

# Mathematics People

## Nesterov Wins Dantzig Prize

YURI NESTEROV of the Catholic University of Louvain has been awarded the 2000 George B. Dantzig Prize. According to the prize citation, Nesterov was selected "for his fundamental contributions to the theory of interior point methods for convex programming, including his introduction of the concept of self-concordance." He has also made contributions to the study of convex optimization and automatic differentiation.

The Dantzig Prize is awarded every three years by the Mathematical Programming Society and the Society for Industrial and Applied Mathematics.

—From a Dantzig Prize Committee announcement

## Kleinberg Wins National Academy of Sciences Award

The 2001 National Academy of Sciences Award for Initiatives in Research has been given to JON M. KLEINBERG of Cornell University. Kleinberg, who received his Ph.D. from the Massachusetts Institute of Technology in 1996, was chosen "for his development of deep and innovative algorithms to solve fundamental problems in network, information extraction, and discrete optimization."

The Award for Initiatives in Research carries a cash prize of \$15,000 and is presented annually in various fields to recognize innovative young scientists and to encourage new research. The 2001 award was designated for the fields of computational science and applied mathematics.

—From an NAS announcement

## Trevisan Awarded Oberwolfach Prize

LUCA TREVISAN of the University of California, Berkeley, has received the 2000 Oberwolfach Prize for outstanding research in discrete mathematics (including logic and theoretical computer science). Trevisan was awarded the

prize for his work in complexity theory, probabilistic algorithms, and combinatorial optimization. The award was presented on November 22, 2000, at the Mathematical Research Institute in Oberwolfach, Germany, during a workshop on complexity theory.

The Oberwolfach Prize is awarded by the Gesellschaft für Mathematische Forschung (Society for Mathematical Research) to European mathematicians not older than 35 years. The prize recognizes excellent achievements in a specific field of mathematics, which changes each time the prize is given. The prize carries a monetary award of DM 10,000 (approximately US\$5,000).

Previous recipients of the Oberwolfach Prize are Peter Kronheimer (topology and geometry, 1991), Jörg Brüdern and Jens Franke (number theory and algebra, 1993), Gero Friesecke and Stefan Sauter (analysis and applied mathematics, 1996), and Alice Guionnet (stochastics, 1999).

—Elaine Kehoe

## Yang Wins 2001 Faisal International Prize

CHEN NING YANG of the State University of New York at Stony Brook has received the King Faisal International Prize for Science for 2001. Yang will receive a cash award of \$200,000.

A 1957 recipient of the Nobel Prize in Physics, Yang has made substantial contributions to mathematics and to physics. He proposed a theoretical framework which later became the basis of the present theory of the structure of matter at the smallest scales and highest energies.

—From a Faisal Foundation announcement

## Ziegler Awarded Leibniz Prize

The Deutsche Forschungsgemeinschaft (DFG) has selected a mathematical scientist as one of the eleven recipients of its Gottfried Wilhelm Leibniz Prize for the year 2001. GÜNTHER ZIEGLER of the Technische Universität Berlin will receive DM 1.5 million (approximately US\$750,000) to support research over a period of five years.

Günther Ziegler, age 37, studied mathematics and physics at Ludwig-Maximilians-Universität in Munich from 1981 to 1984. He received his Ph.D. in mathematics from the Massachusetts Institute of Technology in 1987. He completed postdoctoral work at Augsburg University and at the Institut Mittag-Leffler in Sweden. He received his *habilitation* from the Technische Universität Berlin, where he today holds the chair in discrete geometry.

Ziegler's research includes work in discrete geometry, combinatorics, and polytopes. He has received numerous awards for his mathematical work, including the DFG's Gerhard Hess Award worth DM 1 million.

The aim of the Leibniz Prize program, which was instituted by the DFG in 1985, is to improve the working conditions of outstanding scientists and scholars, to broaden their opportunities for research, to relieve them of administrative burdens, and to allow them to hire especially highly qualified young academics. The prizewinners are permitted the greatest possible freedom in the way they use the prize funds. The DFG is the main scientific research funding agency of the German government.

—From a DFG announcement

## Humboldt Foundation Research Awards

The Alexander von Humboldt Foundation annually grants up to 150 Humboldt Research Awards to scholars resident outside Germany whose academic qualifications enjoy international recognition. Among those receiving the awards in 1999 were nine mathematicians. What follows are their names, home affiliations, and the German institutes they visited.

