



PMOD Technologies
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PMOD Basic Application Course

September 6-7, 2010

Tokyo, Japan

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

Overview

The aim of PMOD's basic application courses 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.

The PMOD basic application course is being offered biannually at PMOD's headquarters in Zurich, Switzerland. After a highly successful first edition two years ago, this course will be the second of its kind to be offered in Japan. It is scheduled right before the 2010 World Molecular Imaging Congress (WMIC) which will take place in Kyoto, Japan, on September 8-11, and where PMOD will be involved as an exhibitor.

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 the following PMOD tools can only be covered marginally: cardiac modeling tool (PCARD), Alzheimer's tool (PALZ), and normal brain database tool (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

Monday, September 6	09:00 - 17:00
Tuesday, September 7	09:00 - 16:00

Registration and Costs

Registration can be done online or alternatively via max@pmod.jp. It will be handled on a first-come, first-serve basis for a maximal number of 24 participants. The course fee amounts to (including 5% Japanese VAT):

- Standard: EUR 735.-
- Student: EUR 588.- (comprises a 20% discount on the standard fee)

The fee covers the training lessons and documentation, the USB flash key as well as all refreshments during the breaks. After online 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 in downtown Tokyo (exact location to be announced).

Accommodation

The accommodation is not included in the fee and is at the discretion of the participants.

Cancellation Policy

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.