André Lourenço and Dr. Pedro Ferreira
Centro de Investigação Médica
Dep. de Fisiologia e Cirurgia Cardiotorácica
Universidade do Porto - Faculdade de Medicine
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4200-450 Porto

They will also be joined by ADInstruments Training and Support Staff.

Fees: €850 Euros
Included: Dinner on the 19th, Lunch, morning and afternoon tea.
Not included: Travel, accommodation, any other meals.

Registration: https://cardiovascularworkshops2015-adiltd.eventbrite.co.uk

What to bring: We encourage you to bring your own LabChart Cardiovascular data files to the afternoon session. ADInstruments training staff will be able to provide personalised support to meet your specific analysis requirements.

More details: Contact us at training.eu@adinstruments.com or on +44 1865 332 054.