

CURRICULUM VITAE

LIGIA NICOLETA NISTOR

EDUCATION

August 2009-December 2017 Ph.D. in Computer Science, Carnegie Mellon University, USA. My advisor was Prof. Jonathan Aldrich. My thesis was titled *Object Propositions*.

October 2008- August 2009 MSc degree in Computer Science, University of Oxford, United Kingdom. My MSc thesis was supervised by Prof. Luke Ong and was titled *Model-Checking Higher-Order Recursion Schemes*.

September 2004- July 2008 Bachelor Degree in Computer Science at the University of Bucharest. Average mark over 4 years: 9.94/10. My final thesis was titled *Java 3D API*, under the supervision of Prof. Horia Georgescu.

January-June 2006 Erasmus scholarship in Computer Science at the University of Bristol, UK.

2000-2004 *Inochentie Micu Clain* High School, Blaj, Romania. I was in the Mathematics-Computer Science department.

WORK HISTORY

January 2014-present I am working as a software engineer for Oracle Corporation in Cambridge, MA. I work on the EQL query language, for our Big Data Discovery product. I implement new features of the query language, work on the planning and execution details of a query, on the distributed execution of a query, the resource management and the connections between multiple nodes of the cluster where the query is run. I solve problems that our customers report. I work in C++.

May 2012-August 2012 I was an engineering intern at Duolingo. I wrote code in Python, SQLAlchemy, jQuery that was used to connect the web interface with the database. I also helped with the design process and I advertised the Duolingo services on Facebook and Twitter.

May 2010-August 2010 I was a research intern at SRI International. I used the formal verification system PVS to write automatic proofs of linear algebra properties.

July 2007- Sept. 2008 I was a Software Engineer for the international company SC AXWAY ROMANIA SRL. I was in the Installer team of the company. I designed installation kits in the programming language Java and in Python, I wrote documentation and I tested the installation kits on different machines.

SKILLS & HOBBIES

The programming languages/systems that I know are: C++, Java, Python, C, PHP, JavaScript, OCaml, SML, HTML, CSS, C#, Turbo Pascal, SQL, ASP.NET, Matlab, Microsoft Office (Word, Excel, PowerPoint, Access).

In 2012-2013 I was a staff writer for The Tartan, the CMU student newspaper. I wrote for the Science&Technology section.

I enjoy long distance running, reading and painting.

PUBLICATIONS

- Ligia Nistor, **Resource Management in the Oracle Big Data Discovery Query Engine (poster)**, *North East Database Day* 2016.

- Ligia Nistor, **How to Run a Query in Distributed Mode - An Aspect (poster)**, *North East Database Day* 2016.
- Ligia Nistor, **The Oprop Verification Tool: Object Propositions in Action**, *SPLASH Student Research Competition* 2015.
- Mashhood Ishaque, Ligia Nistor and Kevin Backhouse, **Applying Streaming Algorithms to Data at Rest (poster)**, *New England Database Day* 2015.
- Ligia Nistor and Jonathan Aldrich, **Using Machine Learning in the Automatic Translation of Object Propositions**, *AI4FM*, 2014.
- Cyrus Omar, Darya Kurilova, Ligia Nistor, Benjamin Chung, Alex Potanin and Jonathan Aldrich, **Safely Composable Type-Specific Languages**, *ECOOP*, 2014.
- Ligia Nistor, Jonathan Aldrich, Stephanie Balzer and Hannes Mehnert, **Object Propositions**, *19th International Symposium on Formal Methods*, 2014.
- Ligia Nistor, Darya Kurilova, Stephanie Balzer, Benjamin Chung, Alex Potanin and Jonathan Aldrich, **Wyvern: A Simple, Typed, and Pure Object-Oriented Language**, *International Workshop on Mechanisms for Specialization, Generalization and Inheritance (MASPEGHI)*, 2013.
- Ligia Nistor and Jonathan Aldrich, **Verifying Object-Oriented Code Using Object Propositions**, *International Workshop on Aliasing, Confinement and Ownership*, 2011.
- Sarah M. Loos, Andre Platzer, and Ligia Nistor, **Adaptive Cruise Control: Hybrid, Distributed, and Now Formally Verified**, *17th International Symposium on Formal Methods*, 2011.
- Tanu Malik, Ligia Nistor, and Ashish Gehani, **Tracking and Sketching Distributed Data Provenance**, *6th IEEE International Conference on e-Science*, 2010.

TEACHING EXPERIENCE

Fall 2012 I was a teaching assistant for the CMU course *Parallel & Sequential Data Structures and Algorithms*.

Summer 2012 I was an instructor at the IDEA MATH summer camp. I taught the course Probabilistic Model Checking. I prepared the curriculum for the course and was the sole instructor.

Fall 2011 I was a teaching assistant for the CMU course *Introduction to Functional Programming*. I held weekly office hours, I graded homeworks and exams, I designed problems for take-home assignments.

CERTIFICATES, AWARDS

2015 I received an ACM scholarship to attend the SPLASH Student Research Competition.

2012 I was part of the team that won second place at the Social Innovation Solutions Challenge 2012. Our team designed an innovative health care product for inner-city Americans.

2011 I received scholarships to attend the conferences **ECOOP** and **OOPSLA 2011**.

2009 I am a recipient of the **Google EMENA Anita Borg Scholarship 2009**

2009 I received a **full scholarship to attend the Grace Hopper Conference**, held in Tucson, Arizona, USA.

2009 I received full scholarship to attend the **BCSWomen Lovelace Colloquium**, held at University of Leeds, UK, in April 2009. I have presented a poster.

2008 I received the **Scathered European Scholarship** given by the University of Oxford for the academic year 2008/2009.

2005-2007 Each year, I received the Scholarship for Studies given by the University of Bucharest for academic performance.

2000-2004 I participated and won prizes in numerous Mathematical contests, such as : National Olympiad of Mathematics, Annual Contest of the *Gazeta Matematica* journal, *Gheorghe Titeica* contest, National Mathematical Contest *Laurentiu Duican*

2000 I obtained 1st place at the regional contest *The Friends of French*, Oradea, Romania