Resource Summary Report

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Statistical non-Parametric Mapping

RRID:SCR_002092
Type: Tool

Proper Citation

Statistical non-Parametric Mapping (RRID:SCR_002092)

Resource Information

URL: http://www.warwick.ac.uk/snpm

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Description: A toolbox for Statistical Parametric Mapping (SPM) that provides an extensible framework for voxel level non-parametric permutation/randomization tests of functional Neuroimaging experiments with independent observations. SnPM uses the General Linear Model to construct pseudo t-statistic images, which are then assessed for significance using a standard non-parametric multiple comparisons procedure based on randomization/permutation testing. It is most suitable for single subject PET/SPECT analyses, or designs with low degrees of freedom available for variance estimation. In these situations the freedom to use weighted locally pooled variance estimates, or variance smoothing, makes the non-parametric approach considerably more powerful than conventional parametric approaches, as are implemented in SPM. Further, the non-parametric approach is always valid, given only minimal assumptions. The SnPM toolbox provides an alternative to the Statistics section of SPM.

Abbreviations: SnPM

Synonyms: SnPM: Statistical nonParametric Mapping, SnPM - Statistical NonParametric Mapping - A toolbox for SPM, Statistical nonParametric Mapping

Resource Type: data processing software, software toolkit, software resource, software application

Keywords: analyze, linear, linux, macos, matlab, microsoft, magnetic resonance, nifti, posix/unix-like, regression, statistical operation, sunos/solaris, windows, statistical parametric mapping, pet, spect

Funding: Human Brain Project

Availability: Public Domain

Resource Name: Statistical non-Parametric Mapping

Resource ID: SCR_002092

Alternate IDs: nif-0000-00342

Alternate URLs: http://www.nitrc.org/projects/snpm

Record Creation Time: 20220129T080211+0000

Record Last Update: 20250407T215255+0000

Ratings and Alerts

No rating or validation information has been found for Statistical non-Parametric Mapping.

No alerts have been found for Statistical non-Parametric Mapping.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 95 mentions in open access literature.

Listed below are recent publications. The full list is available at RRID.

Ingram RU, et al. (2024) Graded Multidimensional Clinical and Radiologic Variation in Patients With Alzheimer Disease and Posterior Cortical Atrophy. Neurology, 103(4), e209679.

Lu M, et al. (2024) Why do patients with isolated PCL rupture experience no subjective knee joint instability during walking? An in vivo biomechanical study. Frontiers in bioengineering and biotechnology, 12, 1495266.

Flesch T, et al. (2022) Orthogonal representations for robust context-dependent task performance in brains and neural networks. Neuron, 110(7), 1258.

Klugah-Brown B, et al. (2022) Associations between levels of Internet Gaming Disorder symptoms and striatal morphology-replication and associations with social anxiety. Psychoradiology, 2(4), 207.

Chao CC, et al. (2022) Brain Mechanisms of Pain and Dysautonomia in Diabetic Neuropathy: Connectivity Changes in Thalamus and Hypothalamus. The Journal of clinical endocrinology and metabolism, 107(3), e1167.

Morita T, et al. (2022) Facilitation of Hand Proprioceptive Processing in Paraplegic Individuals with Long-Term Wheelchair Sports Training. Brain sciences, 12(10).

Fu Y, et al. (2021) Functional and Structural Connectivity Between the Left Dorsolateral Prefrontal Cortex and Insula Could Predict the Antidepressant Effects of Repetitive Transcranial Magnetic Stimulation. Frontiers in neuroscience, 15, 645936.

Li Q, et al. (2020) Longitudinal Changes in Whole-Brain Functional Connectivity Strength Patterns and the Relationship With the Global Cognitive Decline in Older Adults. Frontiers in aging neuroscience, 12, 71.

Vetter P, et al. (2020) Decoding Natural Sounds in Early "Visual" Cortex of Congenitally Blind Individuals. Current biology : CB, 30(15), 3039.

Zhou X, et al. (2020) Higher levels of (Internet) Gaming Disorder symptoms according to the WHO and APA frameworks associate with lower striatal volume. Journal of behavioral addictions, 9(3), 598.

Lindgren N, et al. (2020) Association of neuroinflammation with episodic memory: a [11C]PBR28 PET study in cognitively discordant twin pairs. Brain communications, 2(1), fcaa024.

Wang X, et al. (2020) Two Forms of Knowledge Representations in the Human Brain. Neuron, 107(2), 383.

Koike T, et al. (2019) What Makes Eye Contact Special? Neural Substrates of On-Line Mutual Eye-Gaze: A Hyperscanning fMRI Study. eNeuro, 6(1).

Bowring A, et al. (2019) Exploring the impact of analysis software on task fMRI results. Human brain mapping, 40(11), 3362.

Winterdahl M, et al. (2019) Sucrose intake lowers ?-opioid and dopamine D2/3 receptor availability in porcine brain. Scientific reports, 9(1), 16918.

Devereux BJ, et al. (2018) Integrated deep visual and semantic attractor neural networks predict fMRI pattern-information along the ventral object processing pathway. Scientific reports, 8(1), 10636.

D'Agostino A, et al. (2018) Sleep endophenotypes of schizophrenia: slow waves and sleep spindles in unaffected first-degree relatives. NPJ schizophrenia, 4(1), 2.

Han JJ, et al. (2018) Increased parietal circuit-breaker activity in delta frequency band and abnormal delta/theta band connectivity in salience network in hyperacusis subjects. PloS one, 13(1), e0191858.

Piarulli A, et al. (2018) Ultra-slow mechanical stimulation of olfactory epithelium modulates consciousness by slowing cerebral rhythms in humans. Scientific reports, 8(1), 6581.

Berman BD, et al. (2018) GABAA Receptor Availability Changes Underlie Symptoms in Isolated Cervical Dystonia. Frontiers in neurology, 9, 188.