Mathematics People

Coxeter Receives Joint CRM/Fields Prize

The first Joint Centre de Recherches Mathématiques/Fields Institute Prize has been awarded to Professor H.S.M. (DONALD) COXETER of the University of Toronto. Professor Coxeter is being honored for a long and remarkable record of accomplishment.

Although he has drawn inspiration from elementary geometry and the symmetries of Platonic solids, Professor Coxeter's work has permeated modern mathematics. He has worked in a range of areas, from groups acting on n-space and sphere packings in n-dimensions, to the structure and classification of Lie groups, to noneuclidean geometry. In addition to mathematicians, many others—including artists, architects, chemists, philosophers, and physicists—know of Coxeter and have been directly influenced by his writing and his unfailing sense of beauty in mathematics. His book *Regular Polytopes* has been a classic since the time it was written and has been and continues to be widely read. The recent advances in buckyballs, fullerenes, and quasicrystals have reemphasized that the regular and semiregular polytopes continue to play important roles in science and mathematics.

Harold Scott MacDonald Coxeter was born in London, England, on February 9, 1907. He received his bachelor's degree in 1929 and his Ph.D. in 1931, both from the University of Cambridge. He also holds honorary degrees from University of Alta (1957), Waterloo University (1969), Acadia University (1971), Trent University (1973), University of Toronto (1979), Carleton University (1984), and McMaster University (1988).

Professor Coxeter was a Fellow of Trinity College, Cambridge, from 1931 to 1935. Concurrently, he was a Rockefeller Foundation Fellow (1932–1933) and a Procter Fellow (1934–1935) at Princeton University. In 1936 he moved to the University of Toronto. Professor Coxeter has held numerous visiting positions at universities around the world. He was editor-in-chief of the *Canadian Journal of Mathematics* from 1949 to 1958. In 1974 he was president of the International Congress of Mathematicians when it was held in Vancouver.

Professor Coxeter received the Tory Medal in 1949. He is a fellow of the Royal Society, London, and of the Royal Society of Canada. He is a foreign member of the Royal Netherlands Academy of Arts and Sciences and a foreign honorary member of the American Academy of Arts and Sciences.

As part of the Joint CRM/Fields Institute Prize, Professor Coxeter will present lectures at The Fields Institute during the fall of 1995 and the Centre de Recherches Mathématiques during September 1995.

—Allyn Jackson

Fossum Elected to Norwegian Society

AMS Secretary ROBERT M. FOSSUM has been elected to the Royal Norwegian Society of Sciences and Letters, the oldest learned society in Norway. Membership in the natural sciences section, to which Fossum was elected, is limited to 200 people, fifty of whom may be nonresidents of Norway.

Fossum, a professor of mathematics at the University of Illinois at Urbana-Champaign, has been at that institution since 1964. He was a Fulbright Scholar at the University of Oslo in 1967 and has been a visiting professor at universities in Aarhus, Copenhagen, and Paris. The author of many scholarly papers and books, Fossum has served as editor of several research journals, including the *Proceedings of the AMS* from 1973 to 1977. He has been AMS secretary since 1989.

—from University of Illinois News Release

D. J. Lewis Named DMS Director

The Division of Mathematical Sciences at the National Science Foundation (NSF) has announced that D. J. LEWIS of the University of Michigan, Ann Arbor, has accepted the position of division director. He succeeds Frederic Y. M. Wan, who left the DMS in January to become vice-chancellor for research and dean of graduate studies at the University of California, Irvine.

"It is the task of the division director to make use of whatever options are provided by Congress to maximize the funding available for mathematics," Lewis says. "To do so will be one of the challenges of this position." The DMS has in recent years been able to take advantage of funding made available through various federal "strategic initiatives". Although some in the mathematical community have questioned the value of such initiatives, there is no doubt that they have benefited mathematics funding. "In my opinion, [the two previous DMS directors] Judy Sunley and Fred Wan did an excellent and very imaginative job in finding ways to use the various strategic initiatives to increase funding for all of mathematics," Lewis points out. "They did far better than any of the other core disciplines. Very few understand what they accomplished and where mathematics would be without those efforts." The funding picture Lewis will face might be quite different, as it appears that Congress may no longer support the initiatives, given the enormous pressure to balance the federal budget.

