

# JOËL OUAKNINE

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United Kingdom    Url: [www.cs.ox.ac.uk/people/joel.ouaknine/home.html](http://www.cs.ox.ac.uk/people/joel.ouaknine/home.html)

**Year of birth:** 1972.  
**Citizenships:** Canadian and French.  
**Family:** Married, two children.

## Research Interests

Verification of real-time, probabilistic, and infinite-state systems (e.g. model-checking algorithms, decision problems, complexity); logic and applications to verification; software analysis; concurrency; automata theory.

## Education

<b>Oxford University</b> Oxford, UK	<b>PhD, Computer Science</b>	<b>2001</b>
<b>McGill University</b> Montréal, Canada	<b>MSc, Mathematics</b> <b>BSc, Honours in Mathematics</b>	<b>1995</b> <b>1993</b>

## Employment

<b>Oxford University</b> Oxford, UK	<b>Professor of Computer Science</b> <b>Reader<sup>1</sup> in Computer Science</b> <b>University Lecturer<sup>2</sup> in Computer Science</b> <b>Fellow of St John's College</b>	<b>2010 – present</b> <b>2008 – 2010</b> <b>2004 – 2008</b> <b>2004 – present</b>
<b>Carnegie Mellon Univ.</b> Pittsburgh, USA	<b>Postdoctoral Fellow</b> (Computer Science Department)	<b>2002 – 2004</b>
<b>Tulane University</b> New Orleans, USA	<b>Postdoctoral Researcher and Instructor</b> (Department of Mathematics)	<b>1999 – 2002</b>

## Awards and Honours

1. Roger Needham Award, 2010.
2. EPSRC Leadership Fellowship, 2009.
3. Outstanding Teaching Award, Oxford University, 2008.
4. Outstanding Teaching Award, Oxford University, 2007.
5. Fonds FCAR Doctoral Scholarship, 1996.

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<sup>1</sup>Tenure awarded July 2009. Roughly equivalent to Associate Professor in North America.

<sup>2</sup>Roughly equivalent to tenure-track Assistant Professor in North America.

## Visiting Positions

1. Invited Professor, Ecole Normale Supérieure de Cachan (France), August 2008.
2. Invited Professor, Ecole Normale Supérieure de Cachan (France), April 2006.

## Research Group

### • PhD students

1. Ventsi Choney, 2011 – present. (*Co-supervised with James Worrell.*)
2. Daniel Bundala, 2010 – present.
3. Hsi-Ming Ho, 2010 – present.
4. Vincent Nimal, 2010 – present. (*Co-supervised with Daniel Kroening.*)
5. Christoph Haase, 2007 – present.
6. Hristina Palikareva, 2007 – present. (*Co-supervised with Bill Roscoe.*)
7. Ed Blakey, PhD 2011. (*Co-supervised with Bob Coecke.*)

### • Visitors and postdocs

1. Philippe Schnoebelen, 2011 – 2012.
2. Andreas Gaiser, 2011 (two-month visit).
3. Jade Alglave, 2009 – present.
4. Michael Tautschnig, 2010 – present.
5. Bjoern Wachter, 2010 – present.
6. Mark Timmer, 2010 (three-month visit).
7. Stefan Kiefer, 2009 – present.
8. Lijun Zhang, 2009 – 2010.
9. Alexander Rabinovich, 2009 – 2010.
10. Gilles Geeraerts, 2008 (three-month visit).
11. Phil Armstrong, 2007 – present.
12. Patricia Bouyer, 2006 – 2007.
13. Axel Legay, 2006 (three-month visit).

### • MSc students

1. Felix Arends, MSc (Distinction) 2009.
2. Julia Erhard, MSc (Distinction) 2009. (*Co-supervised with James Worrell.*)
3. Rastislav Lenhardt, MSc 2009.
4. Pornsook Kornkitichai, MSc 2007.
5. Guo Xi, MSc 2007.
6. Sara Adams, MSc (Distinction) 2006.
7. Tao Zhang, MSc 2006. (*Co-supervised with James Worrell.*)
8. Yiding Liu, MSc 2005.
9. Murray Stokely, MSc 2005.
10. Bo Wang, MSc 2005.
11. Xiaoming Zhong, MSc 2005.

