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## The JACKDAW database package

M.F. Challis

October 1974

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J. Larmouth

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December 1977

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April 1978

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September 1979

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## Three papers on parsing

B.K. Boguraev, K. Spärck Jones, J.I. Tait

1982

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## Analysis and inference for English

Arthur William Sebright Cater

September 1981

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## On using Edinburgh LCF to prove the correctness of a parsing algorithm

Avra Cohn, Robin Milner

February 1982

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## The correctness of a precedence parsing algorithm in LCF

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## A clustering technique for semantic network processing

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## Exception handling in domain based systems

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Poly report

D.C.J. Matthews

August 1982

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## How to drive a database front end using general semantic information

B.K. Boguraev, K. Spärck Jones

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## An island parsing interpreter for Augmented Transition Networks

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January 1983

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## Rewriting in Cambridge LCF

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## LCF\_LSM, A system for specifying and verifying hardware

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## Proving a computer correct with the LCF\_LSM hardware verification system

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## Extending the local area network

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## Structural induction in LCF

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## Compound noun interpretation problems

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## Intelligent network interfaces

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May 1985

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## Automatic summarising of English texts

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## A mechanism for the accumulation and application of context in text processing

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November 1983

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## Verifying the unification algorithm in LCF

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## Using information systems to solve recursive domain equations effectively

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## The design of a ring communication network

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July 1984

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## Executing temporal logic programs

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Event structures  
Lecture notes for the  
Advanced Course on Petri Nets

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December 1986

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## Material concerning a study of cases

B.K. Boguraev, K. Spärck Jones

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This study is reported in B.K. Boguraev and K. Spärck Jones, 'A note on a study of cases', *Computational Linguistics* 13, 1987. The attached material consists first of an extended account of the study with its own illustrative examples, and second of the full data analysis, printed in two different sort orders.

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## An operational semantics for Occam

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John Carroll, Bran Boguraev, Claire Grover,  
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## The foundation of a generic theorem prover

Lawrence C Paulson

March 1988

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## Executing behavioural definitions in higher order logic

Albert John Camilleri

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## Experience with Isabelle A generic theorem prover

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## An operational semantics for occam

Juanito Camilleri

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This is an extended version of UCAM-CL-TR-125, in which we include the operational semantics of priority alternation.

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Michael J.C. Gordon

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Lawrence C. Paulson

May 1990

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Julia Rose Galliers

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Edited by Julia Rose Galliers

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The semantics of VHDL  
with Val and Hol:  
towards practical verification tools

John Peter Van Tassell

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The semantics and  
implementation of aggregates  
or  
how to express concurrency  
without destroying determinism

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## The HOL verification of ELLA designs

Richard Boulton, Mike Gordon, John Herbert,  
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New foundations for  
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FIX-hyperdoctrines and the FIX-logic

Roy L. Crole, Andrew M. Pitts

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## Logic programming, functional programming and inductive definitions

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## Efficient memory-based learning for robot control

Andrew William Moore

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## The Dialectica categories

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J.A. Bradshaw, R.M. Young

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## Higher-order critical pairs

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Ian M. Leslie, Derek M. McAuley,  
Mark Hayter, Richard Black, Reto Beller,  
Peter Newman, Matthew Doar

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Philip Gladwin, Stephen Pulman,  
Karen Spärck Jones

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## Generalised probabilistic LR parsing of natural language (corpora) with unification-based grammars

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## Managing the order of transactions in widely-distributed data systems

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## A development environment for large natural language grammars

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## Using knowledge of purpose and knowledge of structure as a basis for evaluating the behaviour of mechanical systems

John Anthony Bradshaw

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## Introduction to Isabelle

Lawrence C. Paulson

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## Pegasus project description

Sape J. Mullender, Ian M. Leslie,  
Derek McAuley

September 1992

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## Pegasus – Operating system support for distributed multimedia systems

Ian M. Leslie, Derek McAuley,  
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### Storage, programming and display of multimedia objects

Ken Moody, Jean Bacon, Noha Adly,  
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Bjorn Gamback, Manny Rayner, Barney Pell

