



PMOD Technologies
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PMOD Basic Application Course

September 16-17, 2010

Zurich, Switzerland

www.pmod.com/technologies/course/course.html

Overview

The aim of PMOD's biannual basic application courses (held each year in March and September in Zurich) is to teach the participants the effective use of the major PMOD tools. Brief presentations will outline the principles behind the different types of data analysis. They will be complemented by live demonstrations. Ample time will be available for individual practice based on a workbook and for interacting with the trainers.

The participants are required to bring their own notebooks. Each participant will be given a USB flash key with the latest PMOD version as well as training data sets. PMOD can be started directly from the key, such that the configuration of the notebook will remain untouched. As a courtesy, the key can be taken home and will work for another two months. This will give the participants the opportunity to complete their studies if needed, and to try the PMOD tools on their own data.

Educational Objectives

Upon completion of the course, the participants will be able to:

- Exploit the wealth of image presentations and layouts
- Apply the filtering and image processing tools
- Define Volumes-of-Interest (VOIs) using manual and automatic methods and calculate their statistics
- Calculate time-activity curves and submit them to the kinetic modeling tool
- Understand the different types of models and apply them in the general and pixel-wise modeling tool
- Match multi-modal images of a single patient by manual and automatic methods
- Spatially normalize a brain image to a brain atlas
- Select among the available image fusion techniques
- Perform pixel-wise algebra with matched series, e.g. to calculate a perfusion reserve
- Apply segmentation techniques to extract organ surfaces and render them in 3D
- Project functional information as a texture onto a segmented organ surface

Target Audience

The course is aimed at participants with a basic to intermediate skill level. It is primarily designed for existing and prospective PMOD users who:

- Started using PMOD recently
- Wish to extend their knowledge and interact with the authors of the software
- Would like to evaluate modules which are not available in their acquired installations

Contents

Short Background Presentations

The presentations will provide the basics for understanding program operation. They will include the following topics:

- Organization of the PMOD Software
- Quantification by kinetic models
- Image registration, normalization and fusion
- Visualization by 3D image rendering techniques

Program Demonstrations

The demonstrations will show how work is done with the most prevalent PMOD tools:

- Basic PMOD techniques (PVIEW)
- Kinetic modeling with regional time-activity curves (PKIN)
- Applying pixel-wise models to image data (PXMOD)
- Image fusion, algebra, and stereotactic normalization (PFUS)
- 3D image rendering of brain data (P3D)

Note that due to time limitations, the following PMOD tools can only be covered marginally: cardiac modeling (PCARD), Alzheimer's (PALZ), and normal brain database (PBRAINDB). However, related questions may be discussed on an individual basis during the computer exercises. We reserve the right for minor changes of the course content without notification.

Computer Exercises and PMOD Workbook

The participants are required to bring their own notebooks. At least 1GB RAM will be needed. The participants will be asked to conduct a number of exercises on their notebooks, using the supplied USB flash key. At the outset of the course, the "PMOD Workbook" will be distributed, a concise 36-page step-by-step tutorial of all major PMOD tools as well as of database management. The exercises will consist of a set of processing tasks whose solution is detailed in the workbook. Note that the workbook is also available for download from the PMOD website, via the sections reserved for PMOD license owners/requesters of PMOD trial licenses. The course builds heavily upon the workbook, yet it provides much needed context information and yields a personalized learning experience way beyond the workbook, based on the participants' questions, concerns, priorities, research studies, and data, if available.

Course Documentation

The course presentations, the PMOD Workbook, and further course documentation will all be available on the supplied USB flash key.

Organization

Course Schedule

Thursday, September 16	09:00 - 17:00
Friday, September 17	09:00 - 16:00

Course Dinner

On the eve of the first course day, PMOD will offer to all participants a free, complementary dinner. The dinner will allow for continuing discussions and for networking among peers in an informal and relaxed setting.

Registration and Costs

Registration can be done online, and will be handled on a first-come, first-serve basis for a maximal number of 20 participants. The course fee amounts to (student discount of 20% on standard fees):

- Standard: EUR 580.- (until July 31, 2010), EUR 680.- (afterwards)
- Student: EUR 464.- (until July 31, 2010), EUR 544.- (afterwards)

The fee covers the training lessons and documentation, the USB flash key, all refreshments during the breaks, two lunches as well as the course dinner on the eve of the first training day. After registration, the participants will receive by e-mail a confirmation message with access information and payment directions. Note that the *course fee must be paid within 10 days after registration* (online payment). Thereafter, we reserve the right to offer the place to persons waiting for a vacancy.

The student fee is applicable to participants from academia who are currently enrolled in a doctoral or other graduate degree program. As a student participant, please perform the standard registration procedure without payment. Then, send your application for the student fee to info@pmod.com. Once accepted, you are invited to proceed with the online payment.

Course Location

The course will be held at Hotel Continental, Zurich, Switzerland (Stampfenbachstrasse 60, CH-8006 Zurich). The hotel is conveniently located in downtown Zurich, just a 10 minutes walk off the main station.

Accommodation

Accommodation is not included in the course fee and must be booked individually. Our recommended hotels are:

1. Hotel St. Josef (Hirschengraben 64/68, CH-8001 Zurich). 3-Star downtown hotel, a 10 minutes walk from the course location. www.st-josef.ch
2. Hotel Continental (Stampfenbachstrasse 60, CH-8006 Zurich). 4-Star luxury hotel and course location. www.accorhotels.com/accorhotels/fichehotel/de/sof/1196/fiche_hotel.shtml

Cancellation Policy

The course will be cancelled, if one month prior to the course, not enough enrolments have been done. In that case, the registered participants will be notified and will receive a full refund. If a registered participant has to cancel his or her attendance, he or she will get a refund (fee minus bank expenses) provided that the participant's place can be filled by another person.

PMOD Small Animal Imaging and Analysis Course *(optional third course day)*

On Saturday, **September 18**, the day right after the PMOD Basic Application Course, a **PMOD Small Animal Imaging and Analysis Course** will be organized in the same course environment. The participants will be trained in the processing of small animal data using PMOD and will learn the principles and special techniques required for the meaningful analysis of the uptake in small tissue structures.

The prerequisite for participation is an intermediate skill level in PMOD, as acquired for instance at the two days PMOD Basic Application Course. Registration is being handled separately from the basic application course registration, yet the following privileged fees will apply to basic application course participants (student discount of 20% on standard fees):

- Standard: EUR 290.- (until July 31, 2010), EUR 340.- (afterwards)
- Student: EUR 232.- (until July 31, 2010), EUR 272.- (afterwards)

The fee covers the training lessons and documentation, a USB flash key, lunch as well as all refreshments during the breaks.

Further information: see flyer "PMOD Small Animal Imaging and Analysis Course" (available on the PMOD website).