## Professional Activities and Service

- **Invited speaker**

1. Roger Needham Lecture, The Royal Society, London, 2010.
2. 37th Int'l Colloquium on Automata, Languages and Programming (ICALP 10).
3. 26th Conf. on the Mathematical Foundations of Programming Semantics (MFPS 10).
4. Automatic Verification and Analysis of Complex Systems, Spring School (AVACS 10).
5. 3rd Int'l Workshop on Verification and Evaluation of Computer and Communication Systems (VECoS 09).
6. 6th Int'l Conf. on Formal Modelling and Analysis of Timed Systems (FORMATS 08).
7. 4th Workshop on Quantitative Aspects of Programming Languages (QAPL 06).

- **Conference program committee chair**

1. 27th Conf. on the Mathematical Foundations of Programming Semantics (MFPS 11).
2. 7th Int'l Conf. on Formal Modelling and Analysis of Timed Systems (FORMATS 09). (*Jointly chaired with Frits Vaandrager.*)

- **Conference program committee member**

1. 23rd European Symposium on Programming (ESOP 13).
2. 24th Int'l Conf. on Computer Aided Verification (CAV 12).
3. 5th Int'l Workshop on Verification and Evaluation of Computer and Comm. Systems (VECoS 11).
4. 22nd Int'l Conf. on Concurrency Theory (CONCUR 11).
5. 1st Int'l Workshop on Rewriting Techniques for Real-Time Systems (RTRTS 10).
6. 1st Int'l Workshop on Games and Probabilistic Models in Formal Verification (GPMFV 10).
7. 4th Int'l Workshop on Verification and Evaluation of Computer and Comm. Systems (VECoS 10).
8. 8th Int'l Conf. on Formal Modelling and Analysis of Timed Systems (FORMATS 10).
9. 9th Summer School on Modelling and Verifying Parallel Processes (MOVEP 10).
10. 7th European Performance Engineering Workshop (EPEW 10).
11. 25th Conf. on the Mathematical Foundations of Programming Semantics (MFPS 09).
12. 6th Int'l Conf. on the Quantitative Evaluation of Systems (QEST 09).
13. 26th Int'l Symposium on Theoretical Aspects of Computer Science (STACS 09).
14. 6th Int'l Conf. on Formal Modelling and Analysis of Timed Systems (FORMATS 08).
15. 15th Int'l Workshop on Model Checking Software (SPIN 08).
16. 5th Int'l Conf. on the Quantitative Evaluation of Systems (QEST 08).
17. 5th Int'l Conf. on Formal Modelling and Analysis of Timed Systems (FORMATS 07).
18. 2nd Int'l Workshop on Probabilistic Automata and Logics (PAuL 07).
19. 16th EACSL Annual Conf. on Computer Science and Logic (CSL 07).
20. 5th Workshop on Quantitative Aspects of Programming Languages (QAPL 07).
21. 10th Int'l Workshop on Hybrid Systems: Computation and Control (HSCC 2007).
22. 13th Int'l Workshop on Expressiveness in Concurrency (EXPRESS 06).
23. 4th Int'l Conf. on Formal Modelling and Analysis of Timed Systems (FORMATS 06).
24. 21st Annual IEEE Symposium on Logic in Computer Science (LICS 06).
25. 3rd Int'l Workshop on Automatic Verification of Infinite-State Systems (AVIS 04).

- **Journal referee**

1. Formal Aspects of Computing, Springer.
2. Journal of Computer and System Sciences, Elsevier.
3. ACM Transactions on Programming Languages and Systems, Association for Computing Machinery.

