
Classified Advertisements

Positions available, items for sale, services available, and more

MASSACHUSETTS

NORTHEASTERN UNIVERSITY Department of Mathematics Assistant/Associate Professor Tenure-Track Position

The Department of Mathematics at Northeastern University invites applicants for a tenure-track position at the Assistant/Associate Professor level to start as early as September of 2012. Appointments are based on exceptional research contributions in mathematics combined with strong commitment and demonstrated success in teaching. Applications from those with an interest and ability to connect across units in the university to the advantage of research at the interface of mathematics and other disciplines are a top priority. Outstanding candidates with research in any area of mathematics are encouraged to apply.

Minimum Qualifications. Candidates must have a Ph.D., research experience, and demonstrated evidence of excellent teaching ability. Review of applications will begin immediately. Complete applications received by October 1, 2011, will be guaranteed full consideration. Additional applications will be considered until the position is filled.

To apply, visit "Careers at Northeastern" at: https://psoft.neu.edu/psc/neuhrprdpub/EMPLOYEE/HRMS/c/NEU_HR.NEU_JOBS.GBL. Click on "Faculty

Positions" and search for the current position under the College of Science. You can also apply by visiting the College of Science website at: <http://www.northeastern.edu/cos/> and clicking on the Faculty Positions button. Research statements, reference letters, and teaching statements should be submitted to www.mathjobs.org along with the other materials requested there.

Northeastern University is an Equal Opportunity, Affirmative Action Educational Institution and Employer, Title IX University. Northeastern University particularly welcomes applications from minorities, women, and persons with disabilities. Northeastern University is an E-Verify Employer.

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NEW YORK

THE UNIVERSITY OF ROCHESTER Department of Mathematics

The Department of Mathematics at the University of Rochester invites applications for an opening in pure mathematics, starting on July 1, 2013, or later, at the tenure-track Assistant Professor level; more senior candidates with outstanding research achievements may also be considered. The teaching load for this position is three one-semester courses per year. Applications are encouraged in the

general areas currently represented in the department's research profile: algebraic topology; algebra and number theory; analysis and PDE; differential geometry and global analysis; and probability and mathematical physics. Qualifications include a Ph.D. in mathematics, exceptional promise and/or accomplishments in research, and excellence in teaching. Application materials consist of a current C.V.; a statement of current and future research plans; a statement of teaching philosophy and experience; and at least four letters of recommendation, one of which should specifically address teaching. Applications should be submitted electronically through the website: <http://www.rochester.edu/fort/mth>. Consideration of applications will begin on February 15, 2012, and continue on an ongoing basis. The University of Rochester, an Equal Opportunity Employer, has a strong commitment to diversity and actively encourages applications of candidates from groups underrepresented in higher education.

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HOME RENTALS AND SWAPS

HOME RENTALS AND SWAPS

SabbaticalHomes.com. Do you have a home to rent? Are you looking for housing while on sabbatical? We are the academic

Suggested uses for classified advertising are positions available, books or lecture notes for sale, books being sought, exchange or rental of houses, and typing services.

The 2012 rate is \$3.50 per word with a minimum two-line headline. No discounts for multiple ads or the same ad in consecutive issues. For an additional \$10 charge, announcements can be placed anonymously. Correspondence will be forwarded.

Advertisements in the "Positions Available" classified section will be set with a minimum one-line headline, consisting of the institution name above body copy, unless additional headline copy is specified by the advertiser. Headlines will be centered in boldface at no extra charge. Ads will appear in the language in which they are submitted.

There are no member discounts for classified ads. Dictation over the telephone will not be accepted for classified ads.

Upcoming deadlines for classified advertising are as follows: May 2011 issue-February 28 2011; June/July 2011 issue-April 28, 2011;

August 2011 issue-May 27, 2010; September 2011 issue-June 28, 2011; October 2011 issue-July 28, 2011; November 2012 issue-August 30, 2012.

U.S. laws prohibit discrimination in employment on the basis of color, age, sex, race, religion, or national origin. "Positions Available" advertisements from institutions outside the U.S. cannot be published unless they are accompanied by a statement that the institution does not discriminate on these grounds whether or not it is subject to U.S. laws. Details and specific wording may be found on page 1373 (vol. 44).

Situations wanted advertisements from involuntarily unemployed mathematicians are accepted under certain conditions for free publication. Call toll-free 800-321-4AMS (321-4267) in the U.S. and Canada or 401-455-4084 worldwide for further information.

