# Zurich fMRI Methods Evaluation Toolbox – Coding Conventions

| Item | Convention | Example |
|---|---|---|
| **Function Header** | create new function file using function "new_function" | `new_function('compute_snr')`<br>or<br>`new_function compute_snr` |
| **Functions** | names with underscore, all lowercase letters | `compute_snr()` |
| **Variables** | names with mixed-case, starting with lowercase letter | `nImages; iVoxel; totalSnr; maxDurationSeconds` |
| **Classes** | names with mixed-case, starting with uppercase letter<br><br>*Naming conventions:*<br>• if "rich" class, start name with Mr, i.e. stand-alone use and versatile methods (plotting, computation…)<br>• if class exists only as property of another class (e.g. parameter container), prepend name of this class.<br><br>create new class definition file (incl. headers) with "new_class"<br>The class folder "@Classname" is created automatically | `MrImage; MrSeries; CopyData; MrRoi`<br><br>`Mr*`<br><br>`MrSeriesParameters (for MrSeries.parameters)`<br><br>`new_class('MrExperiment') or new_class MrExperiment`<br><br>`=> output: @MrExperiment/MrExperiment.m` |
| **Class Methods** | as for functions, built names with underscore, all lowercase letters<br><br>each methods goes into an extra file (apart from constructor/destructor, set/get)<br><br>create new class method file with "new_method" while being in the class folder, i.e. "@Classname" | `MrExperiment.compute_snr()`<br><br>`cd @MrExperiment`<br>`new_method compute_snr`<br><br>`=> output: @MrExperiment/compute_snr.m` |

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| **Class Properties** | names with mixed-case, starting with lower letter (as variables) | `MrImage.maxPixelValue`<br>`MrSeries.snr` |
| **One-line description** | Provide a one-line description of each class and method right under its definition line.<br>• Start with capital letter<br>• Stay within 80 character limit for the line<br><br>This makes the class/method readable using Matlabs' `doc` function. | `ONE_LINE_DESCRIPTION => Replace e.g. by: Executes a complicated algorithm returning 42.` |

## Resources

Read the following documents to get started with submitting code to the repository.

- Matlab and object-oriented programming

http://www.mathworks.ch/ch/help/matlab/matlab_oop/specifying-methods-and-functions.html

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