4. ACM Transactions on Software Engineering and Methodology, Association for Computing Machinery.
5. Science of Computer Programming, Elsevier.
6. ACM Transactions on Computational Logic, Association for Computing Machinery.
7. International Journal on Software Tools for Technology Transfer, Springer.
8. Formal Methods in System Design, Kluwer.
9. IEEE Transactions on Software Engineering, IEEE Computer Society.
10. Information and Computation, Elsevier.
11. Journal of Logic and Algebraic Programming, Elsevier.
12. Journal of the ACM, Association for Computing Machinery.
13. Logical Methods in Computer Science.
14. London Mathematical Society Journal of Computation and Mathematics.
15. Theoretical Computer Science, Elsevier.

- **Conference referee**

FOSSACS 12, VSTTE 12, FOCS 11, LICS 11, POPL 11, ICALP 10, CAV 10, FOSSACS 10, FSTTCS 09, LICS 09, CAV 09, ICALP 09, TAMC 09, CONCUR 08, CAV 08, PLDI 08, TACAS 08, FOSSACS 08, POPL 08, LFCS 07, STACS 07, CAV 07, LICS 07, FOSSACS 07, LPAR 07, ATVA 06, CONCUR 06, FORMATS 05, CONCUR 05, TACAS 05, FSTTCS 04, FMCAD 04, CAV 04, LICS 04, TACAS 04, AMAST 04, HSCC 04, VMCAI 04, CAV 03, CHARME 03, TACAS 03, PDPAR 03, EXPRESS 03.

- **Grant proposal referee**

1. Microsoft Research PhD Scholarship Programme (UK).
2. European Commission.
3. Qatar National Research Fund.
4. Netherlands Organisation for Scientific Research.
5. Engineering and Physical Sciences Research Council (UK)  
(member of EPSRC peer-review college, 2010 – present).
6. National Science Foundation (USA).

- **External PhD examiner**

1. Laurent Doyen (Habilitation), Ecole Normale Supérieure de Cachan, 2012.
2. Pierre Chambart, Ecole Normale Supérieure de Cachan, 2011.
3. Mohamed Faouzi Atig, Université de Paris Diderot - Paris 7, 2010.
4. Ashutosh Trivedi, University of Warwick, 2009.
5. Pavel Krčal, Uppsala University, 2009.
6. Nathaniel Charlton, Imperial College, 2008.
7. Henri Hansen, Tampere University of Technology, 2007.
8. Fabrice Chevalier, Ecole Normale Supérieure de Cachan, 2007.
9. Gilles Geeraerts, Université Libre de Bruxelles, 2007.

- **Invited seminar speaker**

Queen Mary University of London, September 2011; Cambridge University, October 2010; University of Warwick, March 2010; Université Libre de Bruxelles, March 2010; University of Southampton, February 2010; ETH Zürich, November 2009; Ecole Normale Supérieure de Cachan, October 2009; University of Edinburgh, September 2009; Tel Aviv University, May 2009; Microsoft Research (Cambridge, UK), April 2009; Université Libre de Bruxelles, March 2009; University of Warwick, March 2009; University of Edinburgh, July 2008; University of Birmingham, October 2007; Ecole Normale Supérieure de Cachan, June 2007; University of Southampton, June 2007; Microsoft Research (Cambridge, UK), March 2007; University of Swansea, November 2006; University of Edinburgh, October 2006; Université de Bordeaux

1, October 2006; Ecole Normale Supérieure de Cachan, October 2006; Université de Paris 7, April 2006; Ecole Normale Supérieure de Cachan, April 2006; Dagstuhl, Germany, February 2006; Ecole Polytechnique Fédérale de Lausanne, November 2005; Université Libre de Bruxelles, November 2005; Microsoft Research (Cambridge, UK), September 2005; McGill University, July 2005; Chalmers University of Technology, June 2005; University of Newcastle, June 2005; University of Warwick, April 2005; Microsoft Research (Cambridge, UK), March 2005; Imperial College, February 2005; University of California at Berkeley, March 2004; Oxford University, April 2003; Cambridge University, April 2003; Tulane University, February 2003; Oxford University, April 2002; Oxford University, November 2001.

## University Activities

- **Teaching**

1. Randomised Algorithms, 2008 (twice).
2. Logic and Proof, 2006, 2007, 2008.
3. Complexity, 2005.
4. Formal Program Design II, 2005.
5. Introduction to Concurrency, Tulane University, 2000.
6. Discrete Mathematics, Tulane University, 1999 – 2002 (four times).

