Department of Energy Announces 18 Million Node-Hours for Scientific Research

ASCR Leadership Computing Challenge (ALCC), 2022-2023 *List Posted: 6/29/2022*

Principal Investigator	Title	Institution	City	State	9-digit zip code
Bhatia, Harsh	AI-Driven Multiscale Investigation of RAS-RAF Activation Lifecycle	Lawrence Livermore National Laboratory	Livermore	CA	94550-9698
Candy, Jeff	Exploring pedestal structure via the electromagnetic gyrokinetic framework	General Atomics	San Diego	CA	92121-1122
Chen, Jacqueline	Mitigating Climate Change Through Zero Carbon Fuels	Sandia National Laboratories	Albuquerque	NM	87123-3453
Coon, Ethan	Advancing Watershed System Science using ML and Process-based Simulation	Oak Ridge National Laboratory	Oak Ridge	TN	37830-8050
Del Ben, Mauro	Dynamics and decoherence of excited states in 2D systems for quantum technology	Lawerence Berkeley National Laboratory	Berkeley	CA	94720-8229
Edwards, Robert	The spectrum and structure of hadrons	Jefferson Laboratory	Newport News	VA	23606-4468
Fiuza, Frederico	Energy partition and particle acceleration in laboratory magnetized shocks	SLAC National Accelerator Laboratory	Menlo Park	CA	94025-7015
Gao, Michael	Accelerated Discovery of Low-Cost Hydrogen-Resistant Alloys for Extreme Environments	National Energy Technology Laboratory	Pittsburgh	PA	15236-0940
Gavini, Vikram	First-principles prediction of solute segregation at defects in Mg alloys	University of Michigan	Ann Arbor	MI	48109-1274
Giustino, Feliciano	Computational design of novel semiconductors for power and energy applications	The University of Texas at Austin	Austin	TX	78759-5316
Car, Roberto	Deep learning-enabled ab initio simulation of heterogeneous aqueous systems	Princeton University	Princeton	NJ	08544-2020
Gottlieb, Steven	High Precision Hadronic Vacuum Polarization Contribution to the Muon Anomalous Magnetic Moment using Highly Improved Staggered Quarks	Indiana University	Bloomington	IN	47401-3654
Goulet, Christine	Improved Seismic Hazard Modeling Using Physics-based Simul	Southern California Earthquake Center, University of Southern California	Los Angeles	CA	90089-0701
Hamilton, Steven	Monte Carlo neutron transport for high burnup/high enrichment nuclear fuel	Oak Ridge National Laboratory	Oak Ridge	TN	37830-8050
Hanson, Heidi	Privacy-preserving Transformer models for clinical natural language processing	Oak Ridge National Laboratory	Oak Ridge	TN	37830-8050
Howard, Nathan	Gyrokinetic Prediction of Burning Plasma Profiles Enabled by Surrogate Modeling	Massachusetts Institute of Technology	Cambridge	MA	02139-4307
Hufnagel, Dirk	Using GPU to reconstruct LHC collisions recorded with the CMS detector	Fermi National Accelerator Laboratory	Batavia	IL	60510-5011
Isbill, Sara	Informing Forensics Investigations of Nuclear Materials	Oak Ridge National Laboratory	Oak Ridge	TN	37830-8050
Jiang, Wei	Microscopic Insight into transport properties of Li-battery electrolytes	Argonne National Laboratory	Lemont	IL	60439-4801
Karniadakis, George	A Multiscale Surrogate Model for Fracture Evolution using DeepONet	Brown University	Providence	RI	02912-2912
Lele, Sanjiva	Shock Turbulent Boundary Layer Interaction in Supercritical CO2 Flows	Stanford University	Redwood City	CA	94063-8445

Liu, Jinxun	Terrestrial ecosystem carbon cycle of the conterminous U.S.	U.S. Geological Survey, Western Geographic Science Center	Moffett Field	CA	94035-8803
Lukic, Zarija	Cosmological Hydro Simulations to Explore the High and Low-Redshift Universe	Lawrence Berkeley National Laboratory	Berkeley	CA	94720-8229
Park, Jaeyoung	Particle-in-cell simulations of beam-driven, field-reversed configuration plasmas	TAE Technologies, Inc.	Foothill Ranch	CA	92610-2607
Meehl, Gerald	E3SMv2 Smoothed Biomass Burning Large Ensemble	National Center for Atmospheric Research	Boulder	CO	80301-2252
Merzari, Elia	High-Fidelity Flow Data for Multiscale Bridging: Year 2	Pennsylvania State University	University Park	PA	16802-7000
Moin, Parviz	Large-eddy simulations of dynamic stall in a boundary layer ingesting turbofan	Stanford University	Redwood City	CA	94063-8445
Oleynik, Ivan	Predictive Simulations of Inertial Confinement Fusion Ablator Materials	University of South Florida	Tampa	FL	33620-9951
Ozik, Jonathan	Probabilistic Comparative Modeling of Colorectal Cancer Screening Strategies	Argonne National Laboratory	Lemont	IL	60439-4801
Petridis, Loukas	Integrating HPC molecular simulation with neutron scattering to study complex biological systems	Oak Ridge National Laboratory	Oak Ridge	TN	37830-8050
Popov, Emilian	HFIR DNS simulations	Oak Ridge National Laboratory	Oak Ridge	TN	37830-8050
Priebe, Stephan	High-Fidelity Simulations of Turbulent Aeroacoustics Enabling Sustainable Aviation	GE Research	Niskayuna	NY	12309-1027
Pryor, Sara C	Modeling operating conditions in the US east coast offshore wind energy lease areas	Cornell University	Ithaca	NY	14850-2820
Rakhno, Igor	Optimization studies of LBNF neutrino beamline and hadron absorber complex	Fermi National Accelerator Laboratory	Batavia	IL	60510-5011
Rocco, Noemi	Short Range Correlations from a Quantum Monte Carlo perspective	Fermi National Accelerator Laboratory	Batavia	IL	60510-5011
Shaver, Dillon	High-Fidelity CFD Simulations for Next Generation Nuclear Reactor Designs	Argonne National Lab	Lemont	IL	60439-4801
Skolnick, Jeffrey	Proteome-scale structural and function prediction with deep learning	Georgia Tech Research Corporation	Atlanta	GA	30332-0420
Sprague, Michael	Unlocking wind farm dynamics to secure a sustainable energy future	National Renewable Energy Laboratory	Golden	CO	80401-3111
Tchekhovskoy, Alexander	Simulating Collapsar Accretion Disks, Outflows, and Nucleosynthesis	Northwestern University	Chicago	IL	60611-4579
Trebotich, David	Simulation of flow and transport in desalination systems	Lawrence Berkeley National Laboratory	Berkeley	CA	94720-8229
Ullrich, Paul	A Climate Model Ensemble for Understanding Future Changes to Extreme Weather	University of California, Davis	Davis	CA	95618-6153
Wagner, Lucas	QMC-HAMM: From the nanoscale to the mesoscale	University of Illinois at Urbana-Champaign	Champaign	IL	61820-7406
Wen, Han	Laser-plasma instability mitigation using broadband lasers	Laboratory for Laser Energetics, University of Rochester	Rochester	NY	14627-0140
Yoon, Hong-Jun	Automatic Histologic Diagnosis of Whole Slide Imaging at Scale	Oak Ridge National Laboratory	Oak Ridge	TN	37830-8050

Yu, Yiqi	Investigation of Flow and Heat Transfer Behavior in Involute Plate Research Reactor with Large Eddy Simulation to Support the Conversion of Research Reactors to Low Enriched Uranium Fuel	Argonne National laboratory	Lemont	IL	60439-4801