One of the oft-mentioned problems with mathematics research funding is that too few people receive funding. In recent years, various mechanisms, such as salary caps, have been proposed as ways to increase the number of mathematicians receiving NSF funding. However, the DMS is not fully autonomous in making such decisions, Lewis points out. They depend on the budget and on the policies set forth by the National Science Board, the policy-making body of the Foundation. In addition, he points out, "Sometimes 'fewer but better funded' makes sense, especially when the alternative is for all to be extremely underfunded." But, he notes, "it is probably time to ask if current funding strategies are the best way to use limited funding to advance mathematics. This will be especially important should funding be reduced." He intends to work with the mathematical community to map out alternative funding strategies and bring them before the National Science Board and the Directorate for Mathematical and Physical Sciences. As an example, he pointed to the new group infrastructure grants established this year by DMS in response to advice from the AMS Committee on Science Policy.

Lewis notes that the DMS director is not in a position to personally influence Congress; that task falls to the mathematical community, acting as individuals or through such groups as the Committee on Science Policy. "In making its case, the mathematics community may well need to examine whether it is serving the country as well as it might and rethink what its role should be," he remarks. "There is a lot of skepticism in the general public with regard to higher education, research, and even science... Just sitting back and doing good research will not, in this climate, produce additional funding."

A noted number theorist, D. J. Lewis received his Ph.D. from the University of Michigan in 1950. He was an NSF Fellow at the Institute for Advanced Study in Princeton (1952–1953), an NSF Senior Fellow (1959–1961), a Senior Visiting Fellow at Cambridge (1965, 1969), a Visiting Fellow at Oxford (1976), and Humboldt Awardee (1980, 1983). He has served as organizer of a number of major research conferences in number theory. He presented an AMS Invited Address in Urbana, Illinois, in 1970 and a Mordell Lecture at Cambridge University in 1980. Active on a variety of AMS committees, Lewis has been on the *Notices* Editorial Committee (1989–1992), the Joint Committee on Women in the Mathematical Sciences (1992–1994), and the Committee on Processional Ethics (1992–). He served as Chair of the *Mathematical Reviews* Editorial

Committee (1975–1977) and of the AMS Employment Task Force (1991–1992). Lewis is currently on the AMS Board of Trustees. He was the chair of the Department of Mathematics at the University of Michigan from 1984 to 1994 and served twice on the NSF Advisory Committee for the Mathematical Sciences. In January 1995 he received the AMS Distinguished Public Service Award for his outstanding contributions to the profession.

—Allyn Jackson

Rollo Davidson Trust

The trustees of the Rollo Davidson Trust have awarded Rollo Davidson Prizes for 1995 to two individuals. PHILIPPE BIANE of the University of ParisVI was honored for his work on Brownian motion and quantum probability. YUVAL PERES of the University of California, Berkeley, was honored for his work on probability on trees and connections with Brownian motion.

—Trustees of the Rollo Davidson Trust

Albert Cohen Receives Popov Prize

ALBERT COHEN of the University of Paris-Dauphine and Ecole Normale Supérieure des Techniques Avancées was awarded the first Vasil Popov Prize on January 9, 1995, at the Texas Conference on Approximation Theory. The prize, established in memory of Vasil Popov, is awarded to a young mathematician who has made outstanding research contributions in approximation theory and/or related areas. The prize will be awarded every three years in conjunction with the Texas conference.

The Popov Prize was presented to Cohen by Ronald DeVore of the University of South Carolina on behalf of the selection committee. The other members of the committee were Charles Chui, Paul Nevai, Allan Pinkus, Pencho Petrushev, and Edward Saff. After the prize presentation, Cohen presented a plenary lecture entitled "Nonlinear wavelet approximation and image compression".

Albert Cohen received his Ph.D. in 1990 from the University of Paris-Dauphine, under the direction of Yves Meyer. Cohen's first research dealt with the relation between wavelet theory and filter banks used in signal processing. These investigations led to the design of certain filter banks (related to biorthogonal wavelets) that are widely used by engineers in image and signal processing. This work also provided a deeper understanding of multiresolution analysis and refinement equations. This research, done in collaboration with Ingrid Daubechies, has been extended to the multivariate setting. Cohen has also made significant contributions to the development of multiscale methods for Euclidean domains and to the construction of related numerical algorithms. His recent work has emphasized the connections between wavelet theory and approximation, especially in the context of nonlinear approximation.

—Ronald DeVore, University of South Carolina

Sloan Fellowships Announced

The Alfred P. Sloan Foundation has announced the names of 100 outstanding young scientists and economists selected to receive Sloan Research Fellowships. Among the awardees were twenty mathematical scientists.

Now in its fortieth year, the Sloan Research Fellowship Program provides grants of $30,00 per year for two years. Candidates for the fellowships are nominated by department chairs and other senior scholars. More than 400 nominations were reviewed for the 1995 awards. The committee choosing the awardees in mathematics consisted of Spencer J. Bloch of the University of Chicago, William P. Thurston of the Mathematical Sciences Research Institute, and Karen K. Uhlenbeck of the University of Texas at Austin.