- **Undergraduate project supervisor**

1. Ventsislav Chonev, 2010 – 2011.
2. Yuri Gulla, 2008 – 2009.
3. Kon-Chao Kwek, 2008 – 2009.
4. Martin Smith, 2008 – 2009.
5. Konrad Krawczyk, 2007 – 2008.
6. Mike Lewis, 2007 – 2008.
7. Emily Middleton, 2007 – 2008.
8. Mike Lewis, 2006 – 2007.
9. Viet Nguyen, 2006 – 2007.
10. Alan Dowling, 2005 – 2006.

- **Administration**

1. Domestic Bursar (St John's College), 2009 – present.
2. Decanal Policy Committee (St John's College), 2009 – present.
3. Domestic Committee (St John's College), 2009 – present.
4. Entertainments Committee (St John's College), 2009 – present.
5. Fellows' Housing Committee (St John's College), 2008 – present.
6. Departmental Management Committee, 2007 – present.
7. MSc Examiner, 2007 – 2009.
8. Research Assistantship Appointment Committee (four posts), 2007.
9. University Lecturership Appointment Committee, 2007.
10. Joint Consultative Committee for Undergraduates, 2007 – 2008.
11. University Lecturership Appointment Committee (two posts), 2006.
12. Educational Policy Committee (St John's College), 2006 – 2009.
13. First-Year Curriculum Review, 2005 – 2006.
14. Career Development Fellowship Appointment Committee, 2005.
15. Kendrew Quadrangle Development Committee (St John's College), 2005 – present.

16. Risk Management Committee (St John's College), 2005 – 2008; 2009 – present.
17. Software Engineering Programme and Continuing Education Committee, 2004 – 2005.
18. Governing Body (St John's College), 2004 – present.
19. Admissions Committee (St John's College), 2004 – present.

- **Internal PhD examiner**

1. Chris Broadbent, 2012.
2. Peter Boehm, 2012.
3. Clemens Ley, 2011.
4. Mark Kattenbelt, 2011.
5. Jian Huang, 2010.
6. Jolie de Miranda, 2006.
7. Gordon Rohrmair, 2005.

- **Internal PhD transfer/confirmation examiner**

1. Marco Diciolla, 2012.
2. Jonathan Kochems, 2012.
3. Evgenij Thorstensen, 2011.
4. Peter Boehm, 2010.
5. Leopold Haller, 2010.
6. Bruno Marnette, 2010.
7. Andrew Sellers, 2010.
8. Justyna Petke, 2010.
9. Jian Huang, 2009.
10. Andras Salamon, 2009.
11. Pavel Avgustinov, 2009.
12. Christopher Broadbent, 2009.
13. Bruno Marnette, 2009.
14. Matthias Fruth, 2008.
15. Matthias Fruth, 2008.
16. Tomasz Mazur, 2008.
17. Matthew Hague, 2007.
18. Ed Smith, 2007.
19. Allaa Kamil, 2007.
20. Nick Moffat, 2006.
21. Mathieu Verbaere, 2006.
22. Matthew Hague, 2006.
23. Jian Huang, 2005.
24. Ed Smith, 2005.

## Research Grants

1. Principal Investigator: The Leverhulme Trust, UK (Visiting Professor Philippe Schnoebelen), *Algorithmic Theory of Well-Structured Systems: Applications to Verification*, 2011 – 2012. **GBP 17,650.**
2. Co-Investigator: Engineering and Physical Sciences Research Council, UK (PI Daniel Kroening), *Verification of Shared-Memory Concurrent Software*, 2009 – 2013. **GBP 560,000.**

