Andrew Soffer — Résumé

CONTACT INFORMATION

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EDUCATION

University of California Los Angeles, Los Angeles, CA **August 2011 – Present**
Ph.D. Student in Mathematics
Advisor: Igor Pak
Research interests: Algebraic combinatorics, group theory, representation theory.

Washington University, Saint Louis, MO **Graduated May 2011**

- B.A. in Mathematics, minor in Computer science
- GPA: 3.96/4.00 in math, 3.80/4.00 overall
- Summa Cum Laude, Honors in Mathematics
- William Lowell Putnam Mathematics Competition Honorable Mention **December 2009**
  Score: 60/120, National rank: 44/4036
- Arthur Holly Compton Fellow **2007 – 2011**

PROGRAMMING EXPERIENCE

Languages/programming: C++, Java, Javascript, Mathematica, PHP, Python

Projects:

- *KnowMSG (Know More Simple Groups)*:
  A web application that determines, with proof, if there exist simple groups of a given finite order.
- *PGCC (Pattern Group Conjugacy Computer)*:
  Console application which computes the number of conjugacy classes in pattern groups over finite fields, as a function of the field size.

Directors Summer Program, National Security Agency **May 2010 – August 2010**

- Analyzed cryptographic primitives using algebra, number theory, and probability theory.
- Used Python, C, and C++ to extend an existing databse of code.
- Findings refereed and published internally at the N.S.A.
- Briefed John Chris Inglis, Deputy Director of N.S.A.

RESEARCH

Preprints

1. Soffer, A. *Upper bounds on the number of conjugacy classes in unitriangular groups*, 2014. http://arxiv.org/abs/1411.5389.
2. Pak, I. and Soffer, A. *Co-adjoint orbits and pattern groups*, in preparation.

TEACHING EXPERIENCE

Teaching Assistant **Sepctember 2011 – Present**
Courses taught include: Introductory and intermediate C++, probability, combinatorics, linear algebra, abstract algebra, and calculus.

Hampshire College Summer Studies in Mathematics (HCSSiM) **Summer 2009, 2011**

- Taught courses in combinatorics, and probability in coordination with two other instructors.
- Taught combinatorial game theory course (2009) and geometric constructibility (2011).

PROFESSIONAL SERVICE

American Regions Mathematics League (ARML) **2008 – Present**
Member of the problem-writing committee, which is tasked with writing questions for the ARML competition, an annual national math competition for high school students.