30 Years of SPM: Celebrating the Evolution of Neuroimaging Analysis

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1337

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Roundtable, Other

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Diversity and Inclusion

Diversity of scientific presenters is key to fulfilling OHBM's mission of diversity and inclusivity. As stated in our Code of Conduct, we explicitly honor diversity with respect to multiple factors including career stage, age, culture, ethnicity, gender identity or expression, language, and nationality. We particularly encourage inclusion of speakers from traditionally under-represented groups/nations. ***Note: Proposals not meeting the criteria are likely to be rejected.*** Do you understand and agree to all above terms and conditions?

Yes

Please provide justification on why your speaker selection meets OHBM's selection criteria concerning diversity of speakers.

Our speaker selection prioritises representation across institutions, nationalities, research focus, and methodological perspectives. The panel comprises experts who have contributed to core SPM development over the years, drawn from five universities in three countries (Australia, Belgium and the UK). Each speaker has been invited to represent a distinct imaging modality (PET – Prof Phillips, MRI – Dr Lambert, fMRI - Prof Razi, M/EEG – Prof Garrido, OP-MEG – Dr Tierney) and a distinct methodological focus (DCM – Prof Razi, VBM – Dr Lambert, statistical inference – Prof Nichols). By selecting speakers from different institutions and research backgrounds – spanning cognitive neuroscience, clinical application, and methodological development – we ensure a comprehensive representation of SPM's evolving landscape.

While acknowledging the inherent constraints that an event of this sort imposes on the pool of potential speakers – the aim is to hear from the specific people who have developed SPM – our diversity aims for this event extend beyond panel representation. We have a specific focus on making SPM's development more inclusive and community-driven, and this event will facilitate a two-way dialogue between developers and SPM users. Audience members will be invited to highlight their priorities for the future direction of SPM, and we will make an open invitation to the audience to participate in future software development, particularly through collaborative platforms like GitHub, thereby democratising the research process and creating pathways for broader participation.

Our panel therefore represents not just a retrospective on SPM's history, but a forward-looking approach to inclusivity and community-driven scientific innovation.

Roundtable, Other Course Information

Please describe the advantage of addressing the topic as a Roundtable/Other course:

The roundtable format offers an interactive approach to examining Statistical Parametric Mapping's (SPM) 30-year evolution and its impact on the neuroimaging community, by replacing traditional conference presentations with a dynamic, community-driven dialogue. Unlike conventional lecture-style sessions, this format enables direct engagement between SPM's original developers and the neuroimaging research community, creating a transparent platform for critical discussion. By prioritising audience input, the roundtable becomes a forward-looking forum where researchers can actively shape the conversation, directly quiz developers about methodological challenges, and articulate emerging research priorities. The two-way dialogue ensures that SPM's future development remains closely aligned with the actual needs of the neuroimaging research community, promoting accountability and driving methodological innovation through genuine, unfiltered feedback.

Provide a brief paragraph (roughly 250 words) describing the timeliness and importance of the topic and the desired learning outcomes.

As Statistical Parametric Mapping (SPM) celebrates its 30th anniversary in 2025, this roundtable discussion will offer a critical examination of neuroimaging's methodological evolution. We will bring together key SPM developers, past and present, who will reflect on the significant innovations that SPM introduced to the community, including the General Linear Model (GLM), Voxel-based Morphometry (VBM), and Dynamic Causal Modelling (DCM), and their application across imaging modalities (PET, MRI, fMRI, M/EEG, and OP-MEG). This event will provide a unique opportunity for an open discussion on the foundations for statistical inference in neuroimaging, considering what has gone well and what could be done better in future. The audience will drive the conversation, by highlighting areas of interest for the panel to address and by expressing their priorities for the future direction of SPM development. The panel will directly address key controversies in the field, such as ongoing reproducibility challenges. This forward-looking discussion will equip researchers and clinicians with a strategic perspective on the past, present, and future of neuroimaging research.

List 2-3 specific learning objectives for the audience. Learning objectives are used for ACCME purposes.

After participating in this roundtable, attendees will be able to:
1. Describe critical methodological challenges and lessons learned in neuroimaging research over the past three decades, including principles that maximise reproducibility and enable valid statistical inferences.
2. Identify the latest developments in methodology research that are available through SPM and are directly applicable to attendees' specific research questions.
3. Identify opportunities to contribute to the future development of imaging analysis methods in SPM and in the field more broadly.

Please identify your target audience (1-2 sentences).

The target audience includes researchers and clinicians, who are interested in the development and application of statistical methods in neuroimaging. It will be useful for people who would like to gain a general awareness of how the field came to be, as well for people who are actively involved in methods development or may be interested in contributing in the future.