Wednesday, May 3, 2023, 14-16 CEST

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"Computers, Robots, and Experiments: Reproducibility and beyond"

In this talk I will argue that Artificial Intelligence (AI) and robotics are engineering disciplines and that this should play a central role in the conceptualization of their experimental method. The talk starts from a recent discussion on the reproducibility of results in AI. The emphasis on reproducibility can be seen as an attempt to conform AI to the standards of rigor typical of classical scientific disciplines, such as physics. Some proposals have been spelled out on how to improve the level of reproducibility not only on a purely abstract level, but also on a more concrete one with suggestions and guidelines. This discussion, however, dismisses some important elements. I will focus on one of them, that is the peculiar character of AI as an empirical discipline at the intersection of science and engineering. Because each new program that is built is an experiment - as Newell and Simon claimed in their famous 1976 paper - it is worth considering whether it does make sense to adopt the traditional experimental principles (i.e., reproducibility) of the natural sciences.