

January 5, 2006

Providence, RI---John M. Greene, retired from General Atomics, is receiving the 2006 AMS Leroy P. Steele Prize for a Seminal Contribution to Research. Presented annually by the American Mathematical Society, the Steele Prize is one of the highest distinctions in mathematics. The prize will be awarded on Friday, January 13, 2006, at the Joint Mathematics Meetings in San Antonio, Texas.

Professor Greene shares the prize with three co-authors for their joint paper:

"Korteweg-deVries equation and generalizations. VI. Methods for exact solution", by Clifford S. Gardner, John M. Greene, Martin D. Kruskal, and Robert M. Miura. (COMMUNICATIONS ON PURE AND APPLIED MATHEMATICS, volume 27, (1974), pages 97--133.)

The citation states:

"This is a fundamental paper in the theory of solitons, inverse scattering transforms, and nonlinear completely integrable systems. Before it, there was no general theory for the exact solution of any important class of nonlinear differential equations." The ideas set forth in this paper were quickly extended to other kinds of equations, triggering important work in other areas, such as dynamical systems, inverse scattering, and symplectic geometry.

The citation continues:

"In applications of mathematics, solitons and their descendants (kinks, anti-kinks, instantons, and breathers) have entered and changed such diverse fields as nonlinear optics, plasma physics, and ocean, atmospheric, and planetary sciences. Nonlinearity has undergone a revolution: from a nuisance to be eliminated, to a new tool to be exploited."

More about AMS prizes: <http://www.ams.org/prizes-awards>.

Founded in 1888 to further mathematical research and scholarship, the more than 30,000-member American Mathematical Society fulfills its mission through programs and services that promote mathematical research and its uses, strengthen mathematical education, and foster awareness and appreciation of mathematics and its connections to other disciplines and to everyday life.

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