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Shinjae Yoo

Computational Research Division Lead
Brookhaven National Laboratory



Dr. Shinjae Yoo is the Department Chair of the Artificial Intelligence Department within the Computing and Data Sciences Directorate at Brookhaven National Laboratory (BNL). His research focuses on the convergence of artificial intelligence, high-performance computing, quantum computing, and neuromorphic hardware architectures. Dr. Yoo leads multidisciplinary initiatives in scientific machine learning, multimodal foundation models, physics-informed AI, and cryogenic software-hardware co-design. His work aims to drive technical breakthroughs across next-generation computing paradigms to accelerate scientific discovery and energy applications.