3. Principal Investigator, Leadership Fellowship: Engineering and Physical Sciences Research Council, UK, *Quantitative Verification: From Model Checking to Model Measuring*, 2009 – 2014. **GBP 1,005,000.**
4. Principal Investigator: Engineering and Physical Sciences Research Council, UK (Co-I's Andrzej Murawski and James Worrell), *Automated Verification of Probabilistic Programs*, 2009 – 2011. **GBP 360,000.**
5. Co-Investigator: Engineering and Physical Sciences Research Council, UK (PI Bob Coecke), *Complexity and Decidability in Unconventional Computational Models*, 2008 – 2011. **GBP 180,000.**
6. Principal Investigator: Engineering and Physical Sciences Research Council, UK, *Model-Checking Algorithms for Timed Systems*, 2007 – 2011. **GBP 135,000.**
7. Co-Investigator: Engineering and Physical Sciences Research Council, UK (PI Bill Roscoe, Co-I Gavin Lowe), *CSP Model Checking: New Technology and Techniques*, 2007 – 2011. **GBP 715,000.**
8. Supervisor, FP6 Marie Curie Intra-European Fellowship: European Commission (Fellow Patricia Bouyer), *Logical Languages for Embedded Systems*, 2006 – 2007. **EUR 47,000.**

## Software

1. APEX: A verification tool for probabilistic programs.
2. SLAP: A static livelock analyzer for CSP processes, now incorporated into FDR.
3. MAGIC: A model checker for sequential and concurrent C programs. (Implemented by S. Chaki.)

I have also contributed to:

4. UCLID: A verification tool for infinite-state systems. (Implemented by S. K. Lahiri and S. A. Seshia.)

## Publications

### • Refereed conference papers

1. M. Jenkins, J. Ouaknine, A. Rabinovich, and J. Worrell. The Church Synthesis Problem with metric. *Proceedings of the 20th Annual Conference on Computer Science Logic (CSL 11)*. 15 pages. Leibniz International Proceedings in Informatics 12, 2011.
2. F. Arends, J. Ouaknine, and C. W. Wampler. On searching for small Kochen-Specker vector systems. *Proceedings of the 37th International Workshop on Graph-Theoretic Concepts in Computer Science (WG 11)*. 12 pages. Lecture Notes in Computer Science 6986, Springer-Verlag, 2011.
3. J. Ouaknine, H. Palikareva, A. W. Roscoe, and J. Worrell. Static livelock analysis in CSP. *Proceedings of the 22nd International Conference on Concurrency Theory (CONCUR 11)*. 15 pages. Lecture Notes in Computer Science 6901, Springer-Verlag, 2011. **Winner of Best Paper Award.**
4. B. Cook, C. Haase, J. Ouaknine, M. Parkinson, and J. Worrell. Tractable reasoning in a fragment of Separation Logic. *Proceedings of the 22nd International Conference on Concurrency Theory (CONCUR 11)*. 15 pages. Lecture Notes in Computer Science 6901, Springer-Verlag, 2011.
5. S. Kiefer, A. Murawski, J. Ouaknine, B. Wachter, and J. Worrell. Language equivalence for probabilistic automata. *Proceedings of the 23rd International Conference on Computer-Aided Verification (CAV 11)*. 16 pages. Lecture Notes in Computer Science 6806, Springer-Verlag, 2011.
6. S. Kiefer, J. Ouaknine, J. Worrell, and L. Zhang. On stabilization in Herman's algorithm. *Proceedings of the 38th International Colloquium on Automata, Languages and Programming (ICALP 11)*. 12 pages. Lecture Notes in Computer Science 6756, Springer-Verlag, 2011.
7. T. Brihaye, L. Doyen, G. Geeraerts, J. Ouaknine, J.-F. Raskin, and J. Worrell. On reachability for hybrid automata over bounded time. *Proceedings of the 38th International Colloquium on Automata, Languages and Programming (ICALP 11)*. 12 pages. Lecture Notes in Computer Science 6756, Springer-Verlag, 2011.

