

Carleton

Department of Mathematics and Statistics

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Welcome!

Congratulations on being accepted to Carleton! As Chair of the Department of Mathematics and Statistics, I am happy to hear about your interest in mathematics or statistics, and I am writing to tell you a little about [our department](#), including our departmental newsletter, the *Goodsell Gazette*.

Our department has majors in both [Mathematics](#) and [Statistics](#) and a [minor](#) in Mathematics, and with 9 mathematicians, 4 statisticians and 2-3 yearly visiting [faculty](#), we are able to offer a wide variety of courses in both subjects each term. Our regular course offerings in [mathematics](#) go beyond what you might expect from a standard undergraduate program, both in depth (we have courses like Topics in Abstract Algebra and Real Analysis II) and in breadth (we have courses like Computational Mathematics and Differential Geometry). Every year we have special mathematics seminars on topics like Mathematics of Climate, Mathematics and Democracy, and Introduction to Analytic Number Theory. Our course offerings in [statistics](#) also go beyond what you might expect from a standard undergraduate program with regular course offerings that include introductory courses in Statistics and Data Science, more advanced courses in Statistical Inference and Probability, and electives in topics like Time Series and Bayesian Statistics. We also offer a course in Statistical Consulting, which allows students to collaborate with classmates and local community members on real statistics and data science projects.

Outside the classroom, students enjoy our series of colloquia from people like Ken Ono, Jessica Utts, Trachette Jackson, James Tanton, and Eugenia Cheng. Each year several of our majors study off campus in Hungary in the [Budapest Semesters in Mathematics program](#). We also have a variety of opportunities to engage in problem solving, mathematical modeling, data analytics, and summer research:

- Our recreational problem-solving group regularly competes in the nationwide Putnam contest and regional Konhauser Problemfest and Jerry Heuer MAA-NCS Team Competition. We have generally been quite successful, winning the Konhauser many times and often placing among the top 10% of all teams on the Putnam.
- Every year, Carleton math and stats students participate in team-based applied math contests, including the Mathematical and Interdisciplinary Contests in Modeling, and the SIMIODE Challenge Using Differential Equations Modeling (SCUDEM). These contests strengthen skills in mathematical modeling, computation, and communication and build lasting friendships with your teammates. Carleton teams have received Outstanding awards in the SIMIODE contest (the highest rating awarded by judges) for two years in a row!
- Students interested in statistics and data science regularly compete in regional data analytics competitions, most notably MUDAC (a 24-hour data-analytics competition) and MinneMUDAC (a month-long competition).
- This past summer, Professors Katie St Clair and Adam Loy advised a total of 5 students in statistics research projects where students studied the properties of logistic modeling with respondent-driven sampling data and the behavior of residual diagnostics for generalized linear mixed-effects models. We have more [projects planned](#) for this upcoming summer!



Our department is actively committed to building and sustaining a community in which everyone feels welcome, especially people from groups who have historically been underserved by the mathematics and statistics world. Faculty members individually mentor all majors within the department, welcoming them into the mathematics and statistics community both locally and nationally and helping them find their place in it. In particular, we reach out to majors who identify themselves as members of underserved groups to connect them with programs like the National Math Alliance, an organization designed to encourage students from traditionally underrepresented and underserved groups to pursue advanced degrees in mathematics and statistics. Within the department, [GeMMS](#) (Gender Minorities in Math and Stats) hosts several events each term to bring together majors and potential majors who identify as female or non-binary to build community and foster a sense of belonging. And in past years we've taken students on a road-trip to the Nebraska Conference for Undergraduate Women in Mathematics, where they had an amazing time meeting sister mathematicians from across the country and hearing some first-rate talks and informational panels.

Mathematics and statistics majors who want to continue their education after Carleton find their degrees serve them well. Recent math majors have gone to graduate programs at Berkeley, CalTech, Illinois, Wisconsin, Minnesota, Dartmouth, and Cornell. Recent statistics majors have gone to graduate programs in Statistics, Biostatistics or Data Science at Harvard, Washington, Michigan, Minnesota, and Stanford. Data from 2016-2020 show that Carleton ranks second among all liberal arts colleges in the number of graduates who earn doctoral degrees in mathematics and statistics. There are also plenty of exciting career opportunities for majors who don't wish to pursue graduate students. Careers of recent alumni range from social policy research, transportation engineering, sports analytics, business consulting, financial analysis, software development, and secondary math education.

Perhaps the most important thing our department can offer you, though, is the expertise, energy, enthusiasm, and dedication of our faculty. It is a lot of fun to teach here, and we try to make it just as much fun for our students. We will challenge you, help you when you need it, and enjoy getting to know you. If you have questions or comments about our program, I would be glad to hear from you. You can reach me via email at kstclair@carleton.edu.

Sincerely,



Katie St. Clair
Professor of Statistics
Chair of Mathematics and Statistics