

Ronald E. Hatcher
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*IS SUSY THE GUARDIAN OF
OUR REALITY FROM
OBLIVION?*

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ABSTRACT:

The proposed property of supersymmetry (SUSY) is being searched for by the LHC in its newest scientific planned run. What is SUSY? How do error-coding codes play a role in it, and how might its property of taming quantum fluctuations be a requirement to stabilize the laws of physics?

BIOGRAPHY:

Sylvester James “Jim” Gates, Jr. is an American theoretical physicist. He received two B.S. degrees (mathematics & physics) and a Ph.D. degree all from Massachusetts Institute of Technology. His doctoral thesis was the first thesis at MIT to deal with supersymmetry. He also completed postgraduate studies at both Harvard University and the California Institute of Technology (CalTech). Gates is currently a University System Regents Professor, Distinguished University Professor, the John S. Toll Professor of Physics, and the Center for Particle & String Theory Director at the University of Maryland, College Park, and serves on the U.S. President’s Council of Advisors on Science and Technology (PCAST) and the Maryland State Board of Education (MD-BoE). He is known for his work on supersymmetry, supergravity, and superstring theory. In 1984, working with M.T. Grisaru, M. Rocek, W. Siegel, Gates co-authored Superspace, the first comprehensive book on the topic of supersymmetry. In 2006, he released, the book L'arte della Fisica (The Art of Physics), and has authored over 200 scientific publications.

He is past president of the National Society of Black Physicists, and a NSBP Fellow, as well as a Fellow of the American Physical Society, the American Association for the Advancement of Science, and the Institute of Physics in the U.K. He is a member of the Board of Directors for Fermi National Accelerator Laboratory. He also is currently serving as a Distinguished Research Chair at Canada’s Perimeter Institute. He has been elected to membership in the American Philosophical Society.

His continuing research in supersymmetry, supergravity and superstring/M-theory can be seen via a link on his homepage that leads to a popular-level discussion entitled, “Symbols of Power” and “From the Mathematics of Supersymmetry to the Music of Arnold Schoenberg” (available on Youtube) as well the link marked as “Q2C Festival 2009 Talk” describing some of his current investigations on links of adinkras, error-correcting codes, and equations of fundamental physics.