8. D. Kroening, J. Ouaknine, O. Strichman, Thomas Wahl, and J. Worrell. Linear completeness thresholds for bounded model checking. *Proceedings of the 23rd International Conference on Computer-Aided Verification (CAV 11)*. 16 pages. Lecture Notes in Computer Science 6806, Springer-Verlag, 2011.
9. P. Hunter, P. Bouyer, N. Markey, J. Ouaknine, and J. Worrell. Computing rational radical sums in uniform  $TC^0$ . *Proceedings of the 30th Annual Conference of Foundations of Software Technology and Theoretical Computer Science (FSTTCS 10)*. 9 pages. Leibniz International Proceedings in Informatics 8, 2010.
10. M. Jenkins, J. Ouaknine, A. Rabinovich, and J. Worrell. Alternating timed automata over bounded time. *Proceedings of the 25th Annual IEEE Symposium on Logic in Computer Science (LICS 10)*. 10 pages. IEEE Press, 2010.
11. S. Göller, C. Haase, J. Ouaknine, and J. Worrell. Model checking succinct and parametric one-counter automata. *Proceedings of the 37th International Colloquium on Automata, Languages and Programming (ICALP 10)*. 12 pages. Lecture Notes in Computer Science 6199, Springer-Verlag, 2010.
12. H. Palikareva, J. Ouaknine, and A. W. Roscoe. Faster FDR counterexample generation using SAT-solving. *Proceedings of the 9th International Workshop on Automated Verification of Critical Systems (AVOCS 09)*. 15 pages. Electronic Communications of the EASST, 2009.
13. J. Ouaknine, A. Rabinovich, and J. Worrell. Time-bounded verification. *Proceedings of the 20th International Conference on Concurrency Theory (CONCUR 09)*. 15 pages. Lecture Notes in Computer Science 5710, Springer-Verlag, 2009.
14. C. Haase, S. Kreutzer, J. Ouaknine, and J. Worrell. Reachability in succinct and parametric one-counter automata. *Proceedings of the 20th International Conference on Concurrency Theory (CONCUR 09)*. 15 pages. Lecture Notes in Computer Science 5710, Springer-Verlag, 2009.
15. P. Bouyer, N. Markey, J. Ouaknine, and J. Worrell. On expressiveness and complexity in real-time model checking. *Proceedings of the 35th International Colloquium on Automata, Languages and Programming (ICALP 08)*. 12 pages. Lecture Notes in Computer Science 5126, Springer-Verlag, 2008.
16. A. Legay, A. S. Murawski, J. Ouaknine, and J. Worrell. On automated verification of probabilistic programs. *Proceedings of the 14th International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS 08)*. 15 pages. Lecture Notes in Computer Science 4963, Springer-Verlag, 2008.
17. P. Bouyer, N. Markey, J. Ouaknine, Ph. Schnoebelen, and J. Worrell. On termination for faulty channel machines. *Proceedings of the 25th International Symposium on Theoretical Aspects of Computer Science (STACS 08)*. 12 pages. 2008.
18. P. A. Abdulla, J. Ouaknine, K. Quaas, and J. Worrell. Zone-based universality analysis for single-clock timed automata. *Proceedings of the IPM International Symposium on Fundamentals of Software Engineering (FSEN 07)*. 15 pages. Lecture Notes in Computer Science 4767, Springer-Verlag, 2007.
19. S. Adams, J. Ouaknine, and J. Worrell. Undecidability of universality for timed automata with minimal resources. *Proceedings of the 5th International Conference on Formal Modelling and Analysis of Timed Systems (FORMATS 07)*. 14 pages. Lecture Notes in Computer Science 4763, Springer-Verlag, 2007.
20. P. Bouyer, N. Markey, J. Ouaknine, and J. Worrell. The cost of punctuality. *Proceedings of the 22nd Annual IEEE Symposium on Logic in Computer Science (LICS 07)*. 10 pages. IEEE Press, 2007.
21. R. Lazic, T. Newcomb, J. Ouaknine, A. W. Roscoe, and J. Worrell. Nets with tokens which carry data. *Proceedings of the 28th International Conference on Application and Theory of Petri Nets (ICATPN 07)*. 20 pages. Lecture Notes in Computer Science 4546, Springer-Verlag, 2007.
22. R. E. Bryant, D. Kroening, J. Ouaknine, S. A. Seshia, O. Strichman, and B. Brady. Deciding bit-vector arithmetic with abstraction. *Proceedings of the 13th International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS 07)*. 15 pages. Lecture Notes in Computer Science 4424, Springer-Verlag, 2007.

