

# Andrea Cerone

Post-doctoral Researcher

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*A formal manipulator in mathematics often experiences the  
discomforting feeling that his pencil surpasses him in  
intelligence (Howard W. Eves)*

## Education

- April 2009 - **Ph.D. in Computer Science**, *Trinity College Dublin*, (IE).  
November 2012 Supervisor: Prof. Matthew Hennessy.  
Thesis title: *Foundations of Ad Hoc Wireless Networks*.  
Available at <http://software.imdea.org/~andrea.cerone/works/thesis.pdf>.
- February 2007 - **Laurea Magistrale (M.Sc. Equivalent) in Computer Science**, *Sapienza Università di Roma*, (IT), *110/110* cum Laudae.
- December 2008 Relevant courses: Computational models, Concurrency Theory, Advanced Programming, Semantics of Programming languages, Computer Security, Language Based Security, Cryptography, Distributed Systems.  
Thesis title: *Un Approccio Incrementale alla Semantica della Sicurezza*.  
Supervisor: Dr. Pietro Cenciarelli.
- September 2003- **Laurea Triennale (B.Sc. Equivalent) in Computer Science**, *Sapienza Università di Roma*, (IT), *110/110* cum Laudae.
- February 2007 Relevant courses: Computability and complexity, Operating Systems, Computer Networks, Databases, Probability Theory, Algebra, Math Logic.

## Research Experience

- June 2013 → **Post-doctoral Researcher**, *The IMDEA Software Institute*, Madrid (ES).  
Supervisor: Dr. Alexey Gotsman.  
Research topics: Verification of Higher Order Concurrent Libraries, Foundations of Consistency Models for Distributed Databases.
- August 2012- **Post-doctoral Researcher**, *Trinity College Dublin*, (IE).  
May 2013 Supervisor: Prof. Matthew Hennessy.  
Research topic: Process Algebras for Wireless Networks and Distributed Systems.
- January 2009- **Research Assistant**, *Trinity College Dublin*, (IE).  
April 2009 Supervisor: Prof. Matthew Hennessy.  
Research topic: Modal Logics for Testing Preorders in Process Algebra.

## Journal Publications

- January 2015 **In Journal**, *A. Cerone and M. Hennessy and M. Merro*, Modelling MAC-layer Communications in Wireless Systems, **LMCS**, Volume 11, Issue 1, Paper 18.  
Available at: <http://arxiv.org/pdf/1411.0490.pdf>
- September 2013 **In Journal**, *A. Cerone and M. Hennessy*, Modelling Probabilistic Wireless Networks, **LMCS**, Volume 9, Issue 3, Paper 28.  
Available at: <http://arxiv.org/pdf/1309.4693.pdf>.

## International Conferences Proceedings

- July 2016 **To Appear**, *A. Cerone and A. Gotsman*, Analysing Snapshot Isolation, Selected for Publication at **PODC 2016**.

- October 2015 **In Proceedings**, A. Cerone and A. Gotsman and H. Yang, Transaction Chopping for Parallel Snapshot Isolation, presented at **DISC 2015**.  
Available at: <http://software.imdea.org/~andrea.cerone/works/PSIchopping.pdf>.
- September 2015 **In Proceedings**, A. Cerone and G. Bernardi and A. Gotsman, A Framework for Transactional Consistency Models with Atomic Visibility, presented at **CONCUR 2015**.  
Available at: <http://software.imdea.org/~andrea.cerone/works/Framework.pdf>.
- September 2014 **In Proceedings**, A. Cerone and M. Hennessy, Characterising Testing Preorders for Broadcasting Distributed Systems, presented at **TGC 2014**.  
Available at: <http://software.imdea.org/~andrea.cerone/works/TGC14extended.pdf>.
- July 2014 **In Proceedings**, A. Cerone and A. Gotsman and H. Yang, Parameterised Linearisability, presented at **ICALP 2014**.  
Available at:  
<http://software.imdea.org/~andrea.cerone/works/ParameterisedLinearisability.pdf>.
- June 2013 **In Proceedings**, A. Cerone and M. Hennessy and M. Merro, Modelling Mac-Layer Communications in Wireless Networks (Extended Abstract), presented at **COORDINATION 2013**.  
Available at: <http://software.imdea.org/~andrea.cerone/works/CCCP.pdf>.
- June 2012 **In Proceedings**, A. Cerone and M. Hennessy, Modelling Probabilistic Wireless Networks (Extended Abstract), presented at **FMOODS/FORTE 2012**.  
Available at:  
<http://software.imdea.org/~andrea.cerone/works/ProbabilisticWirelessNetworks.pdf>.
- September 2010 **In Proceedings**, A. Cerone and M. Hennessy, Process Behaviour: Formulae vs. Tests (Extended Abstract), presented at **Express 2010**.  
Available at <http://arxiv.org/abs/1011.6438>

