

SHIRLEY V. MOORE

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EDUCATION

B. A.	Indiana University, Bloomington, IN	Mathematics and Chemistry	1978
M.Ed.	University of Illinois, Urbana-Champaign, IL	Science Education	1980
M.S.	Wichita State University, Wichita, KS	Mathematics	1985
Ph.D.	Purdue University, West Lafayette, IN	Computer Sciences	1990

BACKGROUND

Shirley Moore is an Associate Professor in the Computer Science Department at the University of Texas at El Paso. Her expertise is in performance modeling and optimization for parallel and heterogeneous computing systems. She has over 20 years of experience working in high performance computing.

PROFESSIONAL EXPERIENCE

University of Texas at El Paso	Associate Professor	Sep 2020 – present
Oak Ridge National Laboratory	Senior Computer Scientist	July 2016 – Sep 2020
University of Texas at El Paso	Associate Professor	July 2012 – June 2016
University of Tennessee at Knoxville	Associate Research Professor	July 2010 – Jun 2012
Lindblom Math & Science Academy Chicago, IL	High School Teacher	Aug 2007 -- June 2010
University of Tennessee at Knoxville	Associate Director of Research	June 1998 – July 2007
University of Tennessee at Knoxville	Research Associate	Jan 1993 – May 1998
Hope College, Holland, MI	Assistant Professor	Aug 1990 – Dec 1992
Wichita State University	Instructor	Aug 1981 – July 1985

SELECTED PUBLICATIONS

1. Eric Suchyta, Scott Klasky, Norbert Podhorszki, Matthew Wolf, Abolaji D. Adesoji, Choong-Seock Chang, Jong Choi, Philip E. Davis, Julien Dominski, Stéphane Ethier, Ian T. Foster, Kai Germaschewski, Berk Geveci, Chris Harris, Kevin A. Huck, Qing Liu, Jeremy Logan, Kshitij Mehta, Gabriele Merlo, Shirley V. Moore, Todd S. Munson, Manish Parashar, David Pugmire, Mark S. Shephard, Cameron W. Smith, Pradeep Subedi, Lipeng Wan, Ruonan Wang, Shuangxi Zhang: The Exascale Framework for High Fidelity coupled Simulations (EFFIS): Enabling whole device modeling in fusion science. *Int. J. High Perform. Comput. Appl.* 36(1): 106-128 (2022).
2. John Gounley, Madhurima Vardhan, Erik W. Draeger, Pedro Valero-Lara, Shirley V. Moore, Amanda Randles: Propagation Pattern for Moment Representation of the Lattice Boltzmann Method. *IEEE Trans. Parallel Distributed Syst.* 33(3): 642-653 (2022).
3. William Marfo, Deepak K. Tosh, Shirley V. Moore: Condition monitoring and anomaly detection in cyber-physical systems. *SoSE 2022*: 106-111.
4. Daniel F. Puleri, Sayan Roychowdhury, Peter Balogh, John Gounley, Erik W. Draeger, Jeff Ames, Adebayo Adebisi, Simbarashe Chidyagwai, Benjamin Hernandez, Seyong Lee, Shirley V. Moore, Jeffrey S. Vetter, and Amanda Randles. High Performance Adaptive Physics Refinement to Enable Large-Scale Tracking of Cancer Cell Trajectory. *IEEE Cluster 2022*, Heidelberg, Germany, September 2022.

5. Tiffany M. Mintz, Alexander J. McCaskey, Eugene F. Dumitrescu, Shirley V. Moore, Sarah Powers, and Pavel Lougovski. QCOR: A language extension for the heterogeneous quantum quantum-classical model of computation. *ACM Journal on Emerging Technologies in Computing Systems* 16 (2020).
6. Alexander J. McCaskey, Zachary P. Parks, Jacek Jakowski, Shirley V. Moore, Titus D. Morris, Travis S. Humble, Raphael C. Pooser. Quantum chemistry as a benchmark for near-term quantum computers. *npj Quantum Information* 5, 99 (2019). DOI: [10.1038/s41534-019-0209-0](https://doi.org/10.1038/s41534-019-0209-0)
7. Ivy Bo Peng, Jeffrey S. Vetter, Shirley Moore, Joydeep Rakshit, Stefano Markidis. Analyzing the suitability of contemporary 3D-stacked PIM architecture for HPC scientific applications. *Computing Frontiers 2019*: 256-262.
8. Ivy Bo Peng, Jeffrey S. Vetter, Shirley V. Moore, Seyong Lee. Tuyere: Enabling scalable memory workloads for system exploration. *HPDC 2018*: 180-191.
9. Christopher D. Carothers, Jeremy S. Meredith, Mark P. Blanco, Jeffrey S. Vetter, Misbah Mubarak, Justin M. LaPre, Shirley Moore. Durango: Scalable synthetic workload generation for extreme-scale application performance modeling and simulation. *SIGSIM-PADS 2017*: 97-108.
10. Mariam Umar, Shirley V. Moore, Jeremy S. Meredith, Jeffrey S. Vetter, and Kirk Cameron. Aspen-based performance and energy modeling frameworks. *Journal of Parallel and Distributed Computing* 120: 222-236 (2018).

GRADUATE AND POSTDOCTORAL ADVISORS

Bharat Bhargava, Purdue University; Jack Dongarra, University of Tennessee

GRADUATE STUDENTS AND POSTDOCTORAL RESEARCHERS ADVISED

Karl Furlinger, LMU-Munich; Madhu Hari, University of Utah; Matthew Johnson, Garmin; Kevin London, Microsoft; Rogelio Long, University of Texas at El Paso; Marco Lopez, University of Texas at El Paso; Daniel Lucio, Oak Ridge National Laboratory; Henry Moncada, University of Texas at El Paso; Snigdha Mudunuri, Texas Tech University; Umayanganie Munipala Klaassen, University of Texas at El Paso; Sonish Shrestha, Grand Central Networks; Fengguang Song, Indiana Univ.-Purdue Univ. Indianapolis; Joseph Thomas, University of Nevada-Las Vegas; Mariam Umar, Intel; Vincent Weaver, University of Maine; Felix Wolf, University of Darmstadt.

Total Graduate Students Advised: 12. Total Postdoctoral Scholars Sponsored: 4.

COLLABORATORS AND CO-EDITORS

Mark Blanco, Rensselaer Polytechnic Institute; Kirk Cameron, Virginia Tech University; Christopher Carothers, Rensselaer Polytechnic Institute; Laura Carrington, San Diego Supercomputer Center; Eugene Dumitrescu, Oak Ridge National Laboratory; Eric Freudenthal, University of Texas at El Paso; Mark Gordon, Iowa State University/Ames Laboratory; John Gounley, Oak Ridge National Laboratory; Travis Humble, Oak Ridge National Laboratory; Jacek Jakowski, Oak Ridge National Laboratory; Justin LaPre, Rensselaer Polytechnic Institute; Seyong Lee, Oak Ridge National Laboratory; Rogelio Long, University of Texas at El Paso; Pavel Lougovski, Oak Ridge National Laboratory; Alexander J. McCaskey, Oak Ridge National Laboratory; Jeremy Meredith, Google; Tiffany M. Mintz, AMD; Misbah Mubarak, Argonne National Laboratory; Ivy Bo Peng, Lawrence Livermore National Laboratory; Raphael Pooser, Oak Ridge National Laboratory; Sarah Powers, Oak Ridge National Laboratory; Daniel Puleri, Duke University; Amanda Randles, Duke University; Philip Roth, Oak Ridge National Laboratory; Barry Rountree, Lawrence Livermore National Laboratory; Sarat Sreepathi, Oak Ridge National Laboratory; Ananta Tiwari, San Diego Supercomputer Center; Deepak Tosh, University of Texas at El Paso; Mariam Umar, Intel; Jeffrey Vetter, Oak Ridge National Laboratory; Vincent Weaver, University of Maine; Theresa Windus, Iowa State University.