
Mathematics People

Lacey and Thiele Receive Salem Prize

The Salem Prize for 1996 has been awarded jointly to MICHAEL T. LACEY of Indiana University, Bloomington, and to CHRISTOPH THIELE of Christian-Albrechts-Universität, Kiel, for their remarkable work on Calderón's bilinear Hilbert transform and the development of a new method of phase space analysis. The prize, established in 1968, is given each year to a young mathematician who is judged to have done outstanding work in the area in which Raphaël Salem worked, primarily Fourier series and related topics. The selection committee for the 1996 prize consisted of J. Bourgain, C. Fefferman, V. Havin, P. Jones, Y. Katznelson, and J. C. Yoccoz.

—J. Bourgain, *Institute for Advanced Study*

Presidential Career Awards Announced

Last December, President Clinton named 60 young researchers to receive the first annual Presidential Early Career Awards for Scientists and Engineers (PECASE). The new awards, created in spring 1996, recognize demonstrated excellence and promise of future success in scientific or engineering research and the potential for eventual leadership. The recipients are chosen from nominations made by agencies across the federal government and receive up to \$500,000 over a five-year period to further their re-

search. The PECASE program replaces a number of programs, including the Presidential Young Investigator program of the National Science Foundation.

PECASE awards were given to three individuals who work in the mathematical sciences.

ANDREA BERTOZZI of Duke University received the award through a nomination by the Office of Naval Research. Her research interests are applied analysis and scientific computation, thin films and moving contact lines, singularities and scaling in nonlinear partial equations, and hydrodynamic interface motion.

Weinan E of the Courant Institute of Mathematical Sciences at New York University was nominated by the National Science Foundation. His research interests are in applied mathematics, partial differential equations, and numerical analysis.

Roldan Pozo of the Computing and Applied Mathematics Laboratory at the National Institute of Standards and Technology was nominated by the Department of Commerce. His research interests are in high-performance scientific computation, including object oriented techniques for scientific computing, numerical linear algebra, and software environments and tools for parallel computing.

— *from White House news release*

Deaths

FREDERICK J. ALMGREN, Henry Burchard Fine Professor of Mathematics at Princeton University, died on February 5, 1997. Born July 3, 1933, he was a member of the Society for 36 years.

LOUIS AUSLANDER, professor of mathematics at the Graduate School and University Center, CUNY, died on February 25, 1997. Born July 12, 1928, he was a member of the Society for 45 years.

THOGER S. V. BANG, professor at the University of Copenhagen Mathematical Institute, died on January 18, 1997. Born January 27, 1917, he was a member of the Society for 46 years.

CHARLES L. DOLPH, professor emeritus of the University of Michigan, died in June 1994. Born August 27, 1918, he was a member of the Society for 52 years.

RUDOLF ZUHEIR DOMIATY, professor at Graz Technical University, Graz, Austria, died on October 22, 1996. Born June 25, 1938, he was a member of the Society for 3 years.

THOMAS E. HULL, professor emeritus of the University of Toronto, died on August 15, 1996. Born June 5, 1922, he was a member of the Society for 47 years.

JOHN A. KELINGOS, associate professor of mathematics at Vanderbilt University, died on October 28, 1996. Born January 22, 1936, he was a member of the Society for 35 years.

JOHN A. LEWIS, retired from AT&T Bell Labs, Summit, NJ, died on December 12, 1996. Born January 12, 1923, he was a member of the Society for 46 years.

ROBERT K. MCCONNELL, of Fanwood, NJ, died on November 29, 1996. Born May 12, 1912, he was a member of the Society for 47 years.

NIELS VIGAND PEDERSEN, lecturer at the University of Copenhagen Mathematical Institute, died on November 24, 1996. Born March 12, 1949, he was a member of the Society for 15 years.

GORDON M. PETERSEN, professor emeritus of the University of Canterbury, Christchurch, New Zealand, died on November 9, 1996. Born November 25, 1921, he was a member of the Society for 45 years.

DANIEL SHANKS, of the University of Maryland, College Park, died on September 6, 1996. Born January 17, 1917, he was a member of the Society for 47 years.

KERMIT N. SIGMON, of the University of Florida, Gainesville, died on January 14, 1997. Born April 18, 1936, he was a member of the Society for 33 years.

CHARLES S. SUTTON, professor emeritus of The Citadel, Charleston, SC, died on January 1, 1997. Born July 15, 1913, he was a member of the Society for 59 years.

JAMES A. WARD, of Tallahassee, FL, died on January 28, 1997. Born May 19, 1910, he was a member of the Society for 58 years.

American Mathematical Society

Monotone Operators in Banach Space and Nonlinear Partial Differential Equations

R. E. Showalter, *University of Texas, Austin*

The objectives of this monograph are to present some topics from the theory of monotone operators and nonlinear semigroup theory which are directly applicable to the existence and uniqueness theory of initial-boundary-value problems for partial differential equations and to construct such operators as realizations of those problems in appropriate function spaces.

A highlight of this presentation is the large number and variety of examples introduced to illustrate the connection between the theory of nonlinear operators and partial differential equations. These include primarily semilinear or quasilinear equations of elliptic or of parabolic type, degenerate cases with change of type, related systems and variational inequalities, and spatial boundary conditions of the usual Dirichlet, Neumann, Robin or dynamic type.

The discussions of evolution equations include the usual initial-value problems as well as periodic or more general nonlocal constraints, history-value problems, those which may change type due to a possibly vanishing coefficient of the time derivative, and other implicit evolution equations or systems including hysteresis models. The scalar conservation law and semilinear wave equations are briefly mentioned, and hyperbolic systems arising from vibrations of elastic-plastic rods are developed. The origins of a representative sample of such problems is given in the Appendix.

Mathematical Surveys and Monographs, Volume 49; 1997; 278 pages; Hardcover; ISBN 0-8218-0500-2; List \$75; Individual member \$45; order code SURV/49NA

Recent Developments in Optimization Theory and Nonlinear Analysis

Yair Censor, *University of Haifa, Israel*, and Simeon Reich, *The Technion-Israel Institute of Technology, Haifa*, Editors

This volume contains the refereed proceedings of the special session on Optimization and Nonlinear Analysis held at the Joint American Mathematical Society-Israel Mathematical Union Meeting which took place at the Hebrew University of Jerusalem in May 1995. Most of the papers in this book originated from the lectures delivered at this special session. In addition, some participants who did not present lectures and invited speakers who were unable to attend contributed their work.

The fields of optimization theory and nonlinear analysis continue to be very active. This book presents not only the wide spectrum and diversity of the results, but also their manifold connections to other areas, such as differential equations, functional analysis, operator theory, calculus of variations, numerical analysis, and mathematical programming.

In reading this book one encounters papers that deal, for example, with convex, quasiconvex and generalized convex functions, fixed and periodic points, fractional-linear transformations, moduli of convexity, monotone operators, Morse lemmas, Navier-Stokes equations, nonexpansive maps, nonsmooth analysis, numerical stability, products of projections, steepest descent, the Leray-Schauder degree, the turnpike property, and variational inequalities.

Contemporary Mathematics, Volume 204; 1997; 278 pages; Softcover; ISBN 0-8218-0515-0; List \$49; Individual member \$29; order code CONM/204NA

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