

NATACHA CROOKS

PhD Student in Computer Science

Nationality British, French & Irish

ncrooks@cs.utexas.edu

EDUCATION

PhD - Distributed Systems

Supervised by Lorenzo Alvisi

2013 - 2019

University of Texas at Austin & Cornell University, USA

Certificate of Postgraduate Studies

Supervised by Steven Hand

2012 - 2013

Systems Research Group, Computer Laboratory, Cambridge, UK

Bachelors (Computer Science) - 1st Class Degree - Ranked 1st in year

Dissertation: Data-centric Concurrency Control in Databases

June 2012

University of Cambridge, Cambridge, UK

Double Maitrise (French & British Law) - 2.i - Ranked 1st in French Law

June 2009

University of Cambridge, Cambridge, UK and University Paris 2 - Assas, Paris, France

AWARDS AND HONOURS

Invitation to the Rising Star Workshop,

For top graduating women in computer science and electrical engineering, *Stanford*

October 2017

Microsoft Research Fellowship for Women in CS,

Awarded to women in computer science, *Microsoft Research*

2016-2017

Harrington Fellowship,

Awarded to outstanding incoming graduate students, *UT Austin*

2015-2020

Google Doctoral Fellowship in Distributed Computing,

Awarded for duration of PhD, *Google*

2014-2017

Redgate Prize for the Best Student, Awarded to the student with the highest marks in the

Computer Science Undergraduate Course, *University of Cambridge*

June 2012

Gloucester Research Prize for the Best Dissertation, Awarded to the student with the highest mark in the final year dissertation, *University of Cambridge*

June 2012

Science, Engineering and Technology Student of the Year Awards,

Shortlisted as part of 3 British and Irish undergraduates

London, United Kingdom

September 2012

PEER-REVIEWED PUBLICATIONS

OSDI'18 Obladi: Oblivious Serializable Transactions In The Cloud

Natasha Crooks, Matthew Burke, Ethan Cecchetti, Sitar Harel, Lorenzo Alvisi and Rachit Agarwal

PODC'17 Seeing is Believing: A client-centric specification of database isolation

Natasha Crooks, Youer Pu, Lorenzo Alvisi and Allen Clement

SIGMOD'17, Tebaldi: Taking Modular Concurrency Control To The Next Level

Chunzhi Su, Natasha Crooks, Cong Ding, Lorenzo Alvisi and Chao Xie

NSDI'17, I Can't Believe it's Not Causal: Scalable Causal Consistency Without Slowdown Cascades

Akbar Syed Mehdi, Cody Littlely, Natasha Crooks, Lorenzo Alvisi, Nathan Bronson and Wyatt Lloyd

OOPSLA'17 Geo-Distribution of Actor-based Services

Phil Bernstein, Sebastian Burckhardt, Sergey Bykov, Natasha Crooks, Jose Faleiro, Gabriel Kliot, Alok Kumbhare, Muntasir Raihan Rahman, Vivek Shak, Adriana Szekeres and Jorgen Thelin

SIGMOD'16, TARDiS: A Branch and Merge Approach to Weak Consistency

Natasha Crooks, Youer Pu, Nancy Estrada, Trinabh Gupta, Lorenzo Alvisi and Allen Clement

NSDI'16, Popcorn: Scalable and Private Media Consumption

Trinabh Gupta, Natasha Crooks, Whitney Mulhern, Lorenzo Alvisi and Michael Walfish

Eurosys'15, Musketeer, One for All Data Processing Frameworks

Ionel Gog, Malte Schwarzkopf, Natasha Crooks, Matthew Grosvenor, Allen Clement and Steven Hand

