

fNIRS Training Course

Boston University / Massachusetts General Hospital

Nov 6-8, 2019

DAY 1 – November 6th Wednesday

- 9:00 – 10:30 am **NIRS Introduction** – Lecture
- 10:30 – 11:15 am **Hands-on A** – Cuff occlusion with various instruments (CW-NIRS, FD-NIRS, DCS)
- 11:15 – 11:30 am **Break**
- 11:30 – 12:45 pm **fNIRS overview** – Lecture
- 12:45 – 1:30 pm **Lunch**
- 1:15 – 2:00 pm **Computer testing**
- 2:00 – 3:00 pm **Data analysis** – Basic steps demonstrated with Homer2
- 3:00 – 5:00 pm **Hands-on B and C** – 3D-digitizer and fNIRS experiments:
Hands-on B (1 hour) – Digitizing probe locations
Hands-on C (1 hour) – fNIRS data acquisition during mental task
- 6 pm **Dinner**

DAY 2 – November 7th Thursday

- 9:00 – 10:30 am **Short separation regression and GLM** – Lecture and exercise
- 10:30 – 10:45 am **Break**

- 10:45 – 12:15 pm **Motion Artifacts** – Lecture and exercise
- 12:15 – 1:00 pm **Lunch**
- 1:00 – 3:00 pm **Exercise: Data analysis** – Analysis of Hands-on B data from Day 1
- 3:00 – 3:15 pm **Exercise: Data analysis** – Result presentation
- 3:15 – 3:45 pm **Break**
- 3:45 – 5:45 pm **Application Talks:**
- Maria Angela Franceschini, “Clinical translation of NIRS-DCS”*
- Alexander von Lühmann, “Toward Multimodal Neuroimaging in the
Everyday World: Mental Workload in Moving Operators”*
- Meryem Ayşe Yücel, “fNIRS Studies at BU”*
- 5:30 – 5:45 pm **Homework assignment** – Homer2 analysis in preparation for Day 3
- 6:00 – 7:30 pm **Working dinner** – Homework + Continue analysis of data from participants

DAY 3 – November 8th Friday

- 9:00 – 10:00 am **Atlas Guided Analysis** – Lecture
- 10:00 – 10:15 am **Exercise: Using subject’s own anatomy**
- 10:15 – 10:30 am **Break**
- 10:30 – 11:30 am **Probe design: software** – Lecture
- 11:30 – 12:30 pm **Exercise: Probe design**
- 12:30 – 1:30 pm **Lunch**

1:30 – 2:30 pm **Exercise: Probe repeatability and comparison with target design**

2:30 – 4:30 pm ***Exercise: Image Reconstruction***

4:30 – 5:00 pm **Wrap up**