

# Computing@PNNL SEMINAR

## *Science in the Era of Extreme Heterogeneity*



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Rapid changes in computing technology are driving ever-faster changes in the way scientific discoveries are made. Dr. Nowell will discuss the dimensions of heterogeneity that are expected to impact the software stack for computational and data-intensive computing in the 2025-2035 time frame. In particular, she will discuss her vision for the research needed to keep technological turbulence from disrupting scientific progress.

**ABOUT:**

After eight years managing an Advanced Scientific Computing Research research portfolio emphasizing scientific data management, analysis, and visualization, Dr. Nowell now oversees a portfolio that covers operating and runtime systems, systems modeling and simulation, and programming models and environments. She recently sponsored a Workshop on Extreme Heterogeneity, aimed at understanding the research needed for supercomputing systems that will be operational in the 2025-2040 time frame. Previously, she served as a program director in the National Science Foundation's Office of Cyberinfrastructure and as a program manager for the Department of Defense, managing projects related to information analysis and visualization. Nowell earned her M.S. and Ph.D. in computer science from Virginia Tech. She also holds a B.A. and M.A. in theatre from the University of Alabama and an M.F.A. from the University of New Orleans.



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