

# Resource Summary Report

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## GMAC: A Matlab toolbox for spectral Granger causality analysis of fMRI data

RRID:SCR\_009581

Type: Tool

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### Proper Citation

GMAC: A Matlab toolbox for spectral Granger causality analysis of fMRI data  
(RRID:SCR\_009581)

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### Resource Information

**URL:** [https://www.nitrc.org/projects/gmac\\_2012/](https://www.nitrc.org/projects/gmac_2012/)

**Proper Citation:** GMAC: A Matlab toolbox for spectral Granger causality analysis of fMRI data (RRID:SCR\_009581)

**Description:** Open-source software toolbox implemented multivariate spectral Granger Causality Analysis for studying brain connectivity using fMRI data. Available features are: fMRI data importing, network nodes definition, time series preprocessing, multivariate autoregressive modeling, spectral Granger causality indexes estimation, statistical significance assessment using surrogate data, network analysis and visualization of connectivity results. All functions are integrated into a graphical user interface developed in Matlab environment. Dependencies: Matlab, BIOSIG, SPM, MarsBar.

**Abbreviations:** GMAC

**Synonyms:** Granger Multivariate Autoregressive Connectivity

**Resource Type:** software resource, software toolkit

**Defining Citation:** [PMID:22925560](#)

**Keywords:** analyze, computational neuroscience, connectivity analysis, matlab, magnetic resonance, nifti, os independent, fmri, connectivity, granger causality, network analysis

**Funding:** NIH Blueprint for Neuroscience Research

**Resource Name:** GMAC: A Matlab toolbox for spectral Granger causality analysis of fMRI data

**Resource ID:** SCR\_009581

**Alternate IDs:** nlx\_155764

**Alternate URLs:** [http://www.nitrc.org/projects/gmac\\_2012](http://www.nitrc.org/projects/gmac_2012)

**Old URLs:** <http://selene.bioing.polimi.it/BBBlab/GMAC/>

**License:** GNU General Public License

**Record Creation Time:** 20220129T080253+0000

**Record Last Update:** 20260905T133253+0000

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## Ratings and Alerts

No rating or validation information has been found for GMAC: A Matlab toolbox for spectral Granger causality analysis of fMRI data.

No alerts have been found for GMAC: A Matlab toolbox for spectral Granger causality analysis of fMRI data.

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## Data and Source Information

**Source:** [SciCrunch Registry](#)

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## Usage and Citation Metrics

We found 1 mentions in open access literature.

**Listed below are recent publications.** The full list is available at [PRECISE-TBI](#) .

Maggioni E, et al. (2021) Effective Connectivity During Rest and Music Listening: An EEG Study on Parkinson's Disease. Frontiers in aging neuroscience, 13, 657221.