Andrew B. Maurer

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Summary

Motivated and independent mathematician with broad interests in technical fields looking for employment in the data science industry following completion of his Ph.D. in May 2019.

Education

University of Georgia — Athens, Georgia
Mathematics, Ph.D. — *2019*
Thesis title: Finite Generation of Relative Cohomology for Lie Superalgebras.
Advisor: Daniel Nakano

University of Massachusetts — Amherst, Massachusetts
Mathematics, Bachelor of Science. Computer Science, Minor. — *2014*
Senior Project: Computational and theoretical study of Hasse-Witt invariants of Jacobi polynomials.
Advisor: Farshid Hajir.

Skills

- **Programming:** *Deep Learning Frameworks:* PyTorch, Fast.AI, TensorFlow. *Statistical Programming:* R, SciPy stack. *General Programming:* Python, Java. *Mathematical Programming:* Sage, GP/Pari.
- **Software:** *Operating Systems:* GNU/Linux, Windows, Mac OS. *Scripting:* Bash, Python. *Version control:* Git. *Document preparation:* LaTeX, org-mode, HTML, markdown.
- **Mathematics:** Linear algebra, calculus, real analysis, algorithms, formal language theory, data structures, statistical regression, nonparametric data analysis, machine learning, deep learning, abstract algebra, complex analysis, algebraic number theory, representation theory, Lie superalgebras, homological algebra.
- **General:** Public speaking, mathematics education, college teaching, workshop facilitation.

Publications

- Maurer, A. "*On the Finite Generation of Relative Cohomology For Lie Superalgebras*." Proceedings of the American Mathematical Society (to appear). (preprint: https://arxiv.org/abs/1711.02112)

Experience

- **Research:** Single-author publication in respected journal. Extensive research in algebra and representation theory. REU on asymptotic problems in coding theory, graph theory, and number theory. Numerous invited talks.
- **Organizer:**
  – Co-organizer of Graduate Student Summer Program & Conference (2018, 6 workshops, ∼40 talks),
  – President of UGA's *Chapter of the American Mathematical Society* (2015–17, ∼50 members),
  – Co-founder / co-organizer of weekly *S.M.A.R.T.S.* seminar (2017–18, ∼25 participants),
  – Co-organizer of Southeast Lie Theory Workshop (2018, ∼35 talks, ∼150 domestic and international participants).
- **Teaching:** *Instructor of record:* Calculus, Pre-Calculus, Mathematics of Decision Making, Upward Bound SAT Math. *Teaching Assistant:* Linear Algebra, Introduction to Proofs, Differential Calculus, Integral Calculus, Foundations of Geometry, Abstract Algebra.
- **Selected Presentations:**
  – *On the Finite Generation of Relative Cohomology for Lie Superalgebras* (Algebra Seminar, audience: research specialists),
  – *Generative Adversarial Networks*, (Graduate Student Seminar, audience: senior graduate students),
  – *Statistics For Mathematicians* (SMARTS Seminar, audience: junior math graduate students),
  – *Coloring Graphs on Surfaces* (Week-long Math Camp, audience: high school students).