

PsPM Course Schedule

Hertz Chair for Artificial Intelligence and Neuroscience (CAIAN)

Day 1 (Thurs) - 18.01.2024

2:00 pm - 3:00 pm **Introduction - General Philosophy of Model-based Inference**
Prof. Dr. Dr. Dominik R. Bach
Theory: Philosophy behind PsPM and Why it is useful - 40 mins
Practice: Installing PsPM and introduction to GUI implementation - 20 mins

3:00 pm - 4:00 pm **Session 1 - LTI & GLM**
Prof. Dr. Dr. Dominik R. Bach
Lecture: LTI & GLM - 10/15 mins
Tutorial: Import and trim the data / Access to GLM features - 30/40 mins
Round up - 10 mins

4:00 pm - 4:30 pm **Coffee Break**

4:30 pm - 5:30 pm **Session 2 - Introduction to MATLAB**
Uzay Gökay & Sourav Kulkarni
Introduction to MATLAB syntax
Imperative programming: for/while loops, If/else statements
Signal processing using MATLAB

5:30 pm - 6:30 pm **Session 3 - Skin Conductance Responses**
Juliana Sporrer
Lecture: Skin Conductance Responses - 10/15 mins
Tutorial: Non-linear models for SCR & artifact removal - 30/40 mins
Round up - 10 mins

Day 2 (Fri) - 19.01.2024

2:00 pm - 3:00 pm **Session 4 - Heart Period Responses**

Juliana Sporrer

Lecture: Heart period responses - 10/15 mins

Tutorial: Cardiac, respiration, and eyeblink EMG pre-processing - 30/40 mins

Round up - 10 mins

3:00 pm - 4:00 pm **Session 5 - Pupil Size Responses**

Dr. Yanfang Xia

Lecture: Pupil size responses - 10/15 mins

Tutorial: How to preprocess pupil data and use the related models - 30/40 mins

Round up - 10 mins

4:00 pm - 4:30 pm **Coffee Break**

4:30 pm - 5:15 pm **Session 6 - Workflow Automation I**

Dr. Carlos Alexandre Gomes

Save the GUI pipeline as a MatlabBatch

Adapt the MatlabBatch script to run for all the subjects

5:15 pm - 6:00 pm **Session 7 - Workflow Automation II**

Dr. Carlos Alexandre Gomes

Working directly with PsPM functions

Translating a PsPM batch script into a pure PsPM script

6:00 pm - 6:30 pm **Q&A and Closing Remarks**
