

**IUSS Philosophy Seminars
L&PIC – Linguistics and Philosophy IUSS Center**

Epistemology & Mathematics Series

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IUSS, Sala Del Camino, Palazzo Broletto

14.00-16.00 CET

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The Fiction View of Mathematical Cognitive Tools

[abstract]

In previous work, I defended the claim that representational “cognitive tools” – for ex. diagrams or notations – are very useful in mathematics because they trigger in experts a specific form of imagination that we defined as *manipulative* (De Toffoli & Giardino, 2014; Giardino, 2018). Some parts of mathematics – traditionally the most abstract and disembodied of the sciences – can thus be considered as analogous to other imaginative enterprises. If this is the case, how does this form of imagination work? To reply to this question, I will explore the possibility of assuming a Walton-inspired framework and consider mathematical cognitive tools as props, in the background of analogous claims about models in the practice of science and the so called “fiction views” that have been flourishing recently in philosophy of science. Based on these considerations, I will present a “non- standard” route to fictionalism in mathematics based on what can be learnt from the use of models in science, and discuss whether it may still be compatible with a “more standard” one. Finally, I will discuss some of the advantages and limits of this view.