

# Logic as a modelling technology: resource semantics, systems modelling, and security

David Pym

## Abstract

The development of BI, the logic of bunched implications, together with its resource semantics, led to the formulation of Separation Logic, which forms the basis of the Infer program analyser deployed in Facebook's code production. However, this rather successful story sits within a broader, quite systematic logical context. I will review the (family of) logics, including process logics, that are supported by resource semantics, explaining their more-or-less uniform meta-theoretic basis and illustrating their uses in a range of modelling applications, including access control, systems security, and workflow simulation.