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## Teaching Experience

- 2011 **Demonstrator**, *Trinity College Dublin*, (IE), Course CS 1011/1012, **Introduction to Programming**.  
Assisted two groups of eight students each to learn the Java programming language, graded their assignments, prepared them to the final exam.
- 2010 and 2011 **Demonstrator**, *Trinity College Dublin*, (IE), Course CS3001, **Formal Methods**.  
Graded Assignments.
- 2010 **Demonstrator**, *Trinity College Dublin*, (IE), Course CS3002, **Theoretical Computer Science**.  
Delivered lectures to the students, focusing on the resolution of selected exercises.

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## Students Supervision

- October 2015 **Massimo Neri**, *Graduate student*, IMDEA Software Institute, Madrid (ES).  
- April 2016 Research Topic: implementation of consistency models for cloud databases.

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## Awards and Distinctions

- July 2016 **Best Paper Award**, *PODC - Principles Of Distributed Computing*.  
Prize awarded for the paper *Analysing Snapshot Isolation*.  
The authors have been invited to publish a full version of the paper in the Journal of the ACM.
- May 2015 **Participation at *by invitation only* seminar**, *Schloss Dagstuhl Seminar n. 15191*, Dagstuhl (DE).  
Title of the Seminar: Compositional Verification Methods for Next-Generation Concurrency.
- June 2013 **Best Paper Award**, *DisCoTec - International Series of Federated Conferences*.  
Prize awarded for the paper *Modelling Mac-Layer Communications in Wireless Systems (Extended Abstract)*.  
DisCoTec comprises three main conferences: COORDINATION, FMOODS/FORTE and DAIS.

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## Additional Training and Experience

- April 2016 **Imperial College London**, (EN), PaPoC 2016, Talk: *Analysing Snapshot Isolation*.
- February 2016 **Trinity College Dublin**, (IE), Invited Talk: *Analysing Transactional Consistency Models*.
- January 2016 **IMDEA Software Institute**, (ES), Talk: *Analysing Transactional Consistency Models*.
- January 2016 **Imperial College London**, (EN), Invited Talk: *Analysing Transactional Consistency Models*.
- January 2016 **University of Kent**, (EN), Invited Talk: *Analysing Transactional Consistency Models*.
- January 2016 **Microsoft Research Cambridge**, (EN), Invited Talk: *Analysing Transactional Consistency Models*.
- June 2015 **INRIA Grenoble**, (FR), FRIDA 2015, Talk: *Analysing and Optimising Parallel Snapshot Isolation*.
- May 2015 **Schloss Dagstuhl**, (DE), By invitation only seminar, n. 15191, Talk: *Analysing and Optimising Parallel Snapshot Isolation*.
- April 2015 **University of Bordeaux**, (FR), PaPoC 2015, Talk: *Analysing and Optimising Parallel Snapshot Isolation*.
- April 2015 **Microsoft Research - IMDEA Software Joint Center**, (ES), 2nd Collaboration Workshop, Talk: *Analysing and Optimising Parallel Snapshot Isolation*.
- February 2015 **IMDEA Software Institute**, (ES), Talk: *On Probabilistic, Broadcasting Distributed Systems*.
- January 2015 **IMT Lucca**, (IT), Invited talk: *Formalising and Optimising Parallel Snapshot Isolation*.
- June 2014 **Aarhus University**, (DK), Invited talk: *Parameterised Linearisability*.
- May 2014 **Trinity College Dublin**, (IE), Invited Talk: *Parameterised Linearisability*.
- May 2014 **University of York**, (EN), International Concurrency Workshop, Talk: *Parameterised Linearisability*.
- April 2014 **IMDEA Software Institute**, (ES), Talk: *Parameterised Linearisability*.
- January 2013 **IMDEA Software Institute**, (ES), Invited talk: *Testing Wireless Networks*.
- December 2012 **IMT Lucca**, (IT), Invited talk: *Testing Probabilistic Wireless Networks*.
- May 2012 **Sapienza Università di Roma**, (IT), Invited talk: *Foundations of ad Hoc Wireless Networks*.

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## Research Interests

- Cloud Databases
- Program Verification
- Weak Consistency
- Process Algebra

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## Computer Skills

Programming Languages C, Java, Coq

Word Processors Word Latex

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## Working Skills

- Teamworking
- Fast learning
- Capacity to work well under pressure and to deadlines
- Adaptability to new environments

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## Languages

Italian **Native Language**

English **Full Professional Proficiency**

Spanish **Professional Working Proficiency**