



# DARTMOUTH COLLEGE

## *Research Associate Position in Computational Number Theory*

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The Department of Mathematics at Dartmouth College invites applications for a research associate appointment with start date September 1, 2021, subject to availability of funds. Applicants are encouraged to apply by February 15, 2021. This position will be under the direction of Professor John Voight, as part of the *Simons Collaboration on Arithmetic Geometry, Number Theory, and Computation* together with PIs at Boston University, Harvard, MIT, and Brown. (See the collaboration website for job openings at the other participating institutions.) The Simons Collaboration aims to accelerate research through the development of computational tools that realize recent theoretical advances in arithmetic geometry and number theory, seeking to exploit these tools to advance the research frontier in these fields.

Responsibilities for the position include: designing and implementing mathematical algorithms and facilitating the integration of these algorithms into existing and future computer algebra systems; compiling and analyzing number-theoretic research datasets and integrating the results into existing and future platforms such as the *L-functions and Modular Forms DataBase* (LMFDB, <http://lmfdb.org>); coordinating with researchers across multiple institutions working in areas relevant to the research agenda, both internal and external to the collaboration; assisting with training and development, e.g., running workshops or teaching courses on topics relevant to the collaboration and supervising student researchers; participating in monthly meetings and annual workshops run by the collaboration; and contributing to proceedings volumes to be published by the collaboration and disseminating research results through conference presentations and journal articles.

The ideal candidate will: be highly motivated and able to work well both independently and collaboratively in mathematical research and software development; have significant computer programming experience and familiarity with a computer algebra package, e.g., Magma, SageMath, or PARI/GP; and have a PhD in mathematics, preferably with a research background in number theory, arithmetic geometry, or algebraic geometry.

This is a three-year position with an initial appointment of two years, renewable contingent upon performance. The position and renewal are subject to budgetary availability. Salary is set at \$65,000 per year.

Dartmouth College, a member of the Ivy League, is located in Hanover, New Hampshire (on the Vermont border). Dartmouth has a beautiful, historic campus, located in a scenic area on the Connecticut River. Recreational opportunities abound in all four seasons. The department (<https://math.dartmouth.edu>) is home to 22 tenured and tenure-track faculty members whose research encompasses the areas of Applied Mathematics, Combinatorics, Complex Systems, Differential Geometry, Functional Analysis, Logic, Noncommutative Geometry, Number Theory, Numerical Analysis, and Topology. The Department of Mathematics is in the School of Arts and Sciences and has a strong PhD program and outstanding undergraduate majors.

Applicants should submit a *curriculum vitae*, statement of research plans and interests, and at least three letters of recommendation. At least one letter should specifically address the applicant's ability as a programmer. The positions will remain open until filled. To initiate an application, go to <http://www.math-jobs.org> — Position ID: Dartmouth-RACNT #16517 and fill out the required application form online. General inquiries can be sent to Tracy Moloney, Department of Mathematics, Dartmouth College, 6188 Kemeny Hall, Hanover, New Hampshire 03755-3551. Specific questions on the selection process can be referred to Professor John Voight ([jvoight@gmail.com](mailto:jvoight@gmail.com)).

Dartmouth College is an equal opportunity/affirmative action employer with a strong commitment to diversity and inclusion. We prohibit discrimination on the basis of race, color, religion, sex, age, national origin, sexual orientation, gender identity or expression, disability, veteran status, marital status, or any other legally protected status. Applications by members of all underrepresented groups are encouraged.

<https://math.dartmouth.edu/activities/recruiting>

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