

Institut d'Histoire et de Philosophie des
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PHILMATHSEMINAR

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

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

Please check the websites of IHPST and SND for possible changes due to the COVID-19 pandemic.

Francesco Genco (IHPST) will give a talk on "**Formal Explanations, Logical Grounding, and Logical Proofs**" on Monday January 17 from 5pm to 7pm in the conference room of the IHPST: 13, rue du Four, 75006 PARIS (second floor).

Students and post docs of the philosophy department of the University Paris 1 Panthéon-Sorbonne and members of the IHPST, including associate members are welcome to attend.

Because of sanitary restrictions due to the COVID-19 pandemic, anyone else wishing to attend must do so online.

The Zoom link is : <https://zoom.univ-paris1.fr/j/91540067905?pwd=SDV0YjVSNG15ek5TMTY1SnVQZUJlQT09>

The ID reunion number is : 915 4006 7905 ; the passcode is : 693428.

Here is a brief summary of the forthcoming talk :

Francesco Genco

Formal Explanations, Logical Grounding, and Logical Proofs

ABSTRACT

The existence of a rigorous proof of a sentence is supposed to guarantee that the sentence is true. It happens sometimes, though, that a proof stands out among the other proofs of a sentence because it does not only certify its truth, but also seems to display in the clearest way the objective reasons of its truth. Such a proof, in other words, explains why the sentence is true. The investigation on this notion of explanation goes far back in the history of philosophy. In the modern and contemporary philosophical literature, an explanatory relation which is essentially connected with the notion of objective reason is receiving considerable attention: the grounding relation. We will focus on logical languages and show that the notion of complete grounding—a logical grounding relation based on Bernard Bolzano's analysis of grounding—is a suitable means to construct logical explanations. First, we will show that explanations thus constructed can be considered, in a rigorous sense, as logical derivations of a particular kind; and then we will study the relations that complete grounding rules entertain with classical and intuitionistic logic in order to investigate, from a technical and conceptual perspective, the specific difference between logical grounding and logical consequence.