



David Gross

GRFP Recipient: 1963

Undergraduate Institution:
B.S., M.S. 1962 The Hebrew
University of Jerusalem

Graduate Institution:
Ph.D. 1966, University of
California, Berkeley

Graduate Field of Study: Physics

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Current Position:
Director, Kavli Institute for
Theoretical Physics, Santa
Barbara

RESEARCH INTERESTS //

David Gross is a theoretical physicist who studied particle and quantum physics over his distinguished career. Gross won the Nobel Prize in physics in 2004 for his work on the “strong interaction”--the force that keeps neutrons and protons in an atom’s nucleus together. The strong force counteracts the repelling force caused by the extreme close packing of neutrons and protons, and the charge repulsion of the protons. Without the strong force, nuclei would fly apart, and atoms would not exist as we know them. This work contributed to the theory that unifies all the forces of nature--the Standard Model. Gross’ later work focused on string theory--a model that attempts to mathematically describe all the fundamental forces and forms of matter in the universe.

AWARDS/ HONORS //

Over 20 honorary doctorates and professorships, including:

- Alfred P. Sloan Foundation Fellow, 1970
- Fellow, American Physical Society, 1974
- Fellow, American Academy of Arts and Sciences, 1985
- Member, National Academy of Sciences, 1986
- J. J. Sakurai Prize of the American Physical Society, 1986
- MacArthur Foundation Fellowship Prize, 1987
- Fellow, American Association for the Advancement of Science, 1987
- Dirac Medal, International Center for Theoretical Physics, 1988
- Oscar Klein Medal, Royal Swedish Academy, 2000
- High Energy and Particle Physics Prize, European Physical Society, 2003
- Nobel Prize in Physics, 2004
- San Carlos Boromero Award, University of San Carlos, Philippines, 2008

POSITION PROFILE //

- Junior Fellow, Harvard Society of Fellows, 1966-69
- Assistant Professor, Princeton University, 1969-71
- Associate Professor, Princeton University, 1971-73
- Professor, Princeton University, 1973- 1986
- Eugene Higgins Professor of Physics, Princeton University, 1986-1995
- Thomas Jones Professor of Mathematical Physics, Princeton University, 1995-1997
- Thomas Jones Professor of Mathematical Physics Emeritus, Princeton University, 1997-
- Professor, University of California, Santa Barbara 1997-
- Director, Kavli Institute for Theoretical Physics, Santa Barbara, 1997-
- Frederick W. Gluck Professor of Theoretical Physics, UCSB 2002—

