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PHILMATH SEMINAR

*Research seminar in the philosophy of mathematics
and the philosophy of logic*

Organizers: Fabrice Pataut (SND) and Francesca Poggiolesi (IHPST)

1st SEMESTER 2023-2024 PROGRAM
IHPST – salle de conférences (2ème étage)
13, rue du Four, 75006 Paris

Monday December 4: 5pm-7pm

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(Philosophy, IHPST, Université Paris 1 Panthéon-Sorbonne)

THREE DIMENSIONS OF MATHEMATICAL EXPLANATIONS

Zoom link :

<https://pantheonsorbonne.zoom.us/j/99300546129?pwd=d3BBVkl1uK1YvNUF4bHkvVDBrREhWZz09>

Meeting ID : 993 0054 6129

Passcode : 829340

Recent literature on intra-mathematical explanation (mathematical explanation of a mathematical fact) has significantly expanded the range of case studies analysed from different areas of mathematical practice. Nevertheless, very few general accounts of mathematical explanation have been proposed since Steiner's [1978] and Kitcher's [1981], and none seems to attract a wide consensus. In this paper, I suggest that the case studies analysed so far show that intra-mathematical explanation varies along three main dimensions: (i) the goals of enquiry, (ii) the target audience, and (iii) the mathematical features of the explanans, and I argue that this framework can illuminate many aspects of the current disagreement about explanations in mathematical practice.