

**“About the persistence and varieties of ‘materiality arguments’ around the machine: from the programs verification's debate to the debate about the computer simulations’ empiricity”**

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This talk will propose the first developments of a working hypothesis based on an observation: the persistence of strongly similar “materiality arguments” in different philosophical debates regarding the epistemic power - and limits - of computers, computer programs and computer outputs. The research question will be: what can we learn about "what a machine and a program are" from the similarities and differences between these different kinds of materiality arguments? This talk will choose to draw a first parallel between what has been called the “materiality argument” in the philosophy of computer simulations and the older but all-too famous Hoare/Fetzer debates concerning the necessity - or non-necessity - to take into account the causal connections operating in the computer to assess the validity of the program, or, more precisely, to assess the validity of the modeling relationships between the algorithm, the source code and the stored executable program. The method will be comparative and based on systematic reviews.