Processing fMRI data with MATLAB

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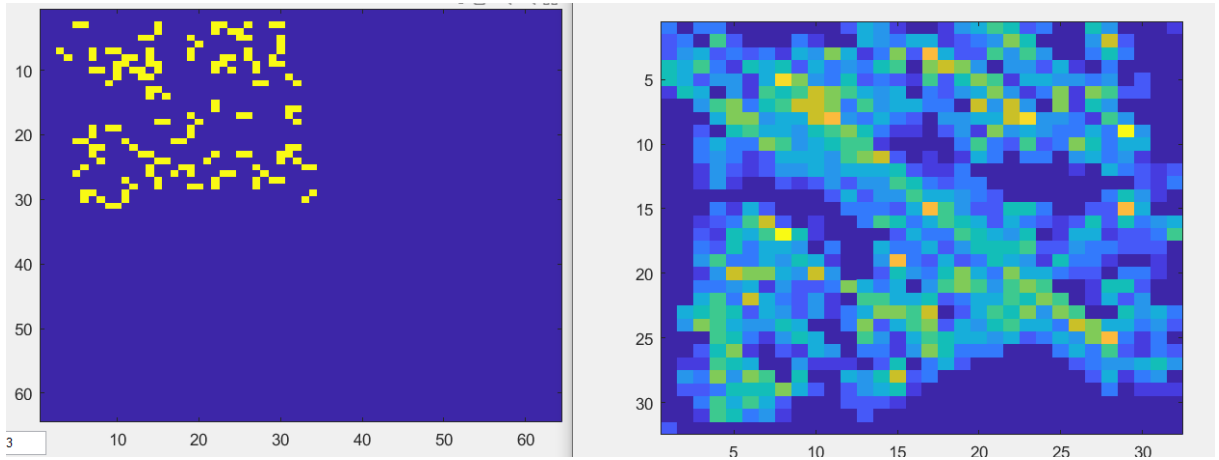
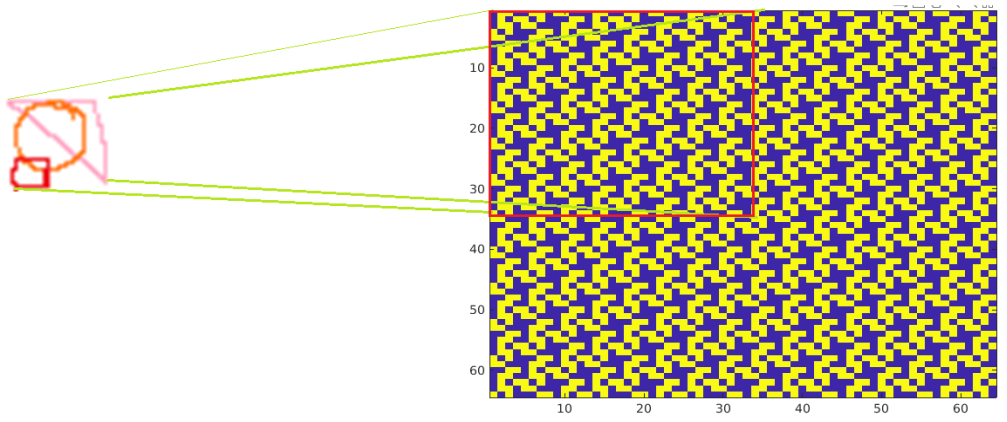
- Preparing functional magnetic resonance imaging paradigms
  - Backward masking paradigm
  - A specifically designed symptom provocation and desicion making paradigm
  - Psycholinguistic paradigms
- Creating an intelligent system which is based on, completely, biological rules and features: the Neurosim
- Artificial Intelligence algorithms e.g. Hidden Markov Model

- V1 is the first cortical input region of vthe visual system.
  - There are spatial filters which has inspired the Gabor filters.
- Blobs are frequency filters that pass differnt wave lenghts.



