Frequently asked question about GAT

1. **Where can I get GAT.**
   - GAT is available online at Stanford NCNL webpage under tools.
   Alternatively, you can use the following link to download GAT.
       https://redcap.stanford.edu/surveys/?s=WTSR8K

2. **Is there any documentation for GAT?**
   - The implementation of GAT toolbox is described in Hosseini et al., PLoS
   ONE 2012 available for free at
   http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.
   0040709. The step-by-step guide for using GAT is available in a document
   named "GAT_MANUAL.doc" inside the GAT folder.

3. **Which papers must I cite when publishing GAT results?**
   - Please refer to the first page in "GAT_MANUAL.doc" for the information
   regarding citing GAT in your paper.

4. **What algorithms are used for calculating network measures?**
   - GAT uses BCT for calculation of graph measures. The description of the
   formulations can be found in Rubinov & Sporns, NeuroImage 2010 (Complex
   network measures of brain connectivity: uses and interpretations).

5. **Error "??? Error using ==> spm>spm_version at ... ; Can't obtain SPM
   Revision information".**
   - Check the Matlab path and make sure that the path to SPM directory is on
   top of the path to GAT directory.

6. **Error "Undefined function 'degrees_und' for input arguments of type
   'double'".**
   - Make sure that the BCT directory is already added to your Matlab path.

7. **Error "??? Undefined function or variable "Output1" : Error in ==>
   KAN_FixedDensity at line !!! ".**
   - This error means that the program could not find a common minimum
   density of full connectivity for your input networks. This might happen when
   the networks are really sparse, the maximum density of the networks does
   not fall within the density range that you have chosen, or you have small
   number of ROIs.

8. **When using GAT for functional and/or DTI networks, the calculation
   stuck at "calculating network measures at each density: 1 out of N...".**
   - Make sure your networks are symmetric.

9. **Matlab cannot read the Excel files that include FreeSurfer data for structural correlation network analysis.**
   - This problem sometimes happens in Unix platforms. As an alternative, you may save the data in a Matlab variable named mat4SVM and save it as mat4GAT.mat. Also, do not forget to put the region names in a Matlab cell array named "regionName" and save it in mat4GAT.mat along with the mat4SVM.

10. **Where can I find the p-values for regional differences in networks parameters?**
    - The p-values for regional measures (e.g. regional node betweenness) are in *_pval.mat files (e.g. RegNodeBetw_norm_pval.mat).

11. **When using GAT output for visualizing structural correlation networks, the BrainNet Viewer gives an error.**
    - Make sure you do not have any space in ROI names

12. **Where are the p-values for AUC/FDA analyses saved?**
    - They are in .mat files named AUC_MeasureName_2Tail_pval.

13. **I cannot unzip the GAT.zip file that I downloaded from the NCNL website.**
    - The GAT.zip is compressed under MAC and sometimes cannot unzip properly on PC systems. Try a different unarchiver such as Stuffit Expander.

14. If you get any error involving Matlab Parallel Function and Java, try to install the following Matlab patch developed by Mathworks:

    http://www.mathworks.com/support/bugreports/919688

    Make sure that you are downloading the version that corresponds to your Matlab release.