

Online Franco-African Seminar in Digital Sciences - LIRIMA
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Gilles Dowek



Logipedia: towards a Wikipedia of formal proofs

Abstract

Formal computerized proofs are now a central tool in computer science and in mathematics. But, each system – Coq, HOL Light, Isabelle/HOL, PVS... – implements its own language and its own theory, limiting the interoperability between systems and the sustainability of these proofs. Logipedia is an, in progress, encyclopedia of formal proofs, expressed in various theories. We shall present this encyclopedia and discuss the scientific question below such a project: what is a theory?

Biography

Gilles Dowek is a researcher at Inria and a professor at the École normale supérieure de Paris-Saclay. He conducts research on the formalization of mathematics, proof processing systems, physics of computation, safety of aerospace systems and epistemology and ethics of computer science. He has received, in 2007, the Grand Prix de Philosophie de l'Académie française for Computation, proof, machine (Cambridge University Press). Last published book « Ce dont on ne peut parler, il faut l'écrire, langues et langages » (Le Pommier, 2019).