RELEVANT EXPERIENCE

- UC Berkeley**, *Assistant Professor*
Berkeley, USA *August 2020 -*
- Large-scale data systems group
- Cornell University**, *Visiting Researcher*
Ithaca, USA *August 2016-August 2020*
- Laboratory for Advanced Systems Research, supervised by Lorenzo Alvisi
 - Work on concurrency control for distributed databases.
 - Work on oblivious databases.
 - Work on scalable blockchain systems.
- INRIA (joint with LIP6/CNRS)**, *Visiting Researcher*
Paris, France *May 2016- August 2016*
- WHISPER team, supervised by Gilles Muller
 - Implementation of a DSL for verified Linux multi-core schedulers
- University of Texas at Austin**, *Graduate Researcher*
Austin, USA *August 2015 - May 2016*
- Laboratory for Advanced Systems Research, supervised by Lorenzo Alvisi
 - Work on weakly consistent geo-distributed storage.
 - Work on theoretical foundations for database isolation/consistency.
- Microsoft Research**, *PhD Research Intern*
Redmond, USA *May 2015- August 2015*
- Data Management and Mining Group, supervised by Phil Bernstein
 - Design of a framework for building geo-distributed applications
- University of Texas at Austin**, *Research Scholar*
Austin, USA *August 2014 - May 2015*
- Laboratory for Advanced Systems Research, supervised by Lorenzo Alvisi
 - Work on weakly consistent geo-distributed storage.
 - Work on private media streaming systems.
- Max Planck Institute For Software Systems**, *Graduate Researcher*
Saarbruecken, Germany *July 2013 - August 2014*
- Robust Systems Group, supervised by Allen Clement
 - Work on large scale processing systems.
- Imperial College**, *Undergraduate Research Fellowship*
London, UK *June 2012-September 2012*
- Distributed Systems Group, supervised by Dr. Peter Pietzuch
 - Analysis of Lightweight Virtualisation Strategies for Stream-Processing Systems
- MPI-SWS**, *Undergraduate Research Fellowship*
Saarbruecken, Germany *June 2011-September 2011*
- Dependable Systems Group, supervised by Dr. Rodrigo Rodrigues and Dr. Allen Clement
 - Implementation of an eventually consistent centralised MySQL database
- Materna GmbH, Research & Development Division**, *Developer*
Dortmund, Germany *June 2010-September 2010*
- Developed Bluetooth Support for the JMEDS Framework for Web Services (Java edition for DPWS Stack)

RELEVANT TEACHING EXPERIENCE

Object-oriented programming and data-structures (CS2110) , Cornell, <i>Lecturer</i>	2018
Distributed Computing (CS5414) , Cornell, <i>Teaching Assistant</i>	2016, 2017, 2018
Databases , Second Year Undergraduate Course, Cambridge, <i>Supervisor (Teaching Assistant)</i>	2012-2013
Bioinformatics , Third Year Undergraduate Course, Cambridge, <i>Supervisor (Teaching Assistant)</i>	2012-2013
E-Commerce , Third Year Undergraduate Course, Cambridge, <i>Supervisor (Teaching Assistant)</i>	2012-2013
Prolog , Second Year Undergraduate Course, Cambridge, <i>Supervisor (Teaching Assistant)</i>	2012-2013

SERVICE

Program Committee	VLDB'2020
Program Committee	Student Research Competition SOSP'2019
Program Committee	OPODIS'2019
Program Committee	ICDCS'2018, ICDCS'2019
Program Committee	PaPoC'2018, PaPoC'2019
Program Committee	PPoPP'2016 Artefact Evaluation
Reviewer	Distributed Computing (2015)
Subreviewer	Eurosys'2014, OSDI'2014, SoCC'2015, Eurosys'2016, PODC'2017

JOURNALS AND BOOK CHAPTERS

IEEE Data Engineering Bulletin (Dec. 2017), The Dirty Secret of Causal Consistency: Writes
Lorenzo Alvizi, Natacha Crooks, and Akbar Syed Mehdi

Encyclopedia of Big Data Technologies (Book Chapter), TARDiS: A Branch and Merge Approach to
Weak Consistency
Natacha Crooks

WORKSHOPS AND POSTERS

LADIS'14, Towards a Consistent Understanding of Consistency Models
Henrique Moniz, Ricardo Dias, Joo Leito, Natacha Crooks, Lorenzo Alvizi, Allen Clement and Rodrigo Rodrigues

OSDI'14, TARDiS: Transactional Storage with Parallel Worlds (Poster)
Natacha Crooks, Nancy Estrada and Allen Clement

Eurosys'13, Lightweight Software Fault Isolation for Stream Processing (Poster)
Natacha Crooks, Eva Kalyvianaki and Peter Pietzuch

TECHNICAL REPORTS

arXiv:1609.06670 Obladi: Oblivious Serializable Transactions In The Cloud
Natacha Crooks, Matthew Burke, Ethan Cecchetti, Sitar Harel, Lorenzo Alvizi and Rachit Agarwal

arXiv:1609.06670 Seeing is Believing: A Unified Model For Consistency and Isolation via States
Natacha Crooks, Youer Pu, Lorenzo Alvizi, and Allen Clement

OUTREACH

Expand Your Horizons , Exposing Young Women to Computer Science, Cornell, USA	2017
Hour of Code , Teaching Computer Science to Primary School Children, Austin, USA	2014 - 2016
Code Club , Teaching Computer Science to Primary School Children, Cambridge, UK	2013 - 2014

LANGUAGES

English, French: Native. German, Spanish: Proficient, Chinese: European Level B2.

REFEREES

Available on request