DMITRY ANOSOV: Steklov Institute of the Russian Academy of Sciences, Moscow; Universität Ulm and Universität Bonn; DARYL JOHN DALEY: Australian National University; Technische Universität München; JOEL L. HOROWITZ: University of Iowa; Humboldt Universität Berlin; YURI KIFER: Hebrew University of Jerusalem; Universität Bremen; KRZYSZTOF CZESLAW: Systems Research Institute of the Polish Academy of Sciences; Humboldt Universität Berlin; GUSTAV I. LEHRER: University of Sydney; Universität Bielefeld; VLADIMIR G. MAZ'YA: Linköping University; Universität Stuttgart; TEMURZ PIRASHVILI: Institute of Mathematics of the Georgian Academy of Sciences; Universität Bielefeld; and KARL RUBIN: Stanford University; Universität Erlangen-Nürnberg.

The Humboldt Research Awards include the invitation to undertake extended periods of research of the award-winners' own choice at German research institutes (4–12 months). The value of the awards ranges from DM 20,000 to DM 150,000 (about US\$10,000 to US\$75,000). Nominations for the awards are made by leading German scholars or research institutions. Direct applications are not accepted.

—Allyn Jackson

## AIM Five-Year Fellow Announced

The American Institute of Mathematics (AIM) has announced that the recipient of the 2001 AIM Five-Year Fellowship is LENHARD L. NG of the Massachusetts Institute of Technology. He was chosen out of more than 100 applicants.

Ng received his A.B. in mathematics and physics from Harvard University in 1996 and was a Putnam Fellow for three years of his undergraduate career. He will receive his Ph.D. from MIT in 2001. His interests are in the area of differential geometry and, in particular, contact geometry and symplectic geometry. His thesis, "Invariants of Legendrian links," develops techniques to distinguish between Legendrian knots and links in standard contact three-space.

The AIM five-year fellowships are awarded each year to outstanding new Ph.D. recipients to support research in an area of pure mathematics. The fellowships cover sixty months of full-time research, as well as funds for travel and equipment. Each fellowship carries a stipend of \$4,000 per month, with an additional \$4,000 per year allocated for travel and equipment.

—From an AIM announcement

## ONR Young Investigators Awards Announced

The Office of Naval Research (ONR) has announced the awarding of 26 grants totaling \$8.5 million in the 2001 ONR Young Investigator Program competition. Two individuals in the mathematical sciences received awards. They are CYNTHIA YOUNG HOPEN of the University of Central Florida and RONALD FEDKIW of Stanford University.

Hopen will do research in optimal signal processing methodologies for laser sensors, considering the effect of atmospheric turbulence on laser beam propagation, divergence, coherence, and scintillation. This research can improve long-range surveillance using laser radar. Fedkiw will pursue algorithm design for computational fluid dynamics, in particular to calculate pressures in flowing fluids near an interface. These numerical techniques will also be applied to three-dimensional visualization of data and image processing.

The Young Investigator Program supports basic research by exceptional faculty at U.S. universities who have received Ph.D.'s or equivalent degrees within the preceding five years. Grants to their institutions provide up to \$100,000 per year for three years. The funds may be applied to a variety of research costs, including salary, graduate student support, laboratory supplies, and operating costs. Young Investigators are selected on the basis of prior professional achievement, the submission of a meritorious research proposal, and evidence of strong support by their respective universities. The program supports outstanding research in a wide range of science

and engineering fields that are critical to the evolution of a first-rate Navy and Marine Corps.

—From an ONR announcement

## Correction

The November 2000 issue of the *Notices*, page 1284, carried an announcement about mathematicians elected to the Royal Society of Canada in 2000. One name was inadvertently omitted from the list: JOHN MCKAY of Concordia University.

## Deaths

JON BARWISE, of Indiana University, Bloomington, died on March 5, 2000. Born on June 29, 1942, he was a member of the Society for 29 years.

ZYGMUND WILLIAM BIRNBAUM, professor emeritus, University of Washington, Seattle, died on December 15, 2000. Born on October 18, 1903, he was a member of the Society for 62 years.

KAREL L. DE BOUVERE, professor emeritus, Santa Clara University, died on November 1, 2000. Born on November 15, 1918, he was a member of the Society for 40 years.