23. J. Ouaknine and J. Worrell. On Metric Temporal Logic and faulty Turing machines. *Proceedings of Foundations of Software Science and Computation Structures (FOSSACS 06)*. 14 pages. Lecture Notes in Computer Science 3921, Springer-Verlag, 2006.
24. J. Ouaknine and J. Worrell. Safety Metric Temporal Logic is fully decidable. *Proceedings of the 12th International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS 06)*. 15 pages. Lecture Notes in Computer Science 3920, Springer-Verlag, 2006.
25. J. Ouaknine and S. Schneider. Timed CSP: A retrospective. *Proceedings of the Workshop on Algebraic Process Calculi: The First Twenty Five Years and Beyond*. 5 pages. Electronic Notes in Theoretical Computer Science 162, Elsevier, 2006.
26. I. Lynce and J. Ouaknine. Sudoku as a SAT problem. *Proceedings of the Ninth International Symposium on Artificial Intelligence and Mathematics (AIMATH 06)*. 9 pages. 2006.
27. M. Stokely, S. Chaki, and J. Ouaknine. Parallel assignments in software model checking. *Proceedings of the International Workshop on Software Verification and Validation (SVV 05)*. 17 pages. Electronic Notes in Theoretical Computer Science 157(1), Elsevier, 2006.
28. S. Chaki, E. M. Clarke, O. Grumberg, J. Ouaknine, N. Sharygina, T. Touili, and H. Veith. State/event software verification for branching-time specifications. *Proceedings of the 5th International Conference on Integrated Formal Methods (IFM 05)*. 17 pages. Lecture Notes in Computer Science 3771, Springer-Verlag, 2005.
29. A. S. Murawski and J. Ouaknine. On probabilistic program equivalence and refinement. *Proceedings of the 16th International Conference on Concurrency Theory (CONCUR 05)*. 15 pages. Lecture Notes in Computer Science 3653, Springer-Verlag, 2005.
30. P. A. Abdulla, J. Deneux, J. Ouaknine, and J. Worrell. Decidability and complexity results for timed automata via channel machines. *Proceedings of the 32nd International Colloquium on Automata, Languages and Programming (ICALP 05)*. 12 pages. Lecture Notes in Computer Science 3580, Springer-Verlag, 2005.
31. J. Ouaknine and J. Worrell. On the decidability of Metric Temporal Logic. *Proceedings of the 20th Annual IEEE Symposium on Logic in Computer Science (LICS 05)*. 10 pages. IEEE Press, 2005.
32. G. Lowe and J. Ouaknine. On timed models and full abstraction. *Proceedings of the 21st Conference on the Mathematical Foundations of Programming Semantics (MFPS 05)*. 20 pages. Electronic Notes in Theoretical Computer Science 155, Elsevier, 2006.
33. D. Kroening, J. Ouaknine, S. Seshia, and O. Strichman. Abstraction-based satisfiability solving of Presburger arithmetic. *Proceedings of the 16th International Conference on Computer-Aided Verification (CAV 04)*. 13 pages. Lecture Notes in Computer Science 3114, Springer-Verlag, 2004.
34. J. Ouaknine and J. Worrell. On the language inclusion problem for timed automata: Closing a decidability gap. *Proceedings of the 19th Annual IEEE Symposium on Logic in Computer Science (LICS 04)*. 10 pages. IEEE Press, 2004.
35. S. Chaki, E. M. Clarke, J. Ouaknine, and N. Sharygina. Automated, compositional and iterative deadlock detection. *Proceedings of the 2nd ACM-IEEE International Conference on Formal Methods and Models for Codesign (MEMOCODE 04)*. 10 pages. OMNI Press, 2004.
36. M. W. Mislove, J. Ouaknine, D. Pavlovic, and J. Worrell. Duality for labelled Markov processes. *Proceedings of Foundations of Software Science and Computation Structures (FOSSACS 04)*. 15 pages. Lecture Notes in Computer Science 2987, Springer-Verlag, 2004.
37. S. Chaki, E. M. Clarke, J. Ouaknine, N. Sharygina, and N. Sinha. State/event-based software model checking. *Proceedings of the 4th International Conference on Integrated Formal Methods (IFM 04)*. 20 pages. Lecture Notes in Computer Science 2999, Springer-Verlag, 2004.
38. E. M. Clarke, D. Kroening, J. Ouaknine, and O. Strichman. Completeness and complexity of bounded model checking. *Proceedings of the 5th International Conference on Verification, Model Checking and Abstract Interpretation (VMCAI 04)*. 12 pages. Lecture Notes in Computer Science 2937, Springer-Verlag, 2004.

