



Resting state fMRI: From Acquisition to Processing

Case Studies of Brain Tumors

TUTORIAL

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Tutorial



- Requirements:
 - Mac/Linux/Windows
 - Matlab with SPM (www.fil.ion.ucl.ac.uk/spm)
 - CONN toolbox (www.nitrc.org/projects/conn)
 - « Set Path » to CONN and SPM folders in Matlab
- *For more information about installation of CONN toolbox:*
- <https://web.conn-toolbox.org/resources/installation>

Tutorial

- Download the data (already pre-processed and denoised) (10 Go?!!):

<https://www.swisstransfer.com/d/6e6c49df-ccfc-44ad-905c-5872aa9f665d>

- Extract the data from the zip folder



Tutorial

- Step 1
- **Open CONN in Matlab**

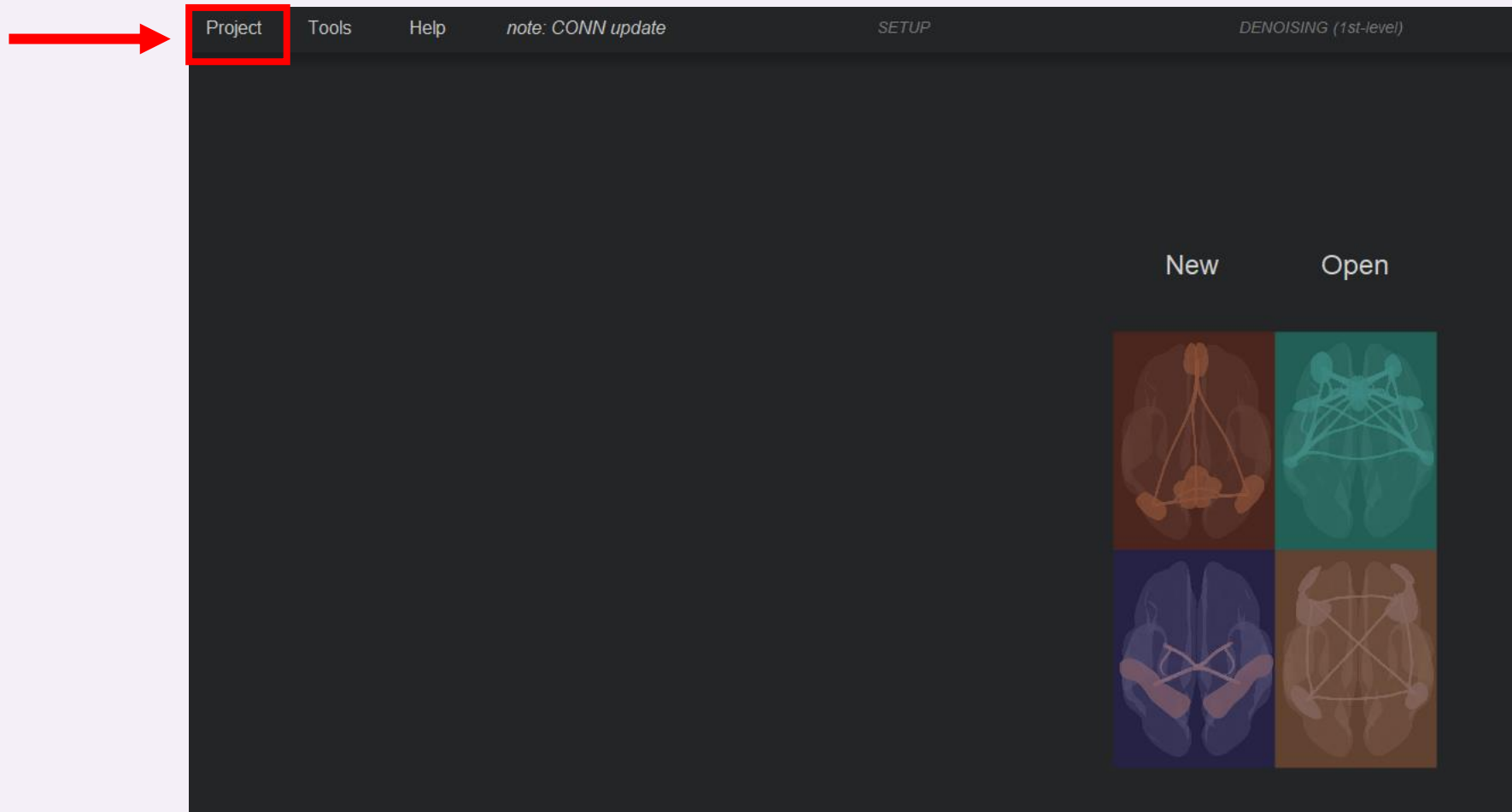
Command Window

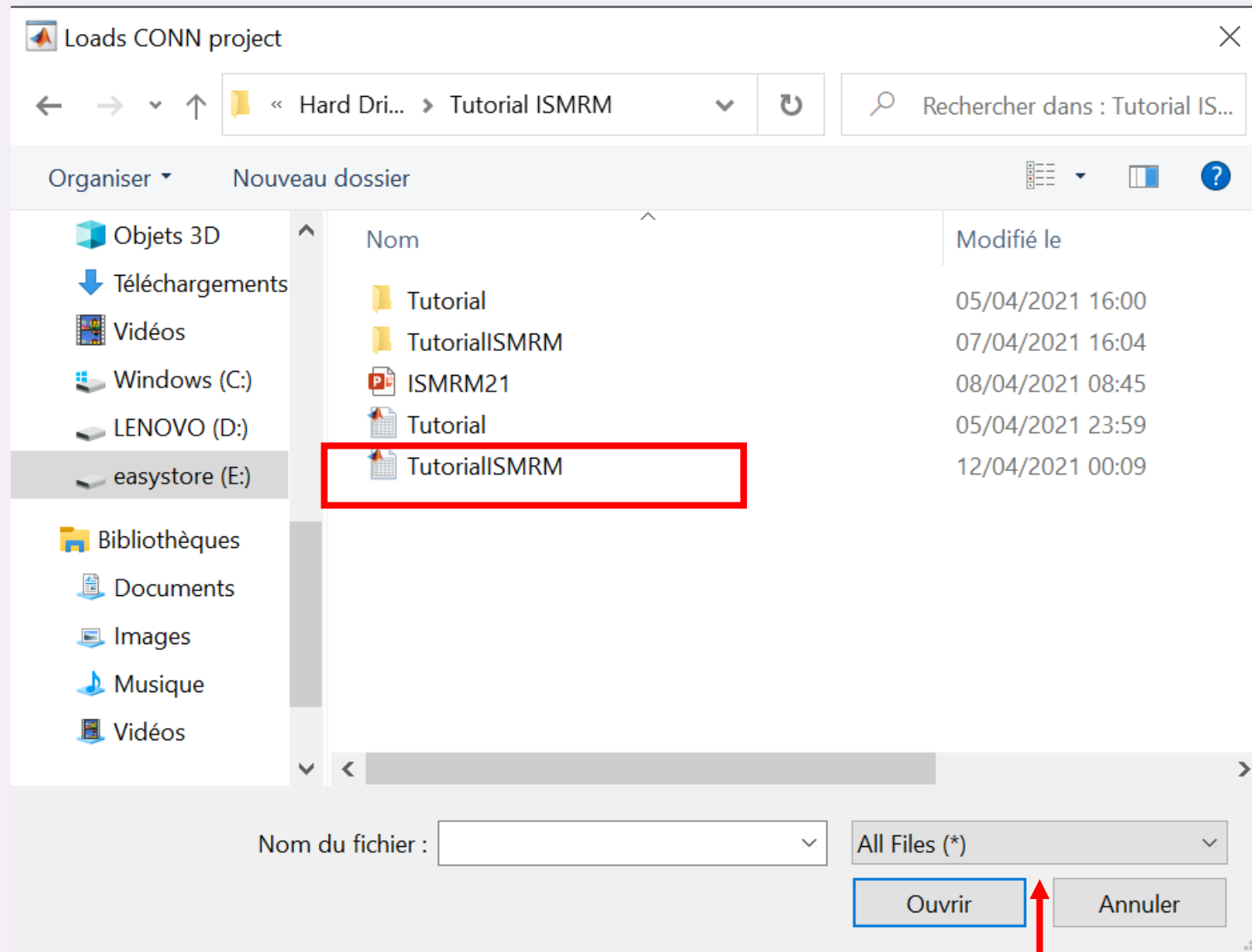
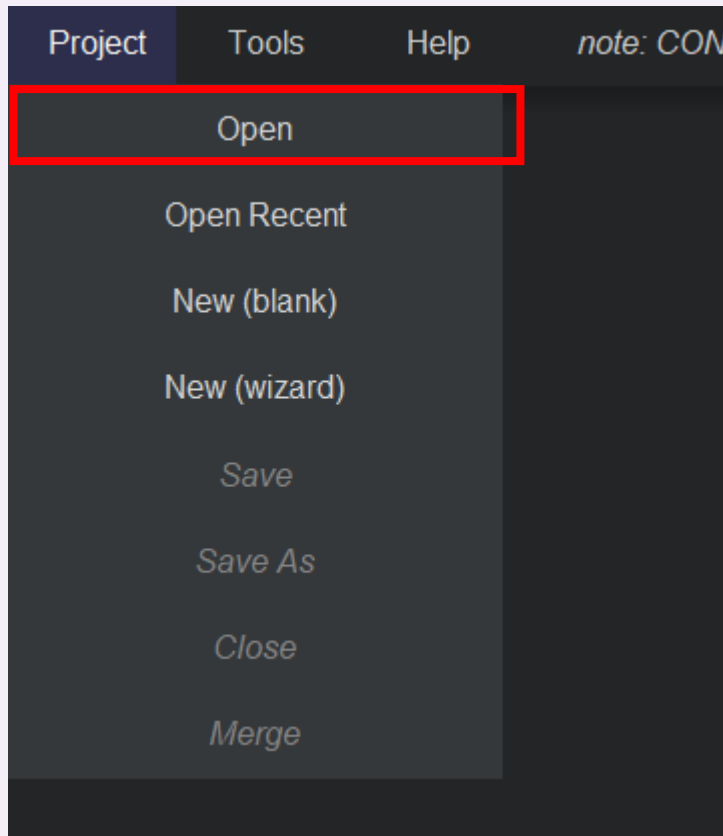
```
>>  
>> conn  
>>  
>>  
>>  
>>  
>>  
>>
```

