

# REGISTRATION FORM

Name : \_\_\_\_\_

Position : \_\_\_\_\_

Institution/Organization Address : \_\_\_\_\_

Tel No (Office) : \_\_\_\_\_

Tel No (Mobile) : \_\_\_\_\_

Fax : \_\_\_\_\_

Email : \_\_\_\_\_

Type of Payment (Cash/LO/Direct Bank in)\* : \_\_\_\_\_

\* LO : RM600, Cash/Direct Bank In : RM500

## Contact Person

Nur Amalina Hashim - (ext : 4046 / 4047)

## Account Name

Universiti Sains Malaysia

## Bank

Bank Islam Malaysia Berhad (BIMB)

## Bank Address

PT 1540, Pesiaran KK6, Jalan Raja Perempuan Zainab II,  
Bandar Baru Kubang Kerian, 16150 Kubang Kerian, Kelantan

## Account Number

03018010100002

## Committee

Chairman : Prof Dato' Dr. Jafri Malin Abdullah

Director : Dr. Aini Ismafairus Abd Hamid

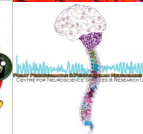
Vice Director : Dr. Hanani Abdul Manan

Secretary : Nur Amalina Hashim

Any inquiries please do not hesitate contact us :

Email : [amalinah@usm.my](mailto:amalinah@usm.my)

Tel : 09-767 4046 / 4047



# INTRODUCTION TO fMRI

"FURTHERING NEUROIMAGING KNOWLEDGE"

I am the right brain.  
I am creativity. A free spirit. I am passion.  
Yearning. Sensuality. I am the sound of roaring laughter.  
I am taste. The feeling of sand beneath bare feet.  
I am movement. Vivid colors.  
I am the urge to paint on an empty canvas.  
I am boundless imagination. Art. Poetry. I sense. I feel.  
I am everything I wanted to be.

Date : 9 - 11 August 2016

Venue : Hospital Universiti Sains Malaysia, Kelantan.





## INTRODUCTION

The rapid growth in neuroimaging technology, methodology and interpretation has transformed neuroscience research and revolutionized progress in clinical applications.

Neuroimaging modalities such as functional magnetic resonance imaging (fMRI) are used by cognitive neuroscience researchers to measure and map brain activity. The popularity of fMRI has grown rapidly because the modality is non-invasive and characterized by a high spatial and temporal resolution. Furthermore, the fMRI signal is also highly reproducible and consistent.

The ‘Introduction to fMRI’ program is designed for fMRI researchers of different skill levels. This program provides participants with a better understanding of the theory and data analysis associated with fMRI; it also exposes participants to several types of software useful for analyzing fMRI data. The program covers experimental design, data acquisition, data processing and data analysis using a general linear model.

In this program, participants will have hands-on exposure to Statistical Parametric Mapping (SPM) software. In addition, participants will be exposed to other software such as FSL and Python pipelines.

Left  
brain

I am the left brain.  
I am a scientist. A mathematician.  
I love the familiar. I categorize. I am accurate. Linear.  
Analytical. Strategic. I am practical.  
Always in control. A master of words and language.  
I can solve equations and play with numbers.  
I am order. I am logic.  
I know exactly who I am

## OBJECTIVE

- 1) understand the basic of fMRI
- 2) able to design experiment using fMRI
- 3) able to analyse and interpret the fMRI data

### Who should attend?

- Research Officer
- Science Officer
- Radiographer
- Radiologist
- Scientist
- Lecturer
- Student



INTRODUCTION TO fMRI

## TENTATIVE

### Day 1 ( 9 August 2016)

8.30am-9.15am	Registration
9.15am-9.30am	Introduction to the course
9.30am-9.45am	Brainwaves in Neurosurgery
9.45am-10.30am	MR Physics
10.30am-11.00am	Tea Break
11.00am-11.30am	MR Safety
11.30am-12.15pm	Introduction to fMRI
12.15pm-1.00pm	Talk 1
1.00pm-2.15pm	Lunch Break
2.15pm-3.00pm	Talk 2
3.00pm-3.30pm	On the origin of the BOLD
3.30pm-4.30pm	The effects of TR and TE on fMRI signal
4.30pm-5.00pm	Experimental Design
5.00pm-5.30pm	Tea Break & Session End

### Day 2 ( 10 August 2016)

8.30am-9.00am	Introduction to SPM
9.00am-10.30am	Spatial Processing
10.30am-11.00am	Tea Break
11.00am-12.30pm	Spatial Processing (Hands-on)
12.30pm-1.15pm	Talk 3
1.15pm-2.30pm	Lunch Break
2.30pm-3.30pm	The General Linear Model
3.30pm-5.00pm	Model Specification (Hands-on)
5.00pm-5.30pm	Tea Break & Session End

### Day 3 ( 11 August 2016)

8.30am-9.30am	Inference (Random Field Theory)
9.30am-10.30am	FFX and RFX (Hands-on)
10.30am-11.00am	Tea Break
11.00am-12.30am	cont. FFX and RFX (Hands-on)
12.30pm-1.15pm	Other Processing method—fMRI post processing including workflow
1.15pm-2.30pm	Lunch Break
2.30pm-3.00pm	cont. Other Processing method—fMRI post processing including workflow
3.00pm-4.00pm	Introduction to FSL
4.00pm-5.00pm	Introduction to phyton pipelines & interfaces
5.00pm-5.30pm	Tea Break & Session End

INTRODUCTION TO fMRI