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Zhixue Wu, Ken Moody, Jean Bacon

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## Natural language processing for information retrieval

David D. Lewis, Karen Spärck Jones

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## A case study of co-induction in Isabelle HOL

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Femto-VHDL:  
the semantics of a subset of  
VHDL and its embedding  
in the HOL proof assistant

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## A workstation architecture to support multimedia

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A fixedpoint approach  
to implementing  
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(updated version)

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## Representing higher-order logic proofs in HOL

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## Verifying modular programs in HOL

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## The temporal properties of English conditionals and modals

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## A new application for explanation-based generalisation within automated deduction

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## The formal verification of the Fairisle ATM switching element: an overview

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Video mail retrieval using voice:  
report on keyword definition  
and data collection  
(deliverable report  
on VMR task No. 1)

G.J.F. Jones, J.T. Foote, K. Spärck Jones,  
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## Belief revision and dialogue management in information retrieval

Brian Logan, Steven Reece, Alison Cawsey,  
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## On intuitionistic linear logic

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## Integrated sound synchronisation for computer animation

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## A HOL interpretation of Noden

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## Ten commandments of formal methods

Jonathan P. Bowen, Michael G. Hinchey

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## Handling realtime traffic in mobile networks

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## Simple, proven approaches to text retrieval

S.E. Robertson, K. Spärck Jones

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## Multithreaded processor design

Simon William Moore

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## A case study of co-induction in Isabelle

Jacob Frost

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## Names and higher-order functions

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## The Church-Rosser theorem in Isabelle: a proof porting experiment

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## Computational types from a logical perspective I

P.N. Benton, G.M. Bierman, V.C.V. de Paiva

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## Retrieving spoken documents: VMR Project experiments

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## Categorical logic

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## CogPiT – configuration of protocols in TIP

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July 1995

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Syn: a single language for  
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parsing and pretty-printing

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OASIS:  
An open architecture for  
secure interworking services

Richard Hayton

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Needham-Schroeder with public keys

Lawrence C. Paulson

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A formal proof of Sylow's theorem

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Joshua Robert Xavier Ross

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## Feature representation for the automatic analysis of fluorescence in-situ hybridization images

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## Automatic signal classification in fluorescence in-situ hybridization images

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Murphy's law,  
the fitness of evolving species,  
and the limits of software reliability

Robert M. Brady, Ross J. Anderson,  
Robin C. Ball

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A Bayesian methodology and  
probability density estimation  
for fluorescence in-situ  
hybridization signal classification

Boaz Lerner

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## Is hypothesis testing useful for subcategorization acquisition?

Anna Korhonen, Genevive Gorrell,  
Diana McCarthy

May 2000

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Nomadic Pict:  
language and infrastructure design  
for mobile computation

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## Contexts and embeddings for closed shallow action graphs

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Pages ii–iv and vi have been removed from this Technical Report to save space; they contained only a formal declaration relating to the PhD submission or were blank.

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expressing and verifying  
communication infrastructure  
for mobile computation

Asis Unyapoth

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Giampaolo Bella, Fabio Massacci,  
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## The triVM intermediate language reference manual

Neil Johnson

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The Escritoire:  
A personal projected display  
for interacting with documents

Mark Ashdown, Peter Robinson

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## Towards a ternary interpolating subdivision scheme for the triangular mesh

N.A. Dodgson, M.A. Sabin, L. Barthe,  
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N.A. Dodgson, J.R. Moore

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## Subdivision as a sequence of sampled $C_p$ surfaces and conditions for tuning schemes

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March 2004

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new-HOPLA —  
a higher-order process language  
with name generation

Glynn Winskel, Francesco Zappa Nardelli

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Keir Fraser, Steven Hand, Rolf Neugebauer,  
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## Acute: High-level programming language design for distributed computation

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Peter Sewell, James J. Leifer,  
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## Location privacy in ubiquitous computing

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## Abstracting application-level security policy for ubiquitous computing

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## Middleware support for context-awareness in distributed sensor-driven systems

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February 2005

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Steve Bishop, Matthew Fairbairn,  
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behavioural specification

