

Symposium organized by the DHST commission for the History and Philosophy of Computing

Title:

HaPoC Symposium: Computations, Proofs and Models

Abstract:

In the late 40s, when the first computers were built and used, programming was a tedious and laborious work, an entirely different practice than what we now consider the art and science of programming. The programmability of these computers, combined with their electronic speed, as von Neumann stated it, made the stored-programming concept natural, but also necessitated the integration of logic into the problem of programming. Since then, computer science and engineering have become more and more intertwined with logic. Existing models of computability have been rediscovered and adapted; programming semantics rooted in logic have been developed; the use of logic to model automatic reasoning processes has become a research field in itself. These different interactions between logic, formalization and computer science have helped shaping the field of computer science itself and changed at least in part the way we understand logical reasoning. The aim of this symposium is to explore these continuing interactions, in order to gain a deeper understanding on the nature of computer science and the contributions of logic to it.

The symposium is organized by the DHST commission for the History and Philosophy of Computing. Since the first HaPoC conference in 2011, the community of people interested in HaPoC is thriving and a large number of different events has been organized. The general spirit of these events is interdisciplinarity and openness towards different fields relevant to HaPoC, guided by a quote by Mike Mahoney that the computer is not one thing but many things and that the same holds true of computing. We were and are strongly convinced that such trans- and interdisciplinarity is necessary if one wants to reflect on a discipline such as computer science with its multidimensional nature. The current symposium will be organized in a similar manner and invites researchers coming from a diversity of backgrounds, including historians, philosophers and computer scientists who want to engage with topics relevant to the history and philosophy of computing

Programme:

Session 1:

Stephanie Dick (Harvard University) , *Putting Mathematics into the Computer: Implementation and Epistemology in Early Automated Logic*

Dale Miller (Inria/Saclay and Lix) , *Defining the semantics of proof evidence*

Peter Koepke (University of Bonn), *Formalism and Computations*

Session 2:

Oron Shagrir (University of Jerusalem), *The Church-Turing Theses*

John Symons (University of Kansas), TBA

Matti Tedre (Stockholm University) , *Competing Claims to Computing as a Discipline*

Session 3:

Edgar Daylight (Universiteit Utrecht), *Using History to Make Software More Tangible*

Gilles Dowek (Inria/Deducteam and Mooc Lab), *How do we know that a statement true in Computer Science?*

Discussion