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## PMOD Training Workshop

September 18 - 19, 2009

Zurich, Switzerland

### Overview

The aim of this PMOD Training Workshop 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 followed by live demonstrations. Finally, 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. They will obtain 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 training 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
- Assess the identifiability of kinetic model parameters
- 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 training workshop is aimed at participants with a basic to intermediate skill level. It is primarily designed for existing and prospective PMOD users who:

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

### Contents

#### *Short Background Presentations*

The presentations will provide basic information for the purpose of understanding program operation. They will include the following topics:

- Organisation of the PMOD Software
- Quantification by kinetic models
- Image registration, normalisation 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 will not be covered expressly by the main teaching: Cardiac modeling tool (PCARD), Alzheimer's Tool (PALZ), Normal brain database tool (PBRAINDB). However, questions concerning those tools may be discussed on an individual basis during the computer exercises.

### *Computer Exercises*

The participants are required to bring their own notebooks. They will obtain 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. The participants will be given a set of processing tasks together with a step-by-step written solution. During exercise time, they may work through the examples of their choice, and address the trainers for help or further information.

Notes:

- The participants are required to bring their own notebooks. At least 1GB RAM will be needed.
- We reserve the right for minor changes of the training content without notification.

## **Organization**

### *Training Schedule*

Friday, September 18 09:00 - 17:00  
Saturday, September 19 09:00 - 16:00

### *Workshop Dinner*

On the eve of the first training day, PMOD will offer to all participants a free, complementary workshop dinner. The dinner will allow the participants and trainers to continue their discussions and to network 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 workshop fee is:

- Standard: EUR 630.-
- Student: EUR 504.- (comprises a 20% discount on the standard fee)

The fee covers the training, all handouts, the USB flash key, all refreshments during the breaks, two lunches, as well as the complementary workshop 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 *workshop 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](mailto:info@pmod.com). Once it has been accepted, you are invited to proceed with the online payment.

### *Workshop Location*

The workshop 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.

[http://www.accorhotels.com/accorhotels/fichehotel/de/sof/1196/fiche\\_hotel.shtml](http://www.accorhotels.com/accorhotels/fichehotel/de/sof/1196/fiche_hotel.shtml)

### *Accommodation*

The accommodation is not included in the fee and must be booked by the individual participants. 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. <http://www.st-josef.ch>
2. Hotel Continental (Stampfenbachstrasse 60, CH-8006 Zurich). 4-Star luxury hotel and course location. [http://www.accorhotels.com/accorhotels/fichehotel/de/sof/1196/fiche\\_hotel.shtml](http://www.accorhotels.com/accorhotels/fichehotel/de/sof/1196/fiche_hotel.shtml)

### *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.