Aleksey Nogin — Curriculum Vitae

Department of Computer Science
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Visa Status US Permanent Resident ("green card" holder)

Education

Cornell University **Ithaca, NY**
August 2002 (expected): **Ph.D.** in Computer Science
May 2000: **M.S.** in Computer Science

Moscow State University **Moscow, Russia**
June 1997: **Diploma with honors** Faculty of Mechanics and Mathematics, Division of Mathematics,
Major: Mathematics, Applied Mathematics

Research Areas

Development of systems for computer-aided software verification and formal reasoning, including logical frameworks and logical programming environments. Theoretical aspects of such systems, including theory of types and its applications.

Research Experience

Cornell University **Ithaca, NY**
Since August 1997: **Research Assistant** with Prof. Robert Constable
Research Projects: Coordinated development of the MetaPRL system. Improved the logical speed of the system by two orders of magnitude. Worked to improve the type theory to increase accessibility to both automated systems and users.

Community services: Administration of Linux servers for the Cornell PRL group.

California Institute of Technology **Pasadena, CA**
July–August 2000: Visitor with Prof. Jason Hickey

9/1992-6/1997 **Moscow State University** **Moscow, Russia**
September 1995 – June 1997: Laboratory for Logical Problems in Computer Science
(headed by Prof. Sergei Artemov)
September 1994 – June 1997: Department of Mathematical Logic and Theory of Algorithms
Advisor: Prof. Alexander Razborov
May 1997: **Diploma Thesis** *Improving the Efficiency of NuPRL Proofs*
May 1996: **Term Paper** *On Intuitionistic Propositional Proof Systems*
May 1995: **Term Paper** *On Horn Interpolation in Linear Logic*

Teaching

Cornell University **Ithaca, NY**
Spring 2002: **TA**, undergraduate CS course "Structure and Interpretation of Computer Programs"
Fall 2000: **Instructor**, undergraduate CS course "Introduction to Unix"
Spring 1998: **TA**, undergraduate CS course "Structure and Interpretation of Computer Programs"
Fall 1997: **TA**, undergraduate CS course "Introduction to Theory of Computing (Honors)"

Publications

Aleksey Nogin. Quotient types: A modular approach. Accepted to TPHOLs 2002 conference. Department of Computer Science TR2002-1869, Cornell University, April 2002.

Aleksey Nogin and Jason Hickey. Sequent schema for derived rules. Accepted to TPHOLs 2002 conference.

Alexei Kopylov and Aleksey Nogin. Markov's principle for propositional type theory. In L. Fribourg, editor, *Computer Science Logic, Proceedings of the 10th Annual Conference of the EACSL*, volume 2142 of *Lecture Notes in Computer Science*, pages 570–584. Springer-Verlag, 2001.

Stephan Schmitt, Lori Lorigo, Christoph Kreitz, and Aleksey Nogin. JProver: Integrating connection-based theorem proving into interactive proof assistants. In *International Joint Conference on Automated Reasoning*, volume 2083 of *Lecture Notes in Artificial Intelligence*, pages 421–426. Springer-Verlag, 2001.

Jason J. Hickey and Aleksey Nogin. Fast tactic-based theorem proving. In J. Harrison and M. Aagaard, editors, *Theorem Proving in Higher Order Logics: 13th International Conference, TPHOLs 2000*, volume 1869 of *Lecture Notes in Computer Science*, pages 252–266. Springer-Verlag, 2000.

Aleksey Nogin. Writing constructive proofs yielding efficient extracted programs. In Didier Galmiche, editor, *Proceedings of the Workshop on Type-Theoretic Languages: Proof Search and Semantics*, volume 37 of *Electronic Notes in Theoretical Computer Science*. Elsevier Science Publishers, 2000.

Aleksey Nogin. Improving the efficiency of NuPRL proofs. Department of Computer Science TR97-1643, Cornell University, August 1997.

Aleksey Nogin. On Horn interpolation in linear logic. Mathematical Logic and Theoretical Computer Science Prepublication Series 1995-11, Steklov Mathematical Institute, April 1995. In Russian.

Awards

1996: Grant from International Soros Science Educational Program ("Soros Student")
9/1994–6/1995: Grant from International Soros Science Educational Program ("Soros Student")
July 1992: 33rd International Mathematical Olympiad, Silver Medal
April 1992: Inter-republic Mathematical Olympiad, Diploma of IInd Degree ("silver medal")
April 1991: USSR Mathematical Olympiad, Diploma of Ist Degree ("gold medal")

Talks

September 2001: Computer Science Logic — 10th Annual Conference of the EACSL, Paris, France
September 2001: Logic Seminar Series, Department of Informatics of Saarland University and MPI Institute, Saarbrücken, Germany
1998 – 2001: PRL Group Seminar, Cornell University: over 15 presentations
August 2000: Theorem Proving in Higher Order Logics, 13th International Conference, Portland, OR
June 2000: Workshop on Type-Theoretic Languages: Proof Search and Semantics, Pittsburgh, PA
March 2000: Seminar "Logical Problems in Computer Science", Department of Mathematical Logic and Theory of Algorithms, Faculty of Mathematics and Mechanics, Moscow State University, Moscow, Russia
May 1997: Student Conference, Faculty of Mathematics and Mechanics, Moscow State University, Moscow, Russia
May 1995: Student Conference, Faculty of Mathematics and Mechanics, Moscow State University, Moscow, Russia

Other

Member of RedHat Linux Beta Testing Team
Contributor for Mozilla and other Open Source projects

References

Prof. Robert L. Constable
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Prof. Jason J. Hickey
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Pasadena, CA 91125
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Prof. Vladimir N. Krupski
Department of Mathematical Logic and Theory of Algorithms
Faculty of Mechanics and Mathematics
Moscow State University
Vorob'evy Gory, V-234 Moscow, GSP-3, 119899 RUSSIA
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