

Pavel Avgustinov

Personal Information

Nationality: Bulgarian
Date of Birth: 12 July 1983
Place of Birth: Sofia
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Magdalen College
High Street
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United Kingdom

Education

- **Oxford University, Magdalen College and (from 2007) Christ Church**
 - Doctorate in Aspect-Oriented Programming. October 2005 — Present
Specialising in the applications of trace monitoring to Runtime Verification. Anticipated completion in summer 2008.
- **Oxford University, Magdalen College**
 - BA Mathematics and Computation. October 2002 — June 2005
Result: **First class** with honours, **BT Technology and Research Prize** for best overall performance in Mathematics and Computer Science.
- **Gymnasium am Rotenbühl, Saarbrücken**
 - German Abitur. Overall mark: 1.0* September 1993 — June 2002
Marks in especially examined subjects (A-level equivalents): Mathematics: 15[†], English: 15[†], Latin: 15[†], Politics: 15[†]

Work Experience

- **Software Engineer** January 2007 — present
Semmler Ltd. (<http://semmler.com>), developing novel technologies for querying structured data with particular application to code exploration and maintenance.
- **Tutor at Oxford University** December 2006 — present
Undergraduate admissions, class teaching (*e.g.* Abstract Algebra, Linear Algebra, Networks & Operating Systems, Object-Oriented Design)
- **Programmer** July 2004 — September 2005
Oxford University Computing Laboratory, Programming Tools Research Group — supervised by Prof. Oege de Moor. Worked on the implementation of *abc*, an optimising, extensible AspectJ compiler (available from <http://aspectbench.org>).
- **Freelance Programmer** August 2002 — September 2004, during holidays
DIALOGIKA GmbH (Saarbrücken, <http://dialogika.de>). Work on various projects of the company, including a document preparation system for the European Parliament and Council, and the database back-end of Luxembourg's social security system.

*The German marking system for overall Abitur grades ranges from 1.0 (best) to 4.0 (worst).

†The German marking system for individual subjects ranges from 15 (best) to 0 (worst).

Awards/Publications

- **Refereed Conference Papers**

Selected papers co-authored with members of the Programming Tools Research Group at Oxford University (see <http://progtools.comlab.ox.ac.uk/members/pavel> for a complete list):

- Type Inference for Datalog, and its Application to Query Optimisation PODS 2008
- Adding Magic to an Optimising Datalog Compiler SIGMOD 2008
- Modularity First: A Case for Mixing AOP and Attribute Grammars AOSD 2008
- Making Trace Monitoring Feasible OOPSLA 2007
- Semantics of Static Pointcuts in AspectJ POPL 2007
- Adding Open Modules to AspectJ AOSD 2006
- Adding Trace Matching with Free Variables to AspectJ OOPSLA 2005
- *abc*: the AspectBench Compiler for AspectJ GPCE 2005
- Optimising AspectJ PLDI 2005
- *abc*: An Extensible AspectJ Compiler AOSD 2005

- **Refereed Journal Papers**

- *abc*: an Extensible AspectJ Compiler TAOSD 2006

- **Technical Reports**

List of technical reports is available at <http://abc.comlab.ox.ac.uk/techreports>.

- **Senior Scholar of Christ Church** 2007 — present
- **Dulverton Scholar** 2003 — 2004

Qualifications and Interests

- **Computer Science, Software Engineering and IT**

- **Research interests:** Extensible languages and compilers, runtime verification, program instrumentation and analysis, automatic test generation, declarative formalisms, deductive databases.
- **Languages:** Java, C++, C, AspectJ, Ruby, Haskell, Perl, PHP, various BASIC dialects and scripting languages, HTML, XML and others.
- **Technologies:** Object-oriented programming and design, compiler construction, aspect-oriented programming, functional programming, design patterns, runtime verification *etc.*
- **Software:** Windows, Unix/Linux, Office, Maple, Mathematica, most standard packages. Experience administrating Windows and Unix servers (web, mail and file servers *etc.*).
- **Theory:** Formal methods, programming language design and semantics, complexity.

- **Languages:** Bulgarian, Russian, German, English (up to native standard); French, Spanish, Latin (working knowledge).

- **Leisure interests:** Music (playing the piano, listening), reading, photography, basketball, chess.

Pavel Avgustinov, July, 2008