39. M. W. Mislove, J. Ouaknine, and J. Worrell. Axioms for probability and nondeterminism. *Proceedings of the 10th International Workshop on Expressiveness in Concurrency (EXPRESS 03)*. 22 pages. Electronic Notes in Theoretical Computer Science 96, Elsevier, 2004.
40. S. Chaki, J. Ouaknine, K. Yorav, and E. M. Clarke. Automated compositional abstraction refinement for concurrent C programs: A two-level approach. *Proceedings of the Workshop on Software Model Checking (SoftMC 03)*. 16 pages. Electronic Notes in Theoretical Computer Science 89(3), Elsevier, 2003.
41. J. Ouaknine and J. Worrell. Revisiting digitization, robustness, and decidability for timed automata. *Proceedings of the 18th Annual IEEE Symposium on Logic in Computer Science (LICS 03)*. 10 pages. IEEE Press, 2003.
42. F. van Breugel, M. W. Mislove, J. Ouaknine, and J. Worrell. An intrinsic characterization of approximate probabilistic bisimilarity. *Proceedings of Foundations of Software Science and Computation Structures (FOSACS 03)*. 15 pages. Lecture Notes in Computer Science 2620, Springer-Verlag, 2003.
43. J. Ouaknine and J. Worrell. Universality and language inclusion for open and closed timed automata. *Proceedings of the 6th International Workshop on Hybrid Systems: Computation and Control (HSCC 03)*. 14 pages. Lecture Notes in Computer Science 2623, Springer-Verlag, 2003.
44. E. M. Clarke, M. Kohlhase, J. Ouaknine, and K. Sutner. System description: Analytica 2. *Proceedings of the 11th Symposium on the Integration of Symbolic Computation and Mechanized Reasoning (CALCULEMUS 03)*. 5 pages. Laboratoire d'Informatique de Paris 6, 2003.
45. K. Martin and J. Ouaknine. Informatic vs. classical differentiation on the real line. In *Proceedings of Workshop Domains VI*. 8 pages. Electronic Notes in Theoretical Computer Science 73, Elsevier, 2004.
46. J. Ouaknine and J. Worrell. Timed CSP = closed timed automata. *Proceedings of the 9th International Workshop on Expressiveness in Concurrency (EXPRESS 02)*. 18 pages. Electronic Notes in Theoretical Computer Science 68(2), Elsevier, 2002.
47. J. Ouaknine. Digitisation and full abstraction for dense-time model checking. *Proceedings of the 8th International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS 02)*. 15 pages. Lecture Notes in Computer Science 2280, Springer-Verlag, 2002.
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#### Extra-curricular Activities

<b>United States Chess Federation ranking among top 500 American players</b>	<b>1992 – 1995</b>
<b>Oxford University Varsity Chess Team Member</b>	<b>1995 – 1999</b>
Represented Oxford in annual match vs. Cambridge University (Games published in <i>The Times</i> , <i>The Daily Telegraph</i> , <i>The Independent</i> ).	
<b>McGill University Chess Team Member</b>	<b>1994</b>
Represented McGill at the Pan-American Inter-University Chess Championship.	
<b>Québec Under-20 Open Chess Championship, winner</b>	<b>1988, 1989</b>

#### References

Available upon request.