**Robert Michael Panoff**
Former Executive Director and
President of the Board
Shodor Education Foundation, Inc.

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**EDUCATION**

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|---|---|---|---|
| University of Notre Dame | Physics | B.S. | 1977 |
| Washington University in St. Louis | Physics | A.M. | 1979 |
| Washington University in St. Louis | Condensed Matter Physics | Ph.D. | 1985 |
| Wofford College, Spartanburg, SC | Science Education | D.Sc.(HC) | 2005 |

**AWARDS**

2022 SIGHPC Award For Outstanding Contribution to Computational Science Education
2014 SIGCSE Outstanding Contribution to Computer Science Education
2011 North Carolina Science Leadership Association Distinguished Service Award
2007 Cisco Systems Growing with Technology Award
2006 US Dept. of Energy Undergraduate Computational Engineering and Science Award

**PROFESSIONAL EXPERIENCE**

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|---|---|
| 2016-Present | Visiting Scientist in Residence, Wofford College |
| 1994-Present | President and Executive Director, Senior Computational Scientist, Shodor Education Foundation, Inc. |
| 1993-1994 | Director, Education Group, National Center for Supercomputing Applications, University of Illinois at Urbana-Champaign, Champaign, Illinois |
| 1991-1993 | Manager of Education, North Carolina Supercomputing Center, Research Triangle Park, NC |
| 1990-1993 | Adjunct Associate Professor of Physics, North Carolina State University, Raleigh, NC |
| 1988-1991 | Assistant Professor of Physics, Clemson University, Clemson, SC |
| 1986-1988 | Assistant Professor of Physics, Kansas State University, Manhattan, KS |
| 1985-1986 | Postdoc, Courant Institute of Mathematical Sciences, New York University |
| 1982-1986 | Research Scientist, Courant Institute of Mathematical Sciences, New York University, NY |

**PUBLICATIONS most related to computational science education**

Glotzer, S.C., Panoff, R. M., Lathrop, S. , "Challenges and Opportunities in Preparing Students for Petascale Computational Science and Engineering," *Computing in Science & Engineering* , vol.11, no.5, pp.22-27, Sept.-Oct. 2009.

Calder, A. C., M. R. Curry, R. M. Panoff, and Y. J. Wong. "Visualization of the Local Contribution to the Nodal Surface of a Many-Fermion Wave Function." *Phys. Rev. E* 53 (1996): 5451.

Panoff, R. M. "The Four A's of Computational Science Education: Application, Algorithm, Architecture, and Active Learning." *IEEE Comput. Sci. & Eng.* 2(4) (1995).

Stevenson, D. E., and R. M. Panoff. "Experiences in Building the Computational Science Program at Clemson." *IEEE Proc Supercomputing* 90 (1990).

Panoff, R. M. "UNIX for Super Computing?"" *UNIX Review* 8 (1990).

**Other related publications**

Panoff, R. M. "Fermion Monte Carlo Algorithms for Quantum Fluids." In *Recent Progress in Many-Body Theories,* ed. by Y. Avishai, vol. *2*. New York: Plenum, 1990.

Dave, R., J. W. Clark, and R. M. Panoff. "Elementary Excitations of Spin-Aligned Deuterium."' *Phys. Rev. B* 41 (1990): 757.

Panoff, R. M., and J. Carlson. "Fermion Monte Carlo Algorithms and Liquid $^3$He." *Phys. Rev. Lett.* 62 (1989): 1130.
Panoff, R. M., and P. A. Whitlock. "Momentum Distributions in Quantum Liquids from Green's Function Monte Carlo Calculations." In *Momentum Distributions*, ed. by R. Silver. New York: Plenum, 1989.
Panoff, R. M., and J. W. Clark. "Ground-state Phases of Polarized Deuterium Species." Phys. Rev. B 36 (1987): 5527.

**SYNERGISTIC ACTIVITIES**

Founder of Shodor Education Foundation, Inc. a non-profit research and education corporation with over $1M annually in federal, state, and private funding to undertake interdisciplinary research in the appropriate uses of technology in education. http://www.shodor.org

Director of ***Computing MATTERS***: Mentoring Academic Transitions Through Experience in Research and Service. Funded by NSF Office of Cyberinfrastructure, Computing MATTERS brings students from middle school through graduate school into computer science and the computational sciences through workshops, apprenticeships, and internships through hands-on experience in modeling and simulation technologies.

Founder and Director of the ***National Computational Science Institute*** (NCSI), a comprehensive, interdisciplinary training program for undergraduate faculty funded by NSF Division of Undergraduate Education. NCSI combines in-person workshops, network-accessible curriculum materials, web-based courses, and continuous support for undergraduate mathematics and science faculty to learn how to do and how to teach computational science, with special emphasis on integrating schools of education faculty with science and math faculty **http://www.computationalscience.org**

Director of the ***Computational Science Education Reference Desk***, a Pathway project of the National Science Digital Library, CSERD brings together the best materials for teaching computational science while promoting an authentic process of Verification, Validation, and Authentication (VVA). http://cserd.nsdl.org

Design Lead for ***Interactivate***, a professional development curriculum for mathematics teachers adopted by Department of Defense Education Activity, and selected for Illuminations website of the NCTM. Winner of numerous interactive exploration curriculum design awards, including ISTE "Best of Web." http://www.shodor.org/interactivate

Developed ***SUCCEED*** (Stimulating Understanding of Computational science through Collaboration, Experiment, Exploration, and Discovery), a middle school and high school workshop and mentorship program, with particular success in reaching hundreds of minority students and underrepresented groups. http://www.shodor.org/succeed

Co-founder of the NSF Corporate and Foundation Alliance, bringing together leaders from NSF, industry and private foundations to address critical issues in undergraduate education. Recipient of special citation for service from NSF Division of Undergraduate Education.

**COAUTHORS AND COLLABORATORS**

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**Graduate and Postdoctoral Advisors**:

Graduate Advisor: John W. Clark, Crow Professor of Physics, Washington University in St. Louis
Postdoctoral Sponsor: Mal Kalos, ASCI, Los Alamos National Laboratory

**Thesis Advisor and Postgraduate-Scholar Sponsor (2):**

Postdoctoral Sponsor for:
David A. Joiner, Shodor Education Foundation (1999-2004)
Garret R. Love, Shodor Education Foundation (2000-2005)