

A one-stop-shop for brain imaging

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Just some of the brain maps included in neuromaps. Credit: The Neuro

The brain is a complex organ, and no one imaging mode can catch everything that's going on inside it. Over the years, multiple "brain maps" have emerged, each focusing on different brain processes, from metabolism to cognitive function. While these maps are important, using them in isolation limits the discoveries researchers can make from them.



Now a team from The Neuro has brought together more than forty existing <u>brain</u> maps in one place. The <u>database</u>, called neuromaps, will help scientists find correlations between patterns across different brain regions, spatial scales, modalities and brain functions.

It provides a standardized space to view each map in comparison to each other, and assesses the statistical significance of these comparisons, to help researchers distinguish a meaningful correlation from a random pattern. The neuromaps database also helps standardize the code across maps, to improve reproducibility of results.

The team published their results in the journal *Nature Methods* and has made their data open access on GitHub.



The workflow of neuromaps. Credit: The Neuro

"Ultimately, we hope that neuromaps will add a spark to the analysis of human brain maps and increase accessibility of data and software tools



to people with diverse research interests," says Justine Hansen, the paper's co-first author. "As the rate at which new <u>brain maps</u> are generated in the field continues to grow, we hope that neuromaps will provide researchers with a set of standardized workflows for better understanding what these data can tell us about the <u>human brain</u>."

More information: Bratislav Misic, neuromaps: structural and functional interpretation of brain maps, *Nature Methods* (2022). DOI: 10.1038/s41592-022-01625-w. www.nature.com/articles/s41592-022-01625-w

GitHub: github.com/netneurolab/neuromaps

Provided by McGill University

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