Submission: Promotions Department, AMS, P.O. Box 6248, Providence, Rhode Island 02940; or via fax: 401-331-3842; or send email to classified@ams.org. AMS location for express delivery packages is 201 Charles Street, Providence, Rhode Island 02904. Advertisers will be billed upon publication.

Classified Advertisements

community's resource for home rentals and home swaps worldwide.

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CHILE

**PONTIFICIA UNIVERSIDAD CATOLICA
DE CHILE**
Department of Mathematics

The Department of Mathematics invites applications for three tenure-track positions at the Assistant Professor level beginning either March or August 2013. Applicants should have a Ph.D. in Mathematics, proven research potential either in pure or applied mathematics, and a strong commitment to teaching and research. The regular teaching load for assistant professors consists of three one-semester courses per year, reduced to two during the first two years. The annual salary will be US\$47,000 (calculated at the current exchange rate of 500 Chilean pesos per dollar).

Please send a letter indicating your main research interests, potential collaborators in our Department (www.mat.puc.cl), detailed curriculum vitae, and three letters of recommendation to:

Monica Musso
Director
Pontificia Universidad Católica de Chile
Av. Vicuña Mackenna 4860
Santiago, Chile;
fax: (56-2) 552-5916;
email: mmusso@mat.puc.cl

For full consideration, complete application materials must arrive by June 30, 2012.

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GERMANY

UNIVERSITY OF STUTTGART
Faculty of Mathematics and Physics

The University of Stuttgart (Germany), Faculty of Mathematics and Physics, solicits applications for an open position of a W3-Professorship for Numerical Mathematics at the Institute of Applied Analysis and Numerical Simulation. Preference will be given to candidates who are internationally renowned experts in at least one of the fields of Numeric/Scientific Computing, Applied or Stochastic Analysis for nonlinear partial differential equations. Collaboration with colleagues from the engineering and natural sciences is expected. The research field should support and extend the University's research priority Modeling and Simulation and the Stuttgart Research Centre for Simulation Technology. Besides teaching of undergraduate students in mathematics, the successful candidate is also expected to participate in the training of undergraduate students in engineering and natural sciences. The

requirements for employment listed in 47 and 50 Baden-Württemberg university law apply. Applications including a curriculum vitae, a teaching record and a list of publications should be sent by **April 10, 2012**, to: Professor Dr. Ingo Steinwart, Prodekan des Fachbereichs Mathematik, Universität Stuttgart, Pfaffenwaldring 57, 70569 Stuttgart, Germany; fax: +49 (0)711/685-65338. The University of Stuttgart has established a Dual Career Program to offer assistance to partners of those moving to Stuttgart. For more information please visit the webpage under: <http://www.uni-stuttgart.de/dual-career/>. The University of Stuttgart is an Equal Opportunity Employer. Applications of women are strongly encouraged. Severely challenged persons will be given preference in case of equal qualifications.

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About the Cover

Data MINEing

April is Math Awareness Month, and this year the theme is data mining. The cover illustrates a simplified variant of the impressive tool MINE described in a recent *Science* article by David and Yakir Reshef and several others, "Detecting novel associations in large data sets", in volume 334 from last December).

"Data mining" is the term coined to describe what one does in order to extract valuable information from the huge amounts of (likely noisy) data that modern computers make available. Among the information one might want to extract are the relations that hold among various specific variables recorded in statistics, for example car accident rate and age. But one might also be given data on a large number of variables, and wonder without much prior information which of them are in fact related. This is what MINE helps with—it scans data for whatever pairs, possibly all, that you might think of interest, and produces for each pair a number—in fact a whole matrix of numbers—that measures the strength of relationship. The basic technique is to fit grids of various sizes to a set of pairs (x,y) in the plane in order to maximize the *mutual information coefficient* of data in the grid. Roughly speaking, the mutual information coefficient (*mic*), based on Shannon's information theory and first defined by the astronomer E. H. Linfoot in 1957, tells how much information about one variable is implied by the other. The cover shows a collection of sample small grids on artificial data.

The problem that Reshef, Reshef, et al. attack looks at first almost impossible. After all, the number of ways to partition a large planar set is (so to speak) astronomical. But because of the additive properties of entropy, a sub-grid of an optimal grid must also be optimal, and this suggests an approach by dynamic programming that turns out to make the task feasible.

One of the authors of the article has described some features of MINE, as well as the process of publishing in *Science*, on his website:

<http://mybiasedcoin.blogspot.com/2011/12/mic-and-mine-short-description.html>

—Bill Casselman
Graphics Editor

(notices-covers@ams.org)