Research output

An algebraic approach for reasoning about information flow

Conditioning in probabilistic programming

Processing text for privacy: an information flow perspective

Privacy in elections: How small is “small”?

Algebra for quantitative information flow

Formal analysis of the information leakage of the DC-nets and crowds anonymity protocols

Reasoning about distributed secrets

Probabilistic rely-guarantee calculus

Axioms for information leakage
Program refinement, perfect secrecy and information flow

Schedulers and finishers: On generating the behaviours of an event structure

Conditioning in Probabilistic Programming

Abstract hidden Markov models: a monadic account of quantitative information flow

Hidden-Markov program algebra with iteration


Additive and multiplicative notions of leakage, and their capacities

Hopscotch - reaching the target hop by hop

Operational versus weakest pre-expectation semantics for the probabilistic guarded command language

Abstractions of non-interference security: Probabilistic versus possibilistic

Abstract channels and their robust information-leakage ordering
Compositional refinement in agent-based security protocols

Model exploration and analysis for quantitative safety refinement in probabilistic B

Continual and explicit comparison to promote proactive facilitation during second computer language learning

On probabilistic Kleene algebras, automata and simulations

Preface

Towards an algebra of routing tables

An expectation transformer approach to predicate abstraction and data independence for probabilistic programs

Compositional closure for Bayes risk in probabilistic noninterference

Linear-invariant generation for probabilistic programs: Automated support for proof-based methods

The Thousand-and-one cryptographers

YAGA: automated analysis of quantitative safety specifications in probabilistic B

Graphical modelling for simulation and formal analysis of wireless network protocols
Programming-logic analysis of fault tolerance: expected performance of self-stabilisation

Quantitative refinement and model checking for the analysis of probabilistic systems

Quantitative μ-calculus analysis of power management in wireless networks

Using probabilistic kleene algebra for protocol verification

Probabilistic guarded commands mechanized in HOL

Memoryless strategies for stochastic games via domain theory

An elementary proof that Herman's Ring is Θ(N²)

Probabilistic Guarded Commands Mechanized in HOL

Abstraction and refinement in probabilistic systems

Abstraction, refinement and proof for probabilistic systems

Compositional specification and analysis of cost-based properties in probabilistic programs

Development via refinement in probabilistic B - Foundation and case study

Towards automated proof support for probabilistic distributed systems

Cost-based analysis of probabilistic programs mechanised in HOL
Deriving probabilistic semantics via the ‘weakest completion’

Almost-certain eventualities and abstract probabilities in the quantitative temporal logic qTL

Probabilistic invariants for probabilistic machines

Probabilistic termination in B

Programming Methodology

Quantitative program logic and expected time bounds in probabilistic distributed algorithms

Games, probability, and the quantitative μ-calculus qMμ

Cost analysis of games, using program logic

A generalisation of stationary distributions, and probabilistic program Algebra

Partial correctness for probabilistic demonic programs

Almost-certain eventualities and abstract probabilities in quantitative temporal logic

Demonic, angelic and unbounded probabilistic choices in sequential programs

A Generalisation of Stationary Distributions and Probabilistic Program Algebra

Quantitative program logic and performance in probabilistic distributed algorithms
Reasoning about efficiency within a probabilistic μ-calculus

Probabilistic models for the guarded command language

Unifying wp and wlp

Probabilistic Predicate Transformers

Refinement-oriented probability for CSP

Software, who needs it?

A question of identity

Finitely generated non-Hopf modules

Enumerating finite groups