Andrew B. Maurer

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Contact Info

Boyd Graduate Research Studies
Department of Mathematics
Athens, Georgia, 30602

http://andrewmaurer.github.io
andrew.b.maurer@gmail.com

Summary

Motivated and independent mathematician with broad interests in technical fields looking for a ***Summer 2017 internship*** *involving data, statistical inference, and communication.*

• *Mathematical research experience.* Participated in mathematical research since summer 2012. Strong programming and technical skills.

• *Degrees.* Mathematics BS, computer science minor (2014). Ph.D. in mathematics (expected 2019). Coursework toward statistics MS (started 2017).

•*Teaching.* Many semesters as primary TA and lecturer for fundamental math courses. Reflected in ability to communicate technical concepts clearly.

Education

University of Georgia — Athens, Georgia

Mathematics, Ph.D Candidate — *Expected 2019*

Advisor: Daniel K. Nakano. Research topic: Representation theory of Lie superalgebras. Proved theorem on finite generation of relative cohomology, a continuation of a narrative in the literature.

Statistics, MS — *Expected 2019*

Beginning coursework in nonparametric data analysis and applied regression analysis.

University of Massachusetts — Amherst, Massachusetts

Mathematics, Bachelor of Science. Computer Science, Minor. — *2010 – 2014*

Advisor: Farshid Hajir. Research topic: Hasse-Witt invariants of Jacobi polynomials. Used programming to investigate behavior of a family of polynomials. Motivated by work of W. Feit.

Skills

- **Programming:** *General Programming:* Python, Java. *Mathematical Programming:* Sage, GP/Pari. *Statistical Programming:* learning R, learning SciPy stack.
- **Software:** *Operating Systems:* Windows, GNU/Linux, Mac OS. *Scripting:* Bash. *Version control:* Git. *Document preparation:* LaTeX, org-mode, HTML, markdown.
- **Mathematics:** Linear algebra, calculus, analysis, algorithms, formal language theory. Learning: regression, nonparametric data analysis, machine learning.
- **General:** Public speaking, mathematics education, workshop facilitation.

Experience

- **Teaching:** *Instructor of record:* Pre-Calculus, Upward Bound SAT Math. *Teaching Assistant:* Linear algebra, Introduction to proofs, Differential calclulus, Integral calculus, Foundations of geometry, Abstract algebra.
- **Research:** Extensive research in algebra and representation theory. REU in Summer 2012 on asymptotic problems in coding theory, graph theory, and number theory. Senior project on inverse Galois theory. Independent project on tropical Grassmannians and tropical GIT.
- **Primary organizer:** President of our *Chapter of the American Mathematical Society* (2015 – present), Principal organizer of *P.E.N.U.L.T.I.M.A.T.E.* seminar (2017 – present).
- **Logistic Assistance:** Tuesday algebraic geometry seminar (2014), Graduate student visitation day (2015, 2016), Summer workshop in Algebraic Geometry (2016), Topological Aspects of Algebra and Arithmetic Geometry (2016).
- **Presentations:** Many presentations on mathematical disciplines such as cryptography, coding theory, theory of computation, support varieties for Lie superalgebras, and geometric complexity theory. Professional website building in Wordpress.