Volume 2: The Specification

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Viktor Vafeiadis, Maurice Herlihy,  
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in research infrastructure  
for shared description

Alan F. Blackwell

April 2006

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R.J. Gibbens, Y. Saacti

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Department for Transport Horizons  
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**Eiko Yoneki**

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## Haggle: Clean-slate networking for mobile devices

Jing Su, James Scott, Pan Hui, Eben Upton,  
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## Preconditions on geometrically sensitive subdivision schemes

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## A smooth manifold based construction of approximating lofted surfaces

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## Vector microprocessors for cryptography

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Jon Crowcroft, Tim Deegan,  
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December 2007

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## IDRM: Inter-Domain Routing Protocol for Mobile Ad Hoc Networks

Chi-Kin Chau, Jon Crowcroft, Kang-Won Lee,  
Starsky H.Y. Wong

January 2008

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People are the network:  
experimental design and evaluation of  
social-based forwarding algorithms

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Gavin M. Bierman, Matthew J. Parkinson,  
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The Intelligent Book:  
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and adaptive textbooks,  
focussing on Discrete Mathematics

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## A capability-based access control architecture for multi-domain publish/subscribe systems

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June 2008

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## Beyond node degree: evaluating AS topology models

Hamed Haddadi, Damien Fay,  
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## A novel auto-calibration system for wireless sensor motes

Ruoshui Liu, Ian J. Wassell

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## A robust efficient algorithm for point location in triangulations

Peter J.C. Brown, Christopher T. Faigle

February 1997

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## Deny-guarantee reasoning

Mike Dodds, Xinyu Feng, Matthew Parkinson,  
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## High precision timing using self-timed circuits

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## State-based Publish/Subscribe for sensor systems

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## Analysis of affective expression in speech

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## Vehicular wireless communication

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TCP, UDP, and Sockets:  
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Thomas Ridge, Michael Norrish, Peter Sewell

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## Optimising the speed and accuracy of a Statistical GLR Parser

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## Citation context analysis for information retrieval

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July 2010

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a functional view of facial affect  
analysis using naturalistic data

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## On joint diagonalisation for dynamic network analysis

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## Resource-sensitive synchronisation inference by abduction

Matko Botinčan, Mike Dodds,  
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Arjuna Sathiaseelan, Jon Crowcroft

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## Verification of security protocols based on multicast communication

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The quest to replace passwords:  
a framework for  
comparative evaluation of  
Web authentication schemes

Joseph Bonneau, Cormac Herley,  
Paul C. van Oorschot, Frank Stajano

March 2012

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## Guessing human-chosen secrets

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## A unified graph query layer for multiple databases

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## Modelling energy efficiency for computation

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## Planning with preferences using maximum satisfiability

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## Mitigating I/O latency in SSD-based graph traversal

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Valentin Dalibard, Eiko Yoneki

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## Hardware synthesis from a stream-processing functional language

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## Automatic extraction of property norm-like data from large text corpora

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## Black-box composition of mismatched software components

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## SBUS: a generic policy-enforcing middleware for open pervasive systems

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## Automatically generating reading lists

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## SNA: Sourceless Network Architecture

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## Capability Hardware Enhanced RISC Instructions: CHERI Instruction-set architecture

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## Capability Hardware Enhanced RISC Instructions: CHERI User's guide

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## Bluespec Extensible RISC Implementation: BERI Hardware reference

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## Programming contextual computations

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## Mephistophone

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## Sentiment analysis of scientific citations

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## ARC: Analysis of Raft Consensus

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## CHERI: A RISC capability machine for practical memory safety

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## Resourceful: fine-grained resource accounting for explaining service variability

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## Program equivalence in functional metaprogramming via nominal Scott domains

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## Automatic facial expression analysis

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October 2014

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## Surface modelling for 2D imagery

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Jatinder Singh, Jean Bacon, Jon Crowcroft,  
Anil Madhavapeddy, Thomas Pasquier,  
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November 2014

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## Capability Hardware Enhanced RISC Instructions: CHERI Instruction-set architecture

