

Vita: James Glimm

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Professional Preparation

Columbia University, Engineering, BA, 1956
Columbia University, Mathematics, Ph.D. 1956-1959

Appointments

1999- Staff Member, Computational Science Center, Brookhaven National Laboratory
1989- Distinguished Professor, SUNY at Stony Brook
1982-89 Professor, Courant Institute, New York University
1974-82 Professor, The Rockefeller University
1968-74 Professor, Courant Institute, New York University
1960-68 Professor, Associate Professor, Assistant Professor, MIT
1959-60 Temporary Member, Institute for Advanced Study

Prizes, Honors, and Fellowships: National Medal of Science (2002); President, American Mathematical Society (2007-2009); Steele Prize for a paper of fundamental importance, AMS (1993); Member, National Academy of Sciences; Member, American Academy of Arts and Science; Dannie Heineman prize for Mathematical Physics (1980); New York Academy of Science Award in the Physical and Math Sciences (1979); National Science Foundation Fellowship 1959-1960; Guggenheim Fellowships 1963-1964, 1965-1966.

Selected Recent Publications:

1. Y. DENG, J. GLIMM, Y. WANG, M. EISENBERG, A. GROLLMAN, AND A. KOROBKA, "Prediction of Protein Binding to DNA in the Presence of Water-Mediated Hydrogen Bonds", *Journal of Molecular Modeling*, **5** (1999), 125-133.
2. G. HAN, Y. DENG, J. GLIMM, G. MARTYNA, "Error and timing analysis of symplectic multiple timestep integration methods for molecular dynamics", *J. Computational Physics*, In Press.
3. Y. DENG, J. GLIMM, J. DAVENPORT, X. CAI, E. SANTOS, "Performance Models on QCDOC for Molecular Dynamics with Coulomb Potentials", *International Journal of High Performance Computing Applications* **18** (2004), 183-198.
4. XUENA WANG, WEI ZHU, KITH PRADHAN, CHEN JI, YEMING MA, OLIVER SEMMES, JAMES GLIMM, "Feature Extraction in the Analysis of Proteomic Mass Spectra", *Proteomics* **7** (2006), 2095-2100.
5. WEI ZHU, XUENA WANG, YEMING MA, MANLONG MA, JAMES GLIMM, JOHN KOVACH, "Detection of Cancer Specific Markers Amidst Massive Mass Spectral Data", *Proc. Nat. Aca. Sci.* **100** (2003), 14666-14671.
6. B. CHENG, J. GLIMM AND D. H. SHARP, "A Three-Dimensional Renormalization Group Bubble Merger Model for Rayleigh-Taylor Mixing". *Chaos* **12** (2002), 267- 274.
7. J. GLIMM, H. JIN, M. LAFOREST, F. TANGERMANN, AND Y. ZHANG, "A Two Pressure Numerical Model of Two Fluid Mixing", *SIAM J. Multiscale Model. Sim.* **1** (2003) 458-484.

8. E. GEORGE, J. GLIMM, X.L. LI, Y. H. LI AND X. F. LIU, “The Influence of Scale-Breaking Phenomena on Turbulent Mixing Rates”, *Phys. Rev. E* **73** (2006) 016304, pp1-5.
9. J. GLIMM, J. GROVE, Y. KANG, T. LEE, X. LI, D. H. SHARP, Y. YU AND M. ZHAO, “Errors in Numerical Solutions of Spherically Symmetric Shock Physics Problems”, *Contemporary Mathematics* **371** (2005) 163-179.
10. J. GLIMM AND D. SHARP, “Prediction and the Quantification of Uncertainty”, *Physica D* **133** (1999), pp 152-170.

Students, Advisors, Collaborators

PhD advisor: Richard Kadison **Former Students:** Y. Chen, L. Koralov, H. J. Kim, T. Smith, J.-Y. Nam, M. Laforest, H. Jin, A.-D. Lin, C. Zoldi, A. Marchese, E. George, Y. Yu, Y.-h. Lee, T. Lee, T. Lu, M. Zhao, S. Dutta, X. Liu, J. Liu.: **Recent Collaborators (other than above):** S. Abarzhi, K. Nishihara, D. Sharp, B. Cheng, J. Grove, D. Brown, L. Diachin, M. Christie, M. Wood, D. Higdon, J. Davenport, Y. Deng, X. Cai, E. Santos, B. DeVolder, Y. Kang, Y. Zhang, X. Li, N. Zhao, Z. Xu, K. Ye, G. Martyna, R. Samulyak, W. Oh, H. Kirk, K. McDonald, M. Kim, Y. Prykarpatsky, N. Stojic, M. Komejl, W. Zhu, Y. Ma, J. Mitchell, P. Drake, X. Wang, J. Kovach.
