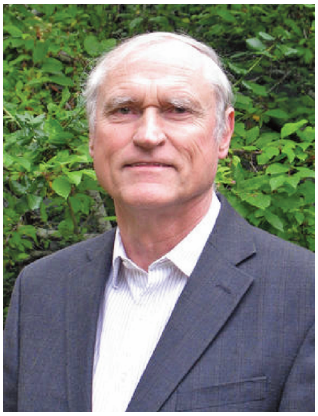
Fefferman and Schoen Awarded 2017 Wolf Prize in Mathematics

Charles Fefferman



Richard Schoen

Charles Fefferman of Princeton University and Richard Schoen of the University of California, Irvine, have been awarded the 2017 Wolf Prize in Mathematics by the Wolf Foundation.

The prize citation reads: "Charles Fefferman has made major contributions to several fields, including several complex variables, partial differential equations and subelliptic problems. He introduced new fundamental techniques into harmonic analysis and explored their application to a wide range of fields including fluid dynamics, spectral geometry and mathematical physics. This had a major impact on regularity questions for classical equations such as the Navier-Stokes equation and the Euler equation. He solved major problems related to the fine structure of solutions to partial differential equations."

"Richard Schoen has been a pioneer and a driving force in geometric analysis. His work on the regularity of harmonic maps and minimalsurfaces had a lasting impact on the field. His solution of the Yamabe problem is based on the discovery of a deep connection to general relativity. Through his work on geometric analysis Schoen has contributed greatly to our understanding of the interrelation between partial differential equations and differential geometry. Many of the techniques he developed continue to influence the advance of non-linear analysis."

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Biographical Sketch: Charles Fefferman

Charles Fefferman was born in Washington, DC, in 1949. Showing exceptional ability in mathematics as a child, he entered the University of Maryland in 1963, at the age of fourteen, having bypassed high school. He published his first mathematics paper in a journal at the age of fifteen. In 1966, at the age of seventeen, he received his BS in mathematics and physics and was awarded a three-year NSF fellowship for research. He received his PhD from Princeton University in 1969 under the direction of Elias Stein. After spending the year 1969–1970 as a lecturer at Princeton, he accepted an assistant professorship at the University of Chicago. He was promoted to full professor in 1971—the youngest full professor ever appointed in the United States. He returned to Princeton in 1973. He has been the recipient of a Sloan Foundation Fellowship (1970) and a NATO Postdoctoral Fellowship (1971). He was awarded the Fields Medal in 1978. His many awards and prizes include the Salem Prize (1971); the inaugural Alan T. Waterman Award (1976); the Bergman Prize (1992); and the Bôcher Memorial Prize of the AMS (2008). He was elected to the American Academy of Arts and Sciences in 1972, the National Academy of Sciences in 1979, and the American Philosophical Society in 1989. He became an honorary member of the London Mathematical Society in 2009.

Biographical Sketch: Richard Schoen

Richard Schoen was born in Celina, Ohio, in 1950. He received his PhD in 1977 from Stanford University under Leon Simon and Shing-Tung Yau. While still a graduate student at Stanford, he accepted a position as instructor of mathematics at the University of California, Berkeley. In 1978 he became assistant professor at New York University. With a Sloan Foundation Fellowship, he spent the year 1979–1980 as a visiting member at the Institute for Advanced Study, Princeton. In 1980 he became professor of mathematics at Berkeley, and in 1984 he moved to the University of California, San Diego. He was awarded a MacArthur Fellowship in 1983. He returned to Stanford in 1987, where he is currently Anne T. and Robert M. Bass Professor of Humanities and Sciences. His honors include election to the American Academy of Arts and Sciences (1988) and the National Academy of Sciences

(1991); selection as a Fellow of the American Association for the Advancement of Science (1995); and a Guggenheim Fellowship (1996). He was awarded the Bôcher Memorial Prize of the AMS in 1989. He has held visiting positions at the Institute for Advanced Study, the Courant Institute of New York University, and Harvard University.

About the Prize

The Wolf Prize is an international award granted by the Wolf Foundation. It carries a cash award of US$100,000. The science prizes are given annually in the areas of agriculture, chemistry, mathematics, medicine, and physics. Laureates receive their awards from the President of the State of Israel in a special ceremony at the Knesset Building (Israel's Parliament) in Jerusalem. The list of previous recipients of the Wolf Prize in Mathematics is available on the website of the Wolf Foundation, `www.wolffund.org.il`.

—Wolf Fund Announcement

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