Robert N. M. Watson, Peter G. Neumann,  
Jonathan Woodruff, Jonathan Anderson,  
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## Bluespec Extensible RISC Implementation: BERI Hardware reference

Robert N. M. Watson, Jonathan Woodruff,  
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Simon W. Moore, Steven J. Murdoch,  
Peter G. Neumann, Robert Norton,  
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April 2015

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## The integration of higher order interactive proof with first order automatic theorem proving

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## Clean application compartmentalization with SOAAP (extended version)

Khilan Gudka, Robert N.M. Watson,  
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Brooks Davis, Ben Laurie, Ilias Marinos,  
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August 2015

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## Capability Hardware Enhanced RISC Instructions: CHERI Instruction-Set Architecture

Robert N. M. Watson, Peter G. Neumann,  
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## Capability Hardware Enhanced RISC Instructions: CHERI Programmer's Guide

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## Web data knowledge extraction

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## Survey propagation applied to weighted partial maximum satisfiability

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## HasGP: A Haskell library for Gaussian process inference

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## Error detection in content word combinations

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## Hardware support for compartmentalisation

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## Recomputation-based data reliability for MapReduce using lineage

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## Evaluating the viability of remote renewable energy in datacentre computing

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## Using multiple representations to develop notational expertise in programming

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## Capability Hardware Enhanced RISC Instructions: CHERI Instruction-Set Architecture (Version 5)

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July 2016

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## Issues in preprocessing current datasets for grammatical error correction

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## Signal maps for smartphone localisation

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## Context-aware programming languages

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## Capability Hardware Enhanced RISC Instructions: CHERI Instruction-Set Architecture (Version 6)

Robert N. M. Watson, Peter G. Neumann,  
Jonathan Woodruff, Michael Roe,  
Jonathan Anderson, John Baldwin,  
David Chisnall, Brooks Davis,  
Alexandre Joannou, Ben Laurie,  
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## ASAP: As Static As Possible memory management

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## Automated verification of continuous and hybrid dynamical systems

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## Proofs for ‘Verifying Spatial Properties of Array Computations’

Dominic Orchard, Mistral Contrastin,  
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## Network traffic classification via neural networks

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## Hierarchical statistical semantic translation and realization

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## Characterizing the impact of network latency on cloud-based applications' performance

Diana Andreea Popescu, Noa Zilberman,  
Andrew W. Moore

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## Capability Hardware Enhanced RISC Instructions (CHERI): Notes on the Meltdown and Spectre Attacks

Robert N. M. Watson, Jonathan Woodruff,  
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Peter G. Neumann

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## Evaluation of decentralized email architecture and social network analysis based on email attachment sharing

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## Interactive analytical modelling

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## Optimising data centre operation by removing the transport bottleneck

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## Raising a new generation of cyber defenders

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## Prefetching for complex memory access patterns

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## OpenDTrace Specification version 1.0

George Neville-Neil, Jonathan Anderson,  
Graeme Jenkinson, Brian Kidney,  
Domagoj Stolfa, Arun Thomas,  
Robert N. M. Watson

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## Privacy markets in the Apps and IoT age

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Pan Hui, Hamed Haddadi, Swades De,  
Irene Ng, Sasu Tarkoma, Richard Mortier

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Are cyber-blackouts in  
service networks likely?:  
implications for  
cyber risk management

Ranjan Pal, Konstantinos Psounis,  
Abhishek Kumar, Jon Crowcroft, Pan Hui,  
Leana Golubchik, John Kelly,  
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## Capability Hardware Enhanced RISC Instructions: CHERI Instruction-Set Architecture (Version 7)

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David Chisnall, Brooks Davis, Nathaniel Wesley Filardo,  
Alexandre Joannou, Ben Laurie, A. Theodore Marketos,  
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## Cut-through network switches: architecture, design and implementation

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November 2018

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## A Performance-efficient and practical processor error recovery framework

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## CheriABI: Enforcing valid pointer provenance and minimizing pointer privilege in the POSIX C run-time environment

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David Chisnall, Jessica Clarke, Nathaniel Wesley Filardo,  
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## An Evaluation of NDP performance

