Tentative Schedule for Mini-School Focusing on Technical Aspects of fMRI

(機能的磁気共鳴イメージングの技術に重点を置いたミニスクール)

Day One (Feb. 11, 2008)

AM .....MRI Basics
(R. Allen Waggoner, RIKEN Brain Science Institute)

PM.....BOLD fMRI
(Dr. Seiji Ogawa, Hamano Life Science Research Foundation)

Day Two (Feb. 12, 2008)

AM .....fMRI Pulse Sequences, Artifacts, Physiological Noise
(R. Allen Waggoner, RIKEN Brain Science Institute)

PM.....Hemodynamic Response, Balloon Model, Davis Model, etc
(Prof. Richard Buxton, University of California, San Diego)

Day Three (Feb. 13, 2008)

AM .....Data Preprocessing, i.e. Physiofix & Motion Correction
(R. Allen Waggoner, RIKEN Brain Science Institute)
Data Analysis, i.e. GLM & event related methods
(Kenichi Ueno, RIKEN Brain Science Institute)

PM.....Split Laboratory time

- Half of the Students working with phantoms to learn how T1, T2*, and susceptibility artifacts affect the choice of Tr, Te, matrix size, flip angle, and resolution.
- Half of the Students will preprocess and analyze actual fMRI data sets. At least two data sets will be used, acquired with two different flip angles. This will allow the students to see the impact of physiological noise on the data sets.

Day Four (Feb. 14, 2008)

AM .....non-BOLD fMRI, i.e. Perfusion, CBV, etc.
(Prof. Seong-Gi Kim, University of Pittsburgh, USA)

PM.....Split Laboratory time

- Half of the Students working with phantoms to learn how T_1, T_2*, and susceptibility artifacts affect the choice of Tr, Te, matrix size, flip angle, and resolution.
- Half of the Students will preprocess and analyze actual fMRI data sets. At least two data sets will be used, acquired with two different flip angles. This will allow the students to see the impact of physiological noise on the data sets.

Evening....Get-Together Party

Day Five (Feb. 15, 2008)

AM .....fMRI of Human Sensory Processes and High-Level Cognition
(Kang Cheng, RIKEN Brain Science Institute)

PM.....Follow-up Laboratory time, the students can continue with phantom experiments or data analysis as needed.

Adjourn

AM: 9:30-12:30; PM: 14:00-17:00