Tutorial

Step 2

Open existing project



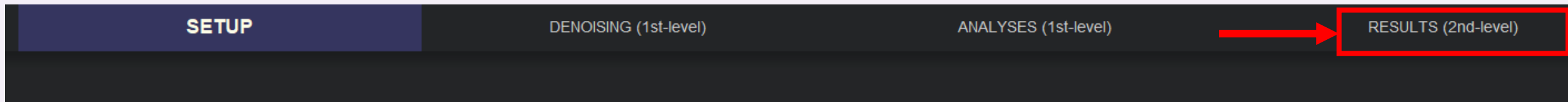


Change the type of file to « All files » to find
The TutorialISM RM.mat file +++

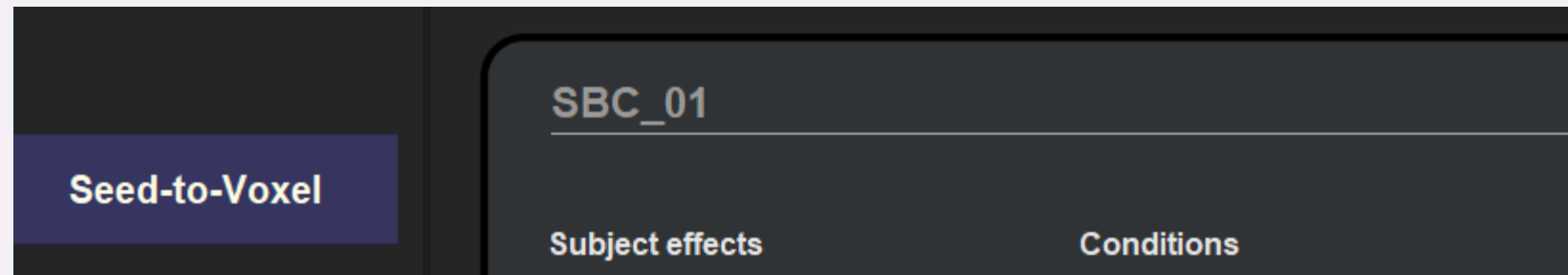
Tutorial

Step 3

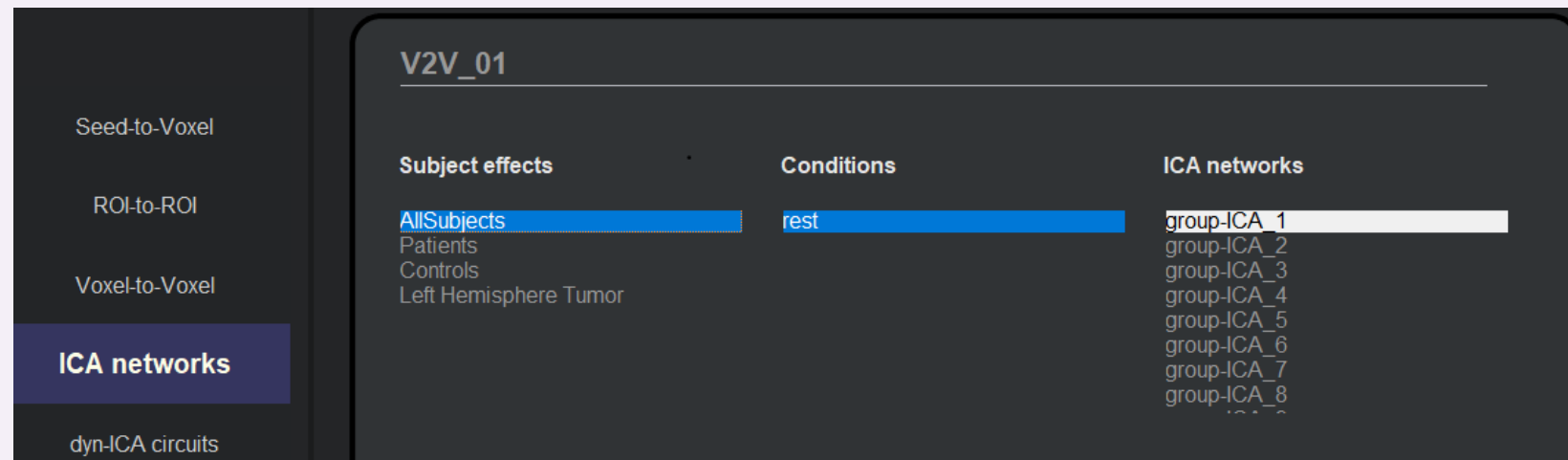
Go to the second level Analysis



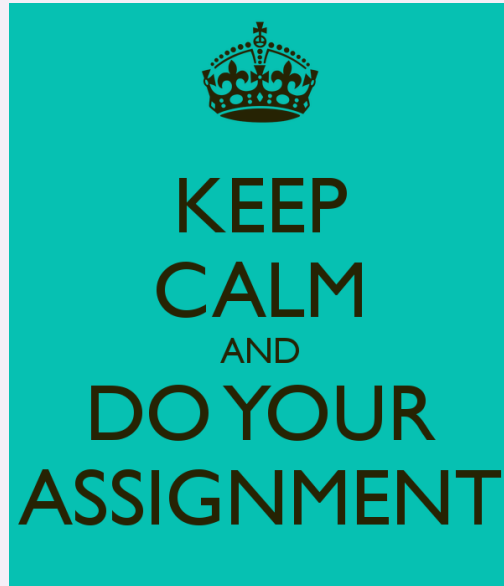
SBCA



ICA



• ASSIGNMENTS



Tutorial: SBCA



- **1- Explore the PCC seed of the Controls**

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- **2- Compare the Default Mode Network (DMN) of Patients and Controls**

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- **3- Compare the Fronto-Parietal Network of Patients versus Controls**

Tutorial: SBCA



- **4- Add covariates to compare Left Hemisphere tumor patients and Controls**

Tutorial: ICA



- **1- Which one of the Independent Components is similar to the DMN?**

Tutorial: ICA



- 2- Compare the DMN of Patients and Controls