FRED T. DALY, of Xavier Jesuit Center, Denver, CO, died on December 5, 1998. Born on April 25, 1913, he was a member of the Society for 49 years.

JOSEPH LANDIN, professor emeritus, University of Illinois at Chicago, died on February 20, 2000. Born on January 25, 1913, he was a member of the Society for 59 years.

STANISLAW LEJA, professor emeritus, Western Michigan University, died on September 27, 2000. Born on January 3, 1912, he was a member of the Society for 45 years.

JOSEPHINE M. MITCHELL, professor emerita, State University of New York, Buffalo, died on December 28, 2000. Born on June 30, 1912, she was a member of the Society for 58 years.

PAUL OLUM, president emeritus, University of Oregon, Eugene, died on January 19, 2001. Born on August 16, 1918, he was a member of the Society for 54 years.

JOSEPH W. SIRY, chief scientist, NASA, Goddard Space Flight Center, Greenbelt, MD, died on January 4, 2001. Born on August 7, 1920, he was a member of the Society for 47 years.

YOSHIHITO TOMITA, of Kobe University, Japan, died in December 2000. Born on February 29, 1944, he was a member of the Society for 13 years.

LAURENCE CHISHOLM YOUNG, of Madison, WI, died on December 24, 2000. Born on July 14, 1905, he was a member of the Society for 55 years.

## Financial Mathematics at King's College London MSc and PhD programmes

King's College is a multi-faculty institution with over 16,000 students. The Department of Mathematics, located in the heart of London only a short walk from Trafalgar Square and Covent Garden, has an international reputation for teaching and research. A graduate programme in Financial Mathematics has now been initiated with the appointments of Professor Lane P. Hughston, Dr Giulia Iori and Dr Mihail Zervos to established posts in the Department. Applications are invited for the MSc in Financial Mathematics, which is being offered both on a full-time and a part-time basis. Some places are also available for suitably qualified research students who would like to pursue a PhD in this subject.

Since the pioneering days of Black, Scholes and Merton, the theory of Mathematical Finance has developed into a substantial body of knowledge and its numerous applications have become vital to the day-to-day functioning of the world's financial institutions. As a consequence, a solid command of the principles and techniques of quantitative finance is essential for a responsible approach to trading, asset management and risk control of complicated financial positions.

The Financial Mathematics MSc programme covers mainstream mathematical finance and its applications. The curriculum includes, for example, derivatives pricing and hedging, asset price dynamics, risk analysis and extreme events, interest rate and foreign exchange processes, credit and inflation-linked products, real options, energy derivatives, stochastic optimisation and control and investment decision making, as well as other mathematical subjects of relevance to practical financial modelling. The programme is run by the Financial Mathematics group in the Department of Mathematics at King's College London, and builds on the group's close links with financial institutions in the City of London and elsewhere throughout the world.

The MSc is based on lecture courses and a project, and requires two years of part-time study or one year of full-time study. Applications are currently being considered for admission in September 2001. The part-time programme is compatible with the needs of those already employed in the financial sector. Candidates choose eight lecture courses in consultation with their course advisor. The present programme includes the following core courses and options:

*Introduction to Derivatives Pricing*

*Applied Probability and Stochastics*

*Stochastic Analysis*

*Advanced Statistics*

*Financial Markets*

*Exotic Derivatives*

*Numerical Methods for Partial Differential Equations*

*Interest Rate and Foreign Exchange Dynamics*

*Portfolio Risk Management*

Further course options are available such as Neural Networks, Linear Systems and Control Theory, and the Spectral Theory of Markov Chains. Each candidate also undertakes a project to study an area of finance in greater depth.

The fees are \$9,200 for the full-time MSc programme beginning in September 2001 and £4,800 per year for the part-time MSc programme beginning in September 2001. An entry requirement for the MSc is the equivalent of a first or upper second class degree in a mathematical discipline.

A PhD degree in financial mathematics or a related area of applied probability is an asset that is often highly valued by employers in the financial sector. Applications from prospective PhD students are currently being solicited. A limited amount of funding may be available for highly qualified candidates.

For further information and application forms, for both the MSc and PhD programmes, see: [www.mth.kcl.ac.uk](http://www.mth.kcl.ac.uk)

Alternatively, please contact:

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