Informational Webinar for DE-FOA-0003673: Genesis Mission Graduate Fellowship Pilot

November 4, 2026

Genesis Mission

FOA Issue Date:	October 8, 2026
Submission Deadline for Letters of Intent:	November 9, 2026, at 5 PM Eastern Time
Letters of Intent Response Date:	November 23, 2026, at 5 PM Eastern Time
Submission Deadline for Applications:	January 12, 2027, at 11:59 PM Eastern Time

Disclaimer : *This presentation summarizes the contents of the NOFO. Nothing in this webinar is intended to add to, take away from, or contradict any of the requirements of the NOFO. If there are any inconsistencies between the NOFO and this presentation or statements from DOE personnel, the NOFO is the controlling document.*

U.S. DEPARTMENT of ENERGY

For more information

The NOFO is the authoritative source for this competition:

Funding Opportunities | U.S. DOE Office of Science (SC)

Modification published on October 28, 2026: issued to note (page 32) that DOE may share application and review materials with the Foundation for Energy Security and Innovation (FESI); to update references to Super Intelligence (SI); and to modify the program policy factors (page 38).

The Genesis Mission

Purpose

The Genesis Mission, as described in Executive Order 14363, is a dedicated, coordinated national effort that will unleash a new age of SI-accelerated innovation and discovery that can solve the most challenging problems of this century.

- The American Science Cloud (AmSC): a collaborative cloud ecosystem for scientific research, data sharing, and analysis;
- The Transformational SI Models Consortium (ModCon): curating data and building foundational, self-improving SI models for science.

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The Genesis Mission Graduate Fellowship Pilot Background

Purpose

The purpose of this pilot is to lay the foundation for the first cohort of Genesis Mission Graduate Fellows, representing a new generation of Ph.D.-level scientists and engineers with exceptional training in SI and scientific disciplines along with practical research experiences.

SC's mission is to deliver the scientific discoveries and major scientific tools to transform our understanding of nature and advance the energy, economic, and national security of the United States. SC is the Nation's largest Federal sponsor of basic research in the physical sciences and the lead Federal agency supporting fundamental scientific research for our Nation's energy future.

Informed by

- February 18, 2026 Genesis Mission University/Science Philanthropy Summit: report
- March 4, 2026 Genesis Mission Request for Information: report
- September 24, 2026 DOE Town Hall on the Genesis Mission Graduate Fellowship Pilot: recording
- Additional Genesis Mission resources related to workforce: site

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The Genesis Mission Graduate Fellowship Pilot Background

The Genesis Mission Pilot Program invites applications engaging the following SC offices:

- Advanced Scientific Computing Research (ASCR)
- Basic Energy Sciences (BES)
- Biological and Environmental Research (BER)
- Fusion Energy Sciences (FES)
- High Energy and Nuclear Physics (HENP)

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Pilot Overview

Accelerated Path: Commitment by Fellows and host academic institutions to graduate within four years.

Dual Competency: Workforce requires training in both SI technologies and target scientific disciplines. "Thesis work must have a recognized impact on the SC-relevant Genesis Mission National Science and Technology Challenges as detailed in RFA DE-FOA-0003612."

Relevant experience: Thesis-related research experiences at DOE-SC User Facilities/National Labs & Industry.

Support Structure: Reimburses university expenses including student stipends, tuition, health insurance, and research experiences at DOE-SC User Facilities/National Labs & Industry.

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Supported research areas

CHALLENGE

1. Reenvisioning Advanced Manufacturing and Industrial Productivity (BES, FES, ASCR)

FOCUS AREAS

1-A: Agentic AI-Driven Chemical Manufacturing (BES)

1-B: AI-Driven Materials Processing (BES)

1-C: AI-Enabled Manufacturing for Extreme Energy Systems (FES)

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Supported research areas

2. Scaling the Biotechnology Revolution (BER, ASCR)

2-A: Biomolecular Science (BER)

2-B: Genotype to Phenotype (BER)

2-C: Predictive Engineering of Microbial Communities (BER)

2-D: Bio Design (BER)

This broad challenge became three challenges in the latest list: Predicting Living Systems, Scaling Biology for American Industrial Leadership, and Early Detection and Attribution of Biological Threats.