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## Distributed consensus revised

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## High-performance memory safety: optimizing the CHERI capability machine

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## Latency-driven performance in data centres

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## Effects of timing on users' perceived control when interacting with intelligent systems

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Rigorous engineering  
for hardware security:  
formal modelling and proof  
in the CHERI design and  
implementation process

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Robert M. Norton, Simon W. Moore,  
Peter G. Neumann, Ian Stark,  
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## An Introduction to CHERI

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## Evaluating visually grounded language capabilities using microworlds

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## Latency-First datacenter network scheduling

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## Machine learning methods for detecting structure in metabolic flow networks

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## CHERI C/C++ Programming Guide

Robert N. M. Watson, Alexander Richardson,  
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## Complete spatial safety for C and C++ using CHERI capabilities

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## Probabilistic concurrent game semantics

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## Capability Hardware Enhanced RISC Instructions: CHERI Instruction-Set Architecture (Version 8)

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## Exploring the effect of spatial faithfulness on group decision-making

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## DSbD CHERI and Morello Capability Essential IP (Version 1)

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## Inline and sideline approaches for low-cost memory safety in C

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## Capability memory protection for embedded systems

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## Rollercoaster: an efficient group-multicast scheme for mix networks

Daniel Huguenroth, Martin Kleppmann,  
Alastair R. Beresford

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the 30th USENIX Security Symposium

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## Verified security for the Morello capability-enhanced prototype Arm architecture

Thomas Bauereiss, Brian Campbell,  
Thomas Sewell, Alasdair Armstrong,  
Lawrence Esswood, Ian Stark, Graeme Barnes,  
Robert N. M. Watson, Peter Sewell

September 2021

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## Data summarizations for scalable, robust and privacy-aware learning in high dimensions

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September 2021

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## CheriOS: designing an untrusted single-address-space capability operating system utilising capability hardware and a minimal hypervisor

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Improving commercial LiFi network  
feasibility through rotation invariance,  
motion prediction,  
and bandwidth aggregation  
at the physical layer

Daniel M. Fisher, Jon A. Crowcroft

November 2021

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## Obstacles to wearable computing

Helen Oliver

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## Gaussian Pixie Autoencoder: Introducing Functional Distributional Semantics to continuous latent spaces

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January 2022

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Martin Kleppmann

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## Transparent analysis of multi-modal embeddings

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## Automating representation change across domains for reasoning

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June 2022

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## Muntjac multicore RV64 processor: introduction and microarchitectural guide

Xuan Guo, Daniel Bates, Robert Mullins,  
Alex Bradbury

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Data-driven representations  
in brain science:  
modelling approaches in gene  
expression and neuroimaging domains

Tiago M. L. Azevedo

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## Dynamic analysis for concurrency optimisation

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Memory safety with  
CHERI capabilities:  
security analysis, language interpreters,  
and heap temporal safety

Brett Gutstein

November 2022

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## CHERI compartmentalisation for embedded systems

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## Motion quality models for real-time adaptive rendering

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## A Next Generation Internet Architecture

Alexander G. Fraser

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## Efficient virtual cache coherency for multicore systems and accelerators

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## Protecting enclaves from side-channel attacks through physical isolation

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March 2023

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## The Cerberus C semantics

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## Arm Morello Programme: Architectural security goals and known limitations

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Peter Sewell, Simon W. Moore,  
Jonathan Woodruff

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## An evaluation of police interventions for cybercrime prevention

Maria Bada, Alice Hutchings,  
Yanna Papadodimitraki, Richard Clayton

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## Efficient spatial and temporal safety for microcontrollers and application-class processors

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## Scalable agent-based models for optimized policy design: applications to the economics of biodiversity and carbon

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## Early performance results from the prototype Morello microarchitecture

Robert N. M. Watson, Jessica Clarke,  
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## Capability Hardware Enhanced RISC Instructions: CHERI Instruction-Set Architecture (Version 9)

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## CHERI C semantics as an extension of the ISO C17 standard

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## Balanced allocations under incomplete information: New settings and techniques

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