

## **« Programming with Matlab »**

**16-17 January , 13-14 February 2012**

**Course deliverers :**

**Dr. Guillaume Rousselet**

**Dr. Cyril Pernet**

### **DR GUILLAUME ROUSSELET**

#### **January 16, 2012:**

Introduction to Matlab 1

The workspace, variables, basic mathematical operations, graphs.

Introduction to Matlab 2

Conditional statements (greater than, less than), RT analysis, scripts.

Introduction to Matlab 3

Flow control (for loops, if statements), functions.

Introduction to Matlab 4

Advanced variables, advanced flow control, file operations.

#### **January 17, 2012:**

Statistics using Matlab 1 - Data description

Histograms, Boxplots, measures of central tendency, measures of dispersion, skewness, kurtosis.

Statistics using Matlab 2 - Robust confidence intervals

Statistics using Matlab 3 - Comparing estimators

### **DR CYRIL PERNET**

#### **February 13, 2012:**

Introduction to linear models (correlations, simple and multiple regressions)

Introduction to linear algebra (solving linear systems)

General linear Models (ANOVAs, ANcova, and Regression using linear algebra - concepts)

Review of Matlab tools for GLM (Stat toolbox)

#### **February 14, 2012:**

Introduction to Image Processing (manipulating image properties)

Introduction to Signal Processing (generating and analyzing waveforms)