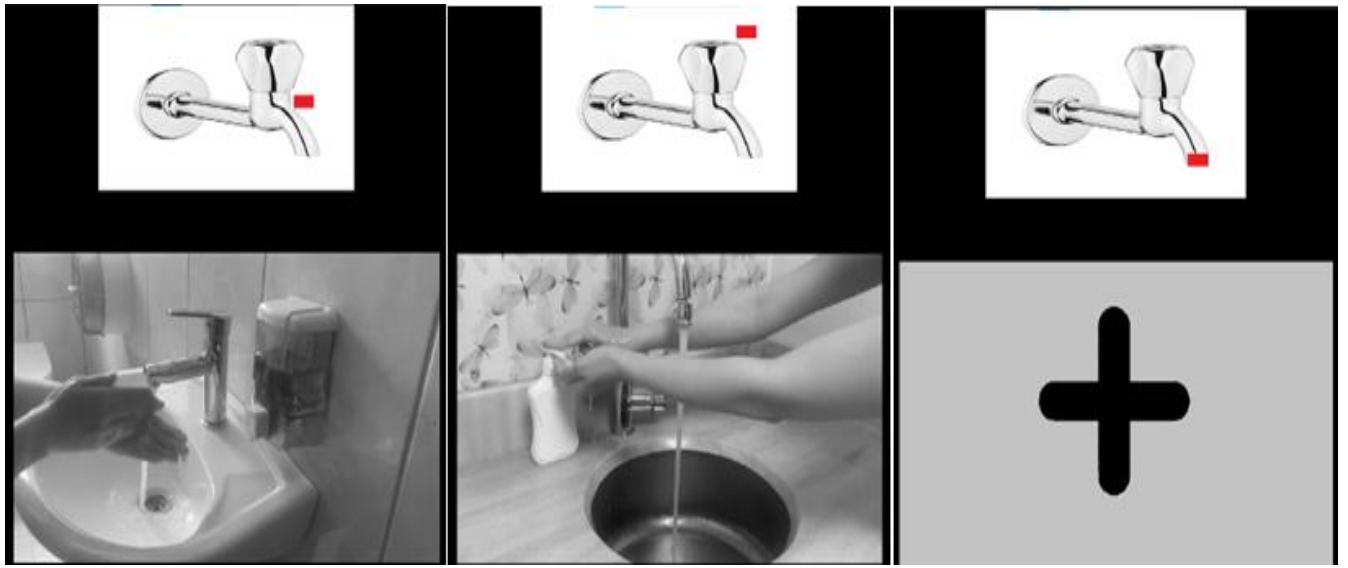


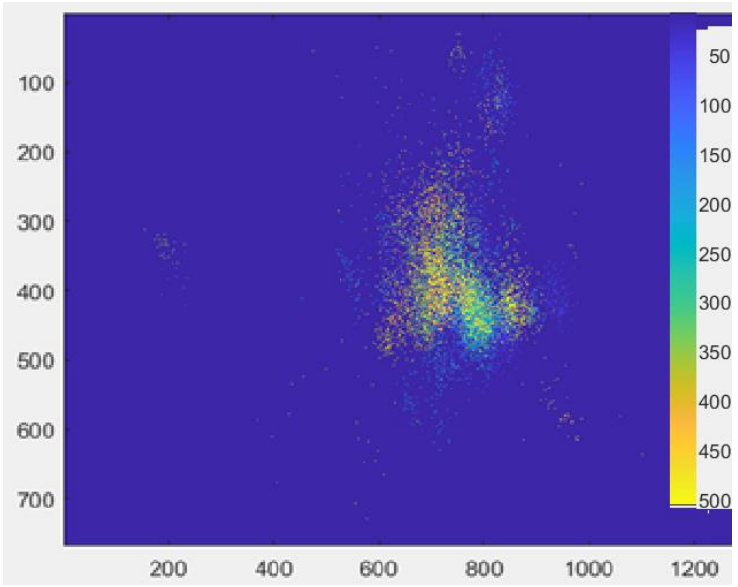
Benefits / added value of using MATLAB and Simulink

- MATLAB has offered easily emplemented toolboxes which has also met many scientific computation demands.
  - Callback functions
  - Statistics
  - Machine learning algorithms
  - SPM12
  - MRC
  - ….

Results obtained and personal considerations

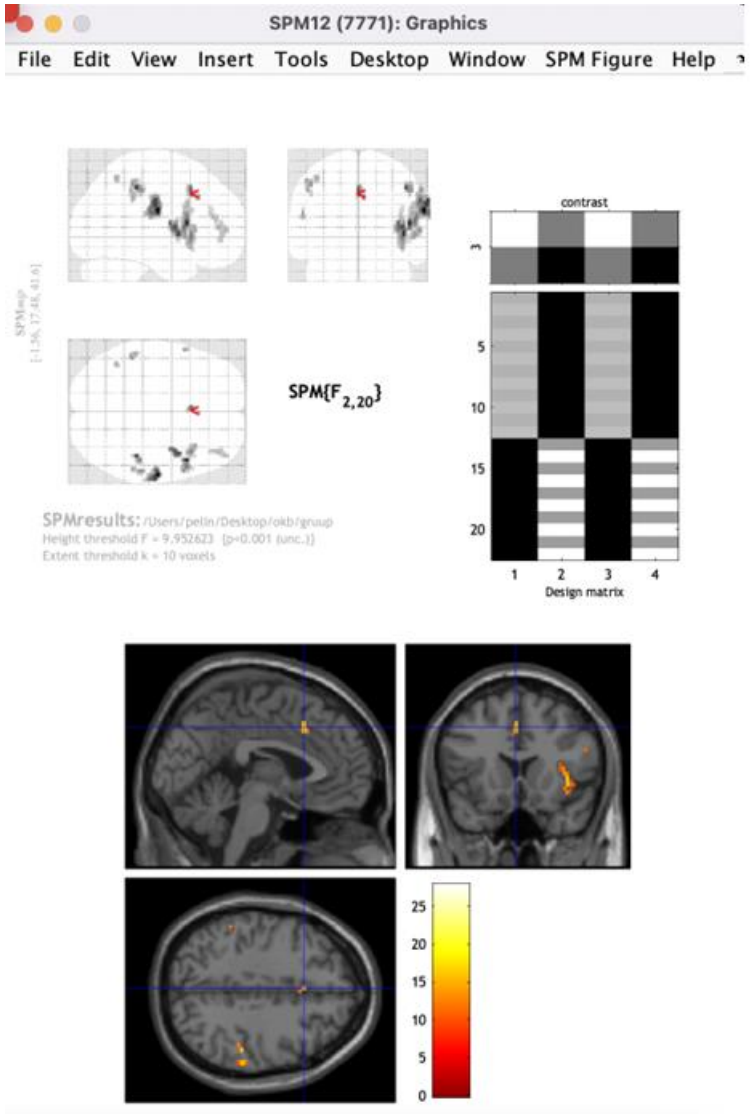
- Callbacks





Future plans

- Improving the neurosim
- Continuou to neuroimaging studies



Thank you

Q&A – 5min

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