

Edited by

Y Sinai

E Stein

# Wolf Prize in Mathematics

Volume 4

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#### **WOLF PRIZE IN MATHEMATICS — Vol. 4**

**edited by Y. G. Sinai and E. M. Stein**

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**Y Sinai**

*Princeton University, USA*

**E Stein**

*Princeton University, USA*

 **World Scientific**

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### List of Wolf Prize Winners

1978	Israel M. Gel'fand	1913–2009
	Carl L. Siegel	1896–1981
1979	Jean Leray	1906–1998
	André Weil	1906–1998
1980	Henri Cartan	1904–2008
	Andrei N. Kolmogorov	1903–1987
1981	Lars V. Ahlfors	1907–1996
	Oscar Zariski	1899–1986
1982	Hassler Whitney	1907–1989
	Mark Grigor'evich Krein	1907–1989
1983/4	Shiing-Shen Chern	1911–2004
	Paul Erdős	1913–1996
1984/5	Kunihiko Kodaira	1915–1997
	Hans Lewy	1904–1988
1986	Samuel Eilenberg	1913–1998
	Atle Selberg	1917–2007
1987	Kiyoshi Itō	1915–2008
	Peter D. Lax	1926
1988	Friedrich Hirzebruch	1927
	Lars Hörmander	1931
1989	Alberto P. Calderón	1920–1998
	John W. Milnor	1931
1990	Ennio de Giorgi	1928–1996
	Ilya Piatetski-Shapiro	1929–2009
1992	Lennart A. E. Carleson	1928
	John G. Thompson	1932

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1993	Mikhail Gromov	1943
	Jacques Tits	1930
1994/5	Jürgen K. Moser	1928–1999
1995/6	Robert Langlands	1936
	Andrew J. Wiles	1953
1996/7	Joseph B. Keller	1923
	Yakov G. Sinai	1935
1999	László Lovász	1948
	Elias M. Stein	1931
2000	Raoul Bott	1923–2005
	Jean-Pierre Serre	1926
2001	Vladimir I. Arnold	1937–2010
	Saharon Shelah	1945
2002/3	Mikio Sato	1928
	John T. Tate	1925
2005	Gregory A. Margulis	1946
	Sergei P. Novikov	1938
2006/7	Stephen Smale	1930
	Hillel Fürstenberg	1935
2008	Pierre R. Deligne	1944
	Phillip A. Griffiths	1938
	David Mumford	1937
2010	Shing-Tung Yau	1949
	Dennis P. Sullivan	1941
2012	Michael G. Aschbacher	1944
	Luis A. Caffarelli	1948

## Preface

This is the fourth volume in the series dealing with the winners of the Wolf Prize in mathematics. The present volume covers mostly the period of the first decade of this century.

It may be well to recall some facts about the Wolf Prize. It was founded by Dr. Ricardo Wolf and his wife Francisca Subirana Wolf and is given each year in five of the six areas of Agriculture, Chemistry, Mathematics, Medicine, Physics, and the Arts. Laureates receive their awards from the President of the State of Israel in a ceremony at the Knesset (Israel's parliament) in Jerusalem. About this prize, S. S. Chern and F. Hirzebruch said it well when they wrote: "The Fields medal goes to young people ... The Wolf prize often honors the achievements of a whole life."

As in the previous volumes, the documents collected here are varied in nature but are intended to sketch a picture of the work and scientific life of each of the laureates. As such, these include bibliographies and curricula vitae, particularly noteworthy papers or surveys, as well as articles written about the winners, whenever these were available.

It is our pleasure to record here our appreciation to the Wolf foundation. We also wish to express our thanks to World Scientific for their role in publishing this volume, and in particular to the help we have received from Ms. E. H. Chionh.

*Yakov G. Sinai*  
*Elias M. Stein*

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## Curriculum Vitae

David Mumford

Date of Birth: June 11, 1937, Worth, West Sussex, UK

### Education:

1957 B.A., Magna Cum Laude, Harvard College

1961 Ph.D., Harvard University

### Employment History:

1961–1962 Instructor and Research Fellow in Mathematics Harvard University  
 1962–1963 Assistant Professor, Harvard University  
 1962–1963 Member, Institute for Advanced Study, Princeton and Visiting Professor, University of Tokyo  
 1963–1967 Associate Professor, Harvard University  
 1967–1977 Professor, Harvard University  
 1967–1968 Visiting Professor, Tata Institute of Fundamental Research  
 1970–1971 Nuffield Professor, University of Warwick  
 1976–1977 Visiting Professor, Institut des Hautes Etudes Scientifiques, Paris  
 1977–1997 Higgins Professor of Mathematics, Harvard University  
 1978–1979 Visiting Professor, Tata Institute of Fundamental Research  
 1981–1984 Chairman, Department of Mathematics, Harvard University  
 1985–1997 Member, Division of Applied Science, Harvard University  
 1991–1994 Vice-President, International Mathematical Union  
 1993(fall) Rothschild Professor, Isaac Newton Institute, Cambridge University  
 1995–1998 President, International Mathematical Union  
 1997– Professor Emeritus, Harvard University  
 1996–2007 University Professor, Division of Applied Math. Brown University  
 1998(fall) Visiting Professor, Institut Henri Poincare, Paris  
 2005(spring) Visiting Professor, Math. Sciences Research Institute, Berkeley  
 2007– Professor Emeritus, Brown University

### Awards:

1953 Westinghouse Science Talent Search, finalist  
 1958–1961 Society of Fellows, Harvard University, Junior Fellow  
 1974 Fields Medal, International Congress of Mathematics, Vancouver  
 1975 Elected to the National Academy of Sciences

1978	Honorary Fellow, Tata Institute of Fundamental Research
1983	Honorary Degree of Doctor of Science, University of Warwick
1987–1992	MacArthur Foundation Fellow
1991	Elected Foreign Member, Accademia Nazionale dei Lincei, Rome
1995	Elected Honorary Member, London Mathematical Society
1997	Elected American Philosophical Society
2000	Honorary Degree of DSc., Norwegian Univ. of Science and Technology, Trondheim
2001	Honorary Degree of DSc., Rockefeller University
2004	Elected Foreign Member, Norwegian Academy of Science and Letters
2005	IEEE Longuet-Higgins Prize, CVPR 2005, (with Jayant Shah)
2006	The Shaw Prize in Mathematical Sciences, Hong Kong (shared with Wu Wentsun)
2007	Amer. Math. Society Steele Prize for Mathematical Exposition
2008	Wolf Prize in Mathematics (shared with Pierre Deligne and Phillip Griffiths)
2008	Elected Foreign Member of the Royal Society (UK)

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