The names of the mathematics grantees and their institutional affiliations are listed below.

ALEXANDER I. BARVINOK, University of Michigan, Ann Arbor; ANDREA L. BERTOZZI, University of Chicago; LUCIA CAPORASO, Harvard University; EDWARD FRENKEL, Harvard University; SERGEI IVANOV, University of Illinois at Urbana-Champaign; TASSO J. KAPER, Boston University; BRUCE KLEINER, University of Pennsylvania; RUTH J. LAWRENCE, University of Michigan, Ann Arbor; JOHN S. LOWENGRUB, University of Minnesota; JEFFERY D. MCNEAL, Princeton University; YAIR MINSKY, State University of New York, Stony Brook; VICTOR NISTOR, Pennsylvania State University; YONGBIN RUAN, University of Utah; ANDRAS SZENES, Massachusetts Institute of Technology; DANIEL I. TATARU, Northwestern University; BURT TOTARO, University of Chicago; RICHARD WENT-

WORTH, University of California, Irvine; ILYA ZA-KHAREVICH, Ohio State University; FANGYANG ZHENG, Duke University; and YUXI ZHENG, Indiana University.

—from Sloan Foundation News Release

NSF Young Investigator Awards Announced

In November 1994, the National Science Foundation (NSF) announced awards in the 1994 NSF Young Investigator program. This program serves to recognize outstanding young faculty and enhance their careers.

Each award provides up to a maximum of $100,000 per year of public and private funds for five years to advance the awardee's teaching and research career. The NSF provides each year a $25,000 base grant and up to $37,500 to match, dollar-for-dollar, funds from private or non-profit sources.

Approximately 1,435 nominations were received and 200 awards were made in all areas of science and engineering. Seven went to scholars in the mathematical sciences. Their names, affiliations, and research areas are given below.

OSCAR P. BRUNO of the Georgia Institute of Technology received his doctorate in 1989 from the Courant Institute for Mathematical Sciences at New York University. He works in applied mathematics, numerical analysis, materials, electromagnetism, and plasma physics.

ANDREW E. GELMAN of the University of California, Berkeley, received his doctorate from Harvard University in 1990. He works in statistics.

IGOR KRIZ of the University of Michigan, Ann Arbor, received his doctorate from Charles University in Prague in 1988. He works in algebraic topology and algebraic geometry.

MARK A. LEWIS of the University of Utah received his doctorate from Oxford University in 1990. He works in mathematical biology, applied mathematics, and ecology.

VICTOR NISTOR of Pennsylvania State University received his doctorate in 1992 from the University of California, Berkeley. He works in operator algebras and noncommutative geometry.

YUAN WANG of Florida Atlantic University received his doctorate from Rutgers University in 1990. He works in applied mathematics and control theory.

JONATHAN WEITSMAN of Columbia University received his doctorate in 1988 from Harvard University. He works in geometry and mathematical physics.

—National Science Foundation

Deaths

ANDREJ V. BITSADZE, of the Steklov Institute of Mathematics in Moscow, Russia, died on September 6, 1994. Born on May 22, 1916, he was a member of the Society for 1 year.

BENEDITO CASTRUCCI, of the University of Sao Paulo, Brazil, died in January 1995. Born on July 8, 1909, he was a member of the Society for 38 years.

AVRON DOUGLIS, Professor Emeritus of the University of Maryland, died on February 15, 1995. Born on March 14, 1918, he was a member of the Society for 37 years .

KUNIO GOMI of Tokyo, Japan, died in September 1993. Born on January 25, 1927, he was a member of the Society for 16 years.

R. T. MCLEAN, of Loyola University in New Orleans, LA, died on November 6, 1994. Born on July 18, 1922, he was a member of the Society for 38 years.

HAIM HANANI, Professor Emeritus of the Technion-Israel Institute of Technology, died in April 1991. Born on September 11, 1912, he was a member of the Society for 34 years.

ALEXANDER P. ROBERTSON of Nedlands, Australia, died on January 31, 1995. Born on June 16, 1925, he was a member of the Society for 35 years.

JOHN LIGHTON SYNGE, formerly director of the School of Theoretical Physics, D. I. A. S. in Dublin, Ireland; professor of mathematics at Carnegie Institute in Pittsburgh, PA; Ohio State University in Columbus, OH; and at the University of Toronto in Canada, died on March 30, 1995, in Blackrock, County Dublin, Ireland, at the age of 98. He was a member of the Society for 68 years.