# Resource Summary Report

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## Generalized Covariance Analysis

RRID:SCR_009488
Type: Tool

### Proper Citation

Generalized Covariance Analysis (RRID:SCR_009488)

### Resource Information

**URL:** http://www.nitrc.org/projects/gcva_pca/

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**Description:** A platform for any Principal Component Analysis (PCA)-based analysis on functional neuroimaging data (PET and fMRI). Includes: * Ordinal Trend Canonical Variance Analysis for parametric designs (C. Habeck et al. A New Approach to Spatial Covariance Modeling of Functional Brain Imaging Data: Ordinal Trend Analysis. Neural Computation 2005; 17: 1602-1645) * Partial Least Squares for any design matrix * Subprofile Scaling Model for cross-sectional designs (JR. Moeller, Strother SC. A regional covariance approach to the analysis of functional patterns in positron emission tomographic data.J Cereb Blood Flow Metab. 1991 Mar;11(2):A121-35.)

**Abbreviations:** gCVA

**Synonyms:** Generalized Covariance Analysis (gCVA)

**Resource Type:** data processing software, image analysis software, software application, software resource

**Keywords:** magnetic resonance, pet, spect, fmri

**Availability:** GNU General Public License

**Resource Name:** Generalized Covariance Analysis

**Resource ID:** SCR_009488

**Alternate IDs:** nlx_155635

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

**Record Last Update:** 20260912T200059+0000

### Ratings and Alerts

No rating or validation information has been found for Generalized Covariance Analysis.

No alerts have been found for Generalized Covariance Analysis.

## Data and Source Information

**Source:** SciCrunch Registry

## Usage and Citation Metrics

We found 9 mentions in open access literature.

**Listed below are recent publications.** The full list is available at SPARC SAWG .


Colloby SJ, et al. (2025) Cerebral metabolic covariance in delirium: pattern response to symptomatic changes. Alzheimer's & dementia : the journal of the Alzheimer's Association, 21(12), e70993.

Harrison JR, et al. (2025) A spatial covariance 123I-5IA-85380 SPECT study of ?4?2 nicotinic receptors in dementia with Lewy bodies. Journal of neurology, 272(10), 660.

Tripathi S, et al. (2022) Brain patterns of pace - but not rhythm - are associated with vascular disease in older adults. Cerebral circulation - cognition and behavior, 3, 100154.

Colloby SJ, et al. (2020) Cholinergic muscarinic M1/M4 receptor networks in dementia with Lewy bodies. Brain communications, 2(2), fcaa098.

Colloby SJ, et al. (2016) A spatial covariance 123I-5IA-85380 SPECT study of ?4?2 nicotinic receptors in Alzheimer's disease. Neurobiology of aging, 47, 83.

Colloby SJ, et al. (2016) Cholinergic and perfusion brain networks in Parkinson disease dementia. Neurology, 87(2), 178.

Gazes Y, et al. (2015) Functional network mediates age-related differences in reaction time: a replication and extension study. Brain and behavior, 5(5), e00324.

Blumen HM, et al. (2014) Behavioral and neural correlates of imagined walking and walking-while-talking in the elderly. Human brain mapping, 35(8), 4090.

Taylor JP, et al. (2013) Covariant perfusion patterns provide clues to the origin of cognitive fluctuations and attentional dysfunction in dementia with Lewy bodies. International psychogeriatrics, 25(12), 1917.