

Biographical Sketch: JOHN W. MORGAN

EDUCATION: B.A., 1968; Ph.D, 1969, Rice University, Advisor: Morton L. Curtis (deceased), Rice University.

EXPERIENCE

Columbia University, Department of Mathematics, Professor, 1977-, Chair 1989-1991, 2004-

Columbia University, Department of Mathematics, Associate Professor, 1974-1977

MIT, Department of Mathematics, Assistant Professor, 1972-1974.

Princeton University, Department of Mathematics, Instructor and Lecturer, 1969-1972.

Visiting Professor: IHES 2000-2001 Institute for Advanced Study, 1996-1997. Princeton University, 1994-1996. Harvard University, 1989-1990. MSRI 1984-1985. Université de Paris, Sud 1975-1976. IHES 1974-1976, 2000-2001.

HONORS AND AWARDS Member European Academy of Sciences, Mathematics Section. 45-minute Speaker, International Congress of Mathematicians, Berkeley, 1986. Alfred P. Sloan Foundation Fellow, 1974-1976.

SCIENTIFIC ACTIVITIES Chair AMS Committee to Select Winner of the Veblen Prize, 2003-2004. Member, Steering Committee, IAS/Park City Institute, 1994-2000, 2000-. Member, Board of Trustees, MSRI, Berkeley 1986-1994, Chair 1989-1994. Member, Committee of Science Policy of AMS, 1992-1995, Chair, 1995. Member, International Congress, Organizing Committee for Topology, 1990 and 1994. Member, Organizing Committee for Special Year in Low Dimensional Topology, MSRI, 1984-1985. Organizer, IAS/Park City Summer Institute in Mathematics, 1994.

Editor, Journal American Mathematical Society 2004 -. Editor, *Inventiones Mathematicae*, 1985-1995; *Topology and its Applications*, 1983-; *Topology and Geometry* 1999-present; *Mathematical Research Letters*, 1995-1996. *Journal of the American Mathematical Society* 2004- Member, Sloan Graduate Mathematics Fellowship Panel, 1994-1999.

SELECTED PUBLICATIONS

M1. R. Friedman and J. Morgan, 'Holomorphic Principal Bundles over elliptic curves' preprint AG/9811130, 'Part II: The Parabolic Construction,' *J. Diff. Geo.* **56** (2000) 301-379; Part III: Singular Curves and Fibrations AG/0108104.

M2. R. Friedman and J. Morgan, 'On the converse to a theorem of Atiyah and Bott,' *J. Alg. Geometry* **11** (2002) 257-292.

M3. R. Friedman and J. Morgan, 'Exceptional Groups and del Pezzo surfaces,' preprint AG/0009155, to appear *Symposium in Honor of C. H. Clemens*, Ed. A. Bertram, J. Carlson, and H. Kley, *Contemporary Mathematics*, Vol. 312, AMS, Providence.

M4. R. Friedman and J. Morgan, 'Miniscule representations, invariant polynomials and spectral covers,' preprint AG/0011082, to appear *Missouri Conference on Hilbert Schemes, Vector Bundles and Representation Theory*, Ed. Z. Qin in *Contemporary Mathematics*, AMS, Providence.

M5. R. Friedman and J. Morgan, 'Automorphism sheaves, spectral covers and the Kostant and Steinberg sections,' preprint AG/020953.

M6. A. Borel, R. Friedman, and J. Morgan, 'Almost Commuting Elements in compact Lie Groups,' *Memoirs of the AMS*, Vol. 157, No. 747, (May, 2002), AMS, Providence, p.136.

M7. R. Friedman, J. Morgan, and E. Witten, 'Vector Bundles and F -theory,' *Commun. Math. Phys.* **187** (1997), 679-743.

M8. P. Deligne et al Editors, *Quantum Fields and Strings: A Course for Mathematicians*, Amer. Math. Soc. Providence, 1999. Two volumes, 1501 pp.

M9. J. Morgan, 'Seiberg-Witten equations and applications to the topology of four-manifolds,' *Lecture Notes in Mathematics*, Princeton University Press, 1996.

M10. J. Morgan, Z. Szabo, and C. Taubes, 'A product formula for the Seiberg-Witten invariants and the Generalized Thom Conjecture,' *J. Diff. Geo.* **44** (1996), 706-788.

RECENT COLLABORATORS

Charles Doran, Columbia University. Adrian Clingher, Institute for Advanced Study. Armand Borel, Institute for Advanced Study. Robert Friedman, Department of Mathematics, Columbia University. Zoltan Szabo, Department of Mathematics, University of Michigan. Clifford Taubes, Department of Mathematics, Harvard University. Edward Witten, Institute for Advanced Study.

THESIS STUDENTS OVER THE PAST 5 YEARS

Pedram Safari Ph.D, 2000 Mehrzad Ajoodnanian, Ph.D, 2000. Brendon Ownes, Ph.D, 2000; McMaster University and Trinity College, Dublin. Adrian Clingher, Ph.D, 2001 Stanford University and Institute for Advanced Study.

SYNERGISTIC ACTIVITIES

1. Involvement with the NSF VIGRE grant at Columbia University reworking the first- and second-year graduate curriculum
2. Development of a new first-year graduate course (as part of the VIGRE program) on groups and their representations; preparation of lecture notes for this course.
3. Preparation of the book, reference M9, which is an introduction suitable for graduate students to the new and active field of Seiberg-Witten invariants.
4. Participation as a lecturer in four different summer schools in the last three years (in China, Hungary, France, Italy) in an attempt to spread the understanding of the new results in Seiberg-Witten theory to graduate students and young postdoctoral fellows around the world.
5. With seven other editors, edited the book, reference M8, an attempt to render the language, ideas and results of modern high energy theoretical physics (quantum field theory and string theory) accessible to the mathematical community.