



# Introduction to Coq

## Coq Andes Summer School 2020

Assia Mahboubi, Inria – VU Amsterdam



# A Versatile Prover

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- Program Verification

- Compcert compiler
- Synthesis of cryptographic primitives
- ...

[Leroy et al. 2009]

[Ebsen et al. 2019]

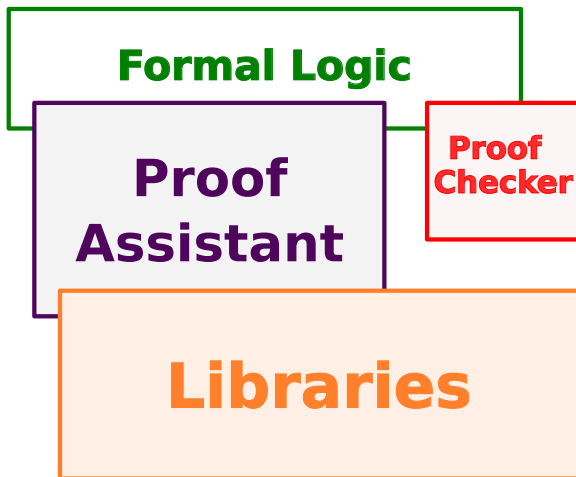
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  - ...
- Teaching
  - Software Foundations
  - ...

# Interactive Theorem Provers



# Dependent Type Theory

Coq, Agda, Matita, Lean, NuPRL, etc.

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# Languages

- Logical foundations
- Libraries
- Meta-Language(s)

# Two Sides of Automation

Filling gaps:

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