Expressing theories in the \( \lambda \Pi \)-calculus modulo theory and in the Dedukti system

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Abstract:

The \( \lambda \Pi \)-calculus modulo theory, implemented in the Dedukti system, is a logical framework where many theories can be expressed: constructive and classical predicate logic, Simple type theory, programming languages, Pure type systems, the Calculus of inductive constructions with universes... This allows to use it to check large libraries of proofs coming from various proofsystems: Zenon, iProver, FoCaLiZe, HOL-Light, and Matita.

Bio:

Olivier Hermant is an associate researcher at MINES ParisTech, on a sabbatical leave at Wesleyan University. He got his PhD in 2005, under the supervision of Gilles Dowek, and his research interests are the combination of rewriting and proof systems, automated theorem proving, semantics and completeness theorems, and type systems.