

SOFTWARE FOUNDATIONS
VOLUME 7

Security Foundations

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**Free online
textbook series**

Formalized in Rocq



Keep it simple

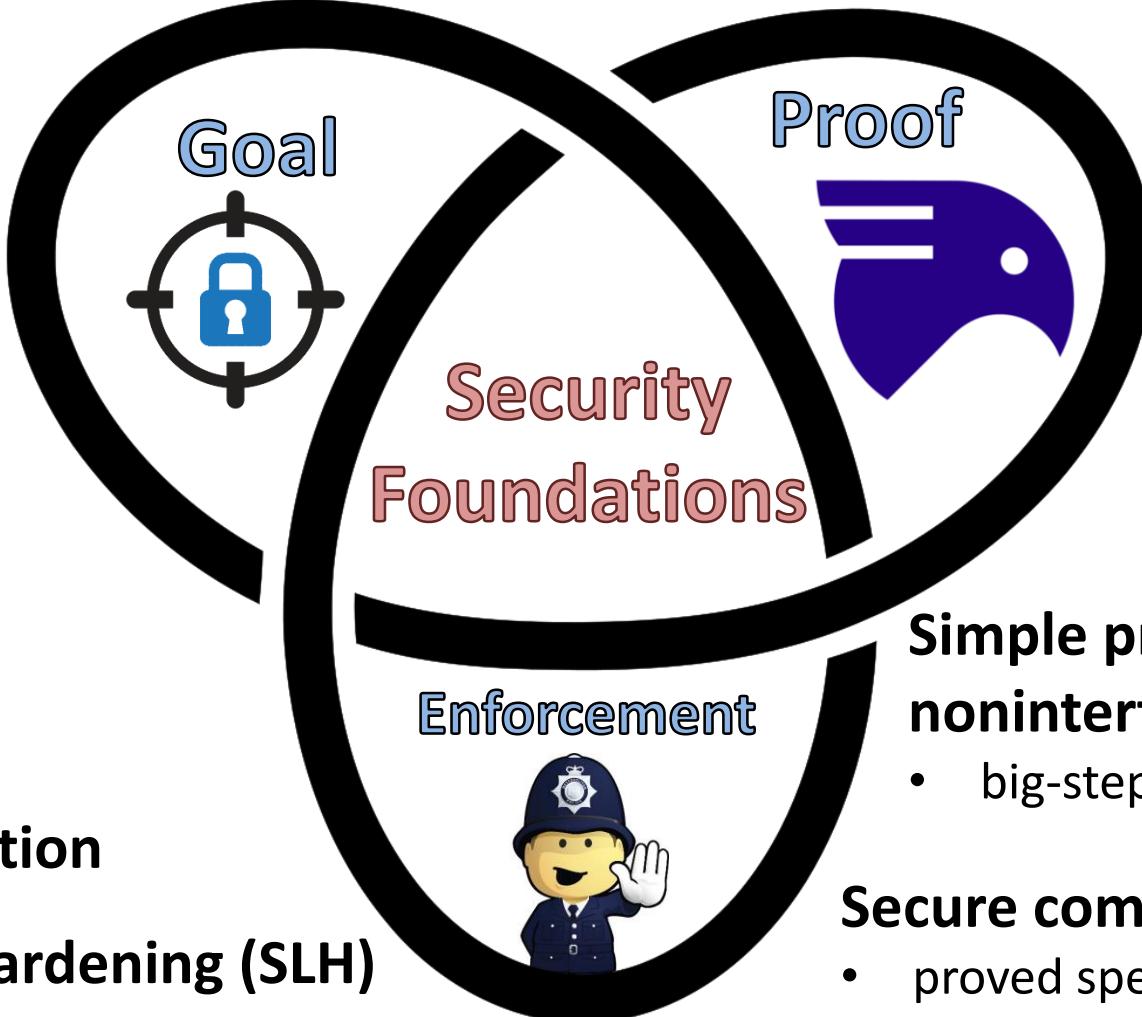
Interactive

Exercise based

**New volume on
Security
Foundations**

Noninterference

- for Rocq functions
- stateful commands
- explicit outputs
- side-channels
(constant time)



Type systems

Secure Multi-Execution

Speculative Load Hardening (SLH)

WIP: Relational Hoare Logic (RHL)

Simple proofs of noninterference

- big-step

Secure compilation

- proved speculative constant time for SLH [IEEE SP'23]