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Supported research areas

3. Securing America's Critical Minerals Supply (BES, BER)

3-E: Geological Finders/Keepers (BES, BER)

3-F: Connections for Isolation (BES)

3-G: Biological Pathways to CMM (BER)

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Supported research areas

5. Accelerating Delivery of Fusion Energy (FES)

5-A: Structural Materials (FES)

5-B: Plasma-Facing Materials (FES)

5-C: Advancing Confinement Approaches (FES)

5-D: Fuel Cycle and Tritium Processing (FES)

5-E: Tritium Breeding Blankets (FES)

5-F: Fusion Plant Engineering and System Integration (FES)

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Supported research areas

7. Discovering Quantum Algorithms with SI (ASCR, BES, HENP, FES)

7-A: Application-aware Error Correction (ASCR)

7-B: Computational Tools for Fault Tolerant Quantum Computational Science (ASCR)

7-C: Hybrid Quantum-Classical Optimization Algorithms (BES)

7-D: Quantum Algorithms for Nonlinear Plasma Physics (FES)

7-E: Quantum Advantage for Nuclear and Hadronic Systems (HENP)

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Supported research areas

8. Realizing Quantum Systems for Discovery (BES, HENP, ASCR)

8-A: SI for Quantum Systems Design (BES)

8-B: SI for Control of Quantum System (HENP)

8-C: SI for Quantum Imaging and Sensing (HENP)

8-D: SI for Quantum Computing and Networking (ASCR)

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Supported research areas

9. Recentering Microelectronics in America (BES, ASCR, HENP, FES)

9-B: Materials and Architectures for Non-von Neuman Computing Devices (BES)

9-C: SI-Driven Architecture Design (ASCR)

9-D: 3D non-volatile compute-in-memory technology (ASCR)

9-E: Physics-Based Circuit Design, Simulation, and Emulation (ASCR)

9-F: Microelectronics in Harsh Environments (HENP)

9-G: Plasma-Enabled Microelectronics Manufacturing (FES)

9-H: Power Electronics and Communication Networks (ASCR)

9-I: Low-temperature Electronics for Sensors and Computation (ASCR, HENP)

9-J: Transform Neuromorphic Computing Connectivity, Communication, and System Hardware Integration (ASCR)

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Supported research areas

11. Achieving SI-Driven Autonomous Laboratories (BES, ASCR, FES)

11-A: Advanced Robotics for Dynamic Laboratory Environments (ASCR)

11-B: SIOps - SI for Network Operations (ASCR)

11-C: SI-Accelerated Science: Correlation to Understanding (BES)

11-D: SI-Enabled Diagnostics and Remote Handling (FES)

11-E: Accelerate the design and prototyping of neuromorphic computing circuit primitives for robotic embodied physical super intelligence (ASCR)

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Supported research areas

12. Designing Materials with Predictable Functionality (BES, ASCR, FES)

12-A: Functional to Quantum Materials (BES)

12-B: Structural Materials (BES, FES)

12-C: Biomolecular Materials (BES)

12-D: Plasma-Facing Materials (FES)

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Supported research areas

13. Enhancing Particle Accelerators for Discovery (HENP, BES, FES, ASCR)

13-A: SI-driven Accelerator Facilities (BES, HENP)

13-B: Integration of Digital Twins for Fusion Systems and Actuators (FES)

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Supported research areas

14. Unifying Physics from Quarks to the Cosmos (HENP, ASCR)

14-A: Foundation Models of Particle Interactions and Cosmic Physics (HENP)

14-B: SI Accelerated DUNE Science (HENP)

14-C: Expedited Discovery from High Complexity and Petabyte-Scale Datasets (HENP)

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Supported research areas

15. Predicting U.S. Water for Energy (BER, ASCR)

15-A: Cloud Microphysics and Atmospheric Turbulence (BER)

15-B: Water and Energy (BER)

15-C: Weeks to Years Prediction (BER)

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Supported research areas

16. Scaling the Grid to Power the American Economy (BER, ASCR)

16-A: Grid Modeling and Analysis (ASCR)

16-B: Grid Operations Optimization (ASCR)

16-C: Uncertainty Quantification (BER, ASCR)

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Supported research areas

17. Unleashing Subsurface Strategic Energy Assets (BER, ASCR, BES)

17-A: Chemical and Hydrologic Transport in Subsurface (BER)

17-B: Evolution of Fractures in the Upper Crust (BES)

Genesis Mission

Supported research areas

18. HPC Code Curation, Translation, and Development for Accelerated Scientific Discoveries (ASCR)

18-A: SI-Driven Code Porting and Optimization (ASCR)

18-B: Automated Scientific Problem-to-Code Generation (ASCR)

18-C: Neuro-Symbolic Agents for Code Development (ASCR)

18-D: Performance Prediction and Feedback Loops (ASCR)

18-E: Trustworthy SI for Scientific Software (ASCR)

18-F: Multi-Modal Data Integration for Code Intelligence (ASCR)

18-G: Partnerships for HPC SI Advancement (ASCR)

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Supported research areas

19. SI for Scientific Reasoning (ASCR)

19-A: Trustworthy Mathematical and Symbolic Reasoning (ASCR)

19-B: Hypothesis Generation from Multi-Modal Data (ASCR)

19-C: Composable and Modular Foundation Models (ASCR)

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Supported research areas

20. Cybersecurity for SI-driven Science Workflows (ASCR)

20-A: SI for Adversarial Robustness and Resilience (ASCR)

20-B: Data Provenance and Integrity Verification (ASCR)

20-C: Real-Time Attack Detection and Mitigation for SI Models (ASCR)

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Supported research areas

21. Super Intelligence in Fluid Flow for Energy Components and Technologies (ASCR, BER, FES)

21-A: Physics-Informed SI for Complex Flow Modeling (BER, ASCR, FES)

21-B: SI-Driven Design and Control for Performance and Durability (ASCR)

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Eligibility

U.S. Institutions of Higher Education and domestic doctoral-granting institutions must be the lead applicant.

Applications may include subawards to institutions of higher education, industry, DOE National Laboratories, and SC user facilities.

Applicant institutions are limited **to no more than one letter of intent** or application as the lead institution.

For questions about eligibility, please contact GM-Uni-Engagement@doe.gov

Genesis Mission

Required Letter of Intent (LOI)

Due November 9, 2026, by 5 pm ET.


TITLE OF PROJECT
John Doe, Vice President of Research
Imaginary University
PI Phone Number, PI Email Address
DE-FOA-0003673
The primary challenge area as identified in Section III of The Genesis Mission: Transforming Science and Energy with AI Notice of Request for Application (RFA) Number: DE-FOA-0003612:
5 - Accelerating Delivery of Fusion Energy
Optional secondary challenge area(s):
9 – Recentering Microelectronics in America
19 – SI for Scientific Reasoning

The title page **must** include the following information:

Project title

Principal Investigator (PI) Name, Job Title

Lead Institution

PI Phone Number, PI Email Address

NOFO Number: DE-FOA-0003673

Primary challenge area as identified here

List of all senior/key personnel at the applicant and subaward institutions

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Required Letter of Intent (LOI)

Due November 9, 2026, by 5 pm ET.

LOI title page **must** be followed by a clear and concise description of the objectives and technical approach of the proposed pilot, including both curriculum development and Genesis Mission research. A high-level description of the cost, schedule, and major milestones of the pilot should be included.

LOI **must** include a list of individuals who should not serve as merit reviewers of a subsequent application (see part 2 of this NOFO). The list of individuals must be included as an "Additional Attachment" to your LOI in PAMS.

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DOE-SC University Engagement Working Group








Tris West, La'Nese Lovings, Chris Fecko, Michael Halfmoon, Sharon Stephenson, David Rabson

