

Resource Summary Report

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Resting State Hemodynamic Response Function Retrieval and Deconvolution

RRID:SCR_023663

Type: Tool

Proper Citation

Resting State Hemodynamic Response Function Retrieval and Deconvolution
(RRID:SCR_023663)

Resource Information

URL: <https://www.nitrc.org/projects/rshrf>

Proper Citation: Resting State Hemodynamic Response Function Retrieval and Deconvolution (RRID:SCR_023663)

Description: Software toolbox for resting state HRF estimation and deconvolution analysis. Matlab and Python toolbox that implements HRF estimation and deconvolution from resting state BOLD signal. Used to retrieve optimal lag between events and HRF onset, as well as HRF shape. Once that HRF has been retrieved for each voxel/vertex, it can be deconvolved from time series or one can map shape parameters everywhere in brain and use it as pathophysiological indicator. Input can be 2D GIfTI, 3D or 4D NIfTI images, but also on time series matrices/vectors. Output are three HRF shape parameters for each voxel/vertex, plus deconvolved time series, and number of retrieved pseudo events. All can be written back to GIfTI or NIfTI images.

Abbreviations: rsHRF

Resource Type: software resource, software toolkit

Defining Citation: [PMID:34560269](#)

Keywords: hemodynamic response function, HRF estimation and deconvolution, resting state BOLD signal, GIfTI images, NIfTI images, brain

Funding: European Union Horizon 2020 Framework Programme ;
Fund for Scientific Research-Flanders ;
National Natural Science Foundation of China

Availability: Free, Available for download, Freely available

Resource Name: Resting State Hemodynamic Response Function Retrieval and Deconvolution

Resource ID: SCR_023663

Alternate URLs: <https://github.com/compneuro-da/rsHRF>

License: BSD 3-Clause "New" or "Revised" License

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Ratings and Alerts

No rating or validation information has been found for Resting State Hemodynamic Response Function Retrieval and Deconvolution.

No alerts have been found for Resting State Hemodynamic Response Function Retrieval and Deconvolution.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 4 mentions in open access literature.

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

Xue C, et al. (2024) Alteration in temporal-cerebellar effective connectivity can effectively distinguish stable and progressive mild cognitive impairment. *Frontiers in aging neuroscience*, 16, 1442721.

Luppi AI, et al. (2024) A synergistic workspace for human consciousness revealed by Integrated Information Decomposition. *eLife*, 12.

Ao Y, et al. (2023) Spatiotemporal dedifferentiation of the global brain signal topography along the adult lifespan. *Human brain mapping*, 44(17), 5906.

Hao Z, et al. (2022) The Atypical Effective Connectivity of Right Temporoparietal Junction in Autism Spectrum Disorder: A Multi-Site Study. *Frontiers in neuroscience*, 16, 927556.