

Arsen ELKIN

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SUMMARY

- ✓ Highly skilled and passionate backend engineer.
- ✓ Has strong mathematical and analytical skills.
- ✓ Possesses strong knowledge of distributed and parallel programming, including MapReduce.

WORK EXPERIENCE

- JUN 2012-CURRENT** Software Engineer at **GOOGLE**
Maintain and improve keyword generation backend that serves multiple AdWords frontends, including Dynamic Search Ads, Keyword Planner, Opportunities Tab.
- Made substantial improvements to generated keyword relevance.
 - Designed and launched a system for suggestion quality maintenance.
 - Implemented tools for rapid quality experimentation and exploration.
 - Made efficiency improvements, substantially increasing backend's throughput.
 - Researched and implemented multiple suggestion quality improvements.
- FEB 2010-APR 2012** Marie Curie Incoming International Fellow at **UNIVERSITY OF WARWICK**
- Performed research on moduli spaces of hyperelliptic curves in positive characteristic.
 - Discovered a large number of new Belyi curves using code written in MAGMA.
- AUG 2009-DEC 2009** Lecturer at **UNIVERSITY OF NORTHERN COLORADO**
Lecturer at **COLORADO STATE UNIVERSITY**
- Taught a graduate course on Modular Forms.
 - Member of the committee to improve Calculus instruction.
- AUG 2006-MAY 2009** Postdoctoral Fellow at **COLORADO STATE UNIVERSITY**
- Taught undergraduate and graduate courses, including elliptic curves and cryptography.
 - Coded computations of de Rham cohomology on Artin-Schreier curves in MAGMA.
- AUG 2005-JUN 2006** Postdoctoral Fellow at **HEBREW UNIVERSITY OF JERUSALEM**
- Conducted research in Algebraic Geometry resulting in publications.

EDUCATION

- AUGUST 2005** Ph.D. in **MATHEMATICS**, **Pennsylvania State University**.
Thesis: "Hyperelliptic Jacobians with Real Multiplication."
- JULY 1999** B.S. in **MATHEMATICS**, **Pennsylvania State University**. GPA: 3.7/4.0
- 1994 - 1997** **COMPUTER SCIENCE** Major, **California State University**, Los Angeles. GPA: 3.8/4.0

TECHNICAL SKILLS

Fluent: C++11, Parallel/Distributed Programming, MapReduce.
Familiar: C, Python, Go, Java, R, Bash, SQL, Git.

SELECTED PUBLICATIONS

- 2013 Ekedahl-Oort strata of hyperelliptic curves in characteristic two. (with Rachel Pries)
- 2010 The rank of the Cartier operator on cyclic covers of the projective line.
- 2006 Hyperelliptic jacobians with real multiplication.

INTERESTS AND ACTIVITIES

- Dancing Avid blues and swing dancer.
Introduced blues dancing to West Midlands, UK and Krakow, Poland.
Co-organizer for BluesQuake 2013 in San Francisco.
- Languages Fluent in English and Russian.