Department of Energy Announces $16 Million for Research on Artificial Intelligence and Machine Learning For Autonomous Optimization And Control Of Accelerators And Detectors

Principal Investigator	Title	Institution	City	State	9-digit zip code
Liu, Ming Xiong	**Intelligent Experiments Through Real-time AI: Fast Data Processing and Autonomous Detector Control for sPHENIX and Future EIC detectors**	**LANL**	**Los Alamos**	**NM**	**87545-0001**
Roland, Gunther (Co-PI)	*same as above- Collaboration*	Massachusetts Institute of Technology	Cambridge	MA	02139-4307
Yu, Dantong (Co-PI)	*same as above- Collaboration*	New Jersey Institute of Technology	Newark	NJ	07102-1982
Tran, Nhan (Co-PI)	*same as above- Collaboration*	FNAL	Batavia	IL	60510-5011
Hao, Cong	*same as above- Collaboration*	*Georgia Institute of Technology*	Atlanta	GA	30332-0420
Schambach, Jo	*same as above- Collaboration*	ORNL	Oak Ridge	TN	37831-6374
Ostroumov, Peter	**Online Autonomous Tuning of the FRIB Accelerator Using Machine Learning**	**MSU**	**East Lansing**	**MI**	**48824-2601**
Scheinker, Alexander	*Same as above- Collaboration*	LANL	Los Alamos	NM	87545-0001
Wrede, Christopher	**Machine Learning for Time Projection Chambers at FRIB**	**MSU**	**East Lansing**	**MI**	**48824-2601**
Carpenter, Michael	**Modern Data Analytics for the Large Gamma-Ray Spectrometers: GRETINA/GRETA and Gammasphere via Machine Learning and Optimization**	**ANL-ATLAS**	**Lemont**	**IL**	**60439-4801**
Redpath, Thomas	**Neural Network Classifier for Analyzing Measurements of Fast Neutrons for Invariant Mass Spectroscopy**	**Virginia State University**	**Petersburg**	**VA**	**23803-2520**
Jacobs, Peter	**New Approaches to Bayesian Uncertainty Quantification for Nuclear Science**	**LBNL**	**Berkeley**	**CA**	**94720-8202**
Mak, Simon	*Same as above- Collaboration*	Duke University	Durham	NC	27708-0251
Shen, Chun	*Same as above- Collaboration*	Wayne State University	Detroit	MI	48202-4050
Lee, Dean	**STREAMLINE Collaboration: Machine Learning for Nuclear Many-Body Systems**	**MSU**	**East Lansing**	**MI**	**48824-2601**
Lovato, Alessandro	*Same as above- Collaboration*	ANL-ATLAS	Lemont	IL	60439-4801
Rocco, Noemi	*Same as above- Collaboration*	FNAL	Batavia	IL	60510-5011
Piekarewicz, Jorge	*Same as above- Collaboration*	Florida State University	Tallahassee	FL	32306-4350
Furnstahl, Richard	*Same as above- Collaboration*	Ohio State university	Columbus	OH	43210-1117
Drischler, Christian	*Same as above- Collaboration*	Ohio University	Athens	OH	45701-2979

Hagen, Gaute	*Same as above- Collaboration*	ORNL	Oak Ridge	TN	37831-6374
Konig, Sebastian	*Same as above- Collaboration*	North Carolina State University	Raleigh	NC	27695-7514
Papenbrock, Thomas	*Same as above- Collaboration*	University of Tennessee-Knoxville	Knoxville	TN	37996-1529
Mustapha, Brahim	**Use of Artificial Intelligence to Optimize Accelerator Operations and Improve Machine Performance**	**ANL**	**Lemont**	**IL**	**60439-4801**
Liuti, Simonetta	**EXCLAIM - EXCLusives via Artificial Intelligence and Machine learning**	**University of Virginia**	**Charlottesville**	**VA**	**22903-4833**
Lin, Huey-Wen	*Same as above- Collaboration*	MSU	East Lansing	MI	48824-2601
Sievert, Matthew	*Same as above- Collaboration*	New Mexico State University	Las Cruces	NM	88003-8002
Li, Yaohang	*Same as above- Collaboration*	ODU	Norfolk	VA	23508-2561
Goldstein, Gary	*Same as above- Collaboration*	Tufts U	Boston	MA	02111-1817
Boer, Marie	*Same as above- Collaboration*	Virginia Polytechnic Institute	Blacksburg, VA	VA	88003-8002
Crawford, Heather	**Machine Learning Optimization: VENUS & GRETA**	**LBNL**	**Berkeley**	**CA**	**94720-8202**
Tennant, Chris	**Graph Learning for Efficient and Explainable Operation of Particle Accelerators**	**TJNAF**	**Newport News**	**VA**	**23606-4468**
Gruszko, Julieta	**Interpretable Machine Learning for Germanium-Based Neutrinoless Double Beta Decay Searches**	**University of North Carolina**	**Chapel Hill**	**NC**	**27599-1350**
Hoffstaetter, Georg	**Beam Polarization Increase in the BNL Hadron Injectors Through Physics-informed Bayesian Learning**	**BNL**	**Upton**	**NY**	**11973-5000**
Hoffstaetter, Georg	*Same as above- Collaboration*	Cornell University	Ithaca	NY	14850-2820
Wang, Yinan	*Same as above- Collaboration*	Rensselaer Polytechnic Institute	Troy	NY	12180-3522
Edelen, Auralee	*Same as above- Collaboration*	SLAC	Stanford	CA	94305-2004
Schram, Malachi	*Same as above- Collaboration*	TJNAF	Newport News	VA	23606-4468
Fanelli, Cristiano	**A Scalable and Distributed AI-assisted Detector Design for the EIC**	**William & Mary**	**Williamsburg**	**VA**	**23187-8795**
Wenaus, Torre	*Same as above- Collaboration*	BNL	Ithaca	NY	14850-2820
Horn, Tanja	*Same as above- Collaboration*	Catholic University of America	Washington	DC	20064-0001
Vossen, Anselm G.	*Same as above- Collaboration*	Duke University	Durham	NC	27708-0251
Diefentahler, Markus	*Same as above- Collaboration*	TJNAF	Newport News	VA	23606-4468

Lawrence, David	AI/ML Optimized Polarization	TJNAF	Newport News	VA	23606-4469