David Bader

Distinguished Professor, Data Science at New Jersey Institute of Technology

Newark, NJ, US

Interests lie at the intersection of data science & high-performance computing, with applications in cybersecurity

Biography

David A. Bader is a Distinguished Professor and founder of the Department of Data Science and inaugural Director of the Institute for Data Science at New Jersey Institute of Technology. Dr. Bader is a Fellow of the IEEE, ACM, AAAS, and SIAM; a recipient of the IEEE Sidney Fernbach Award; and the 2022 Innovation Hall of Fame inductee of the University of Maryland?s A. James Clark School of Engineering. He advises the White House, most recently on the National Strategic Computing Initiative (NSCI) and Future Advanced Computing Ecosystem (FACE). Bader is a leading expert in solving global grand challenges in science, engineering, computing, and data science. His interests are at the intersection of high-performance computing and real-world applications, including cybersecurity, massive-scale analytics, and computational genomics, and he has co-authored over 300 scholarly papers and has best paper awards from ISC, IEEE HPEC, and IEEE/ACM SC. Dr. Bader has served as a lead scientist in several DARPA programs including High Productivity Computing Systems (HPCS) with IBM, Ubiquitous High Performance Computing (UHPC) with NVIDIA, Anomaly Detection at Multiple Scales (ADAMS), Power Efficiency Revolution For Embedded Computing Technologies (PERFECT), Hierarchical Identify Verify Exploit (HIVE), and Software-Defined Hardware (SDH). Dr. Bader is Editor-in-Chief of the ACM Transactions on Parallel Computing, and previously served as Editor-in-Chief of the IEEE Transactions on Parallel and Distributed Systems. He serves on the leadership team of Northeast Big Data Innovation Hub as the inaugural chair of the Seed Fund Steering Committee. ROI-NJ recognized Bader as a technology influencer on its 2021 inaugural and 2022 lists. In 2012, Bader was the inaugural recipient of University of Maryland?s Electrical and Computer Engineering Distinguished Alumni Award. In 2014, Bader received the Outstanding Senior Faculty Research Award from Georgia Tech. Bader has also served as Director of the Sony-Toshiba-IBM Center of Competence for the Cell Broadband Engine Processor and Director of an NVIDIA GPU Center of Excellence. In 1998, Bader built the first Linux supercomputer that led to a high-performance computing (HPC) revolution, and Hyperion Research estimates that the total economic value of Linux supercomputing pioneered by Bader has been over $100 trillion over the past 25 years.

Areas of Expertise

Graph Analytics, Massive-Scale Analytics, High-Performance Computing, Data Science, Applications in Cybersecurity, Computational Genomics

Affiliations

AAAS Fellow, IEEE Fellow, SIAM Fellow, ACM Fellow

Event Appearances

Massive-scale Analytics
13th International Conference on Parallel Processing and Applied Mathematics (PPAM)

Predictive Analytics from Massive Streaming Data
44th Annual GOMACTech Conference: Artificial Intelligence & Cyber Security: Challenges and Opportunities for the Government

Massive-Scale Analytics Applied to Real-World Problems
2018 Platform for Advanced Scientific Computing (PASC) Conference

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Education

University of Maryland
Ph.D. Electrical and Computer Engineering

Lehigh University
M.S. Electrical Engineering

Lehigh University
B.S. Computer Engineering

Accomplishments

Inductee into University of Maryland's A. James Clark School of Engineering Innovator Hall of Fame
2022

NVIDIA AI Lab (NVAIL) Award
2019

Invited attendee to the White House?s National Strategic Computing Initiative (NSCI) Anniversary Workshop.
2019

Facebook AI System Hardware/Software Co-Design Research Award
2019

Named a member of "People to Watch" by HPC Wire
2014

The first recipient of the University of Maryland's Distinguished Alumni Award
2012 Department of Electrical and Computer Engineering

Named a member of "People to Watch" by HPC Wire
2012

Selected by Sony, Toshiba, and IBM to direct the first Center of Competence for the Cell Processor
2006
