

# Sullivan Receives 2004 National Medal of Science

Photo credit: City University of New York.



**Dennis Sullivan**

behavioral, and engineering sciences, that enhances understanding of the world and leads to innovations and technologies that give the United States its global economic edge." The award was established by Congress in 1959 and is administered by the National Science Foundation. A list of previous medalists is available at <http://www.nsf.gov/nsb/awards/nms/medal.htm>.

Dennis Parnell Sullivan was born in Port Huron, Michigan, in 1941. He received his Ph.D. from Princeton University in 1965, under the direction of William Browder. Sullivan has held positions at Princeton, the Massachusetts Institute of Technology, and the Institut des Hautes Études Scientifiques in Paris. Currently he holds the Einstein Chair at the Graduate Center of the City University of New York and is a professor of mathematics at Stony Brook University. His honors include the AMS Veblen Prize in Geometry (1971), the Élie Cartan Prix en Géométrie of the Académie des Sciences de Paris (1981), and the King Faisal Prize (1994). He is a member of the U.S. National Academy of Sciences.

Sullivan's early work was in homotopy theory and surgery, to which he brought a new, geometric point

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Sullivan has made important contributions to the study of foliations and dynamical systems. He has also proved foundational results on quasiconformal and Lipschitz manifolds, categories that are intermediate between the topological and smooth ones. During the 1980s and 1990s, he was responsible for the emergence of the field of conformal dynamics as a lively and important branch of mathematics straddling the traditional borders between pure and applied areas. In recent years, he launched the field of string topology.

—Allyn Jackson

## **Kenneth Arrow, Economist with Mathematical Outlook, Receives National Medal**

One of the recipients of the 2004 National Medal of Science is the economist Kenneth J. Arrow of Stanford University, whose work is quite mathematical and treats such areas as the economics of information and organization, collective decision-making, and general equilibrium theory. Arrow's bachelor's and master's degrees are in mathematics, and he switched to economics for his Ph.D. He has 120 publications listed in MathSciNet. Arrow received the Nobel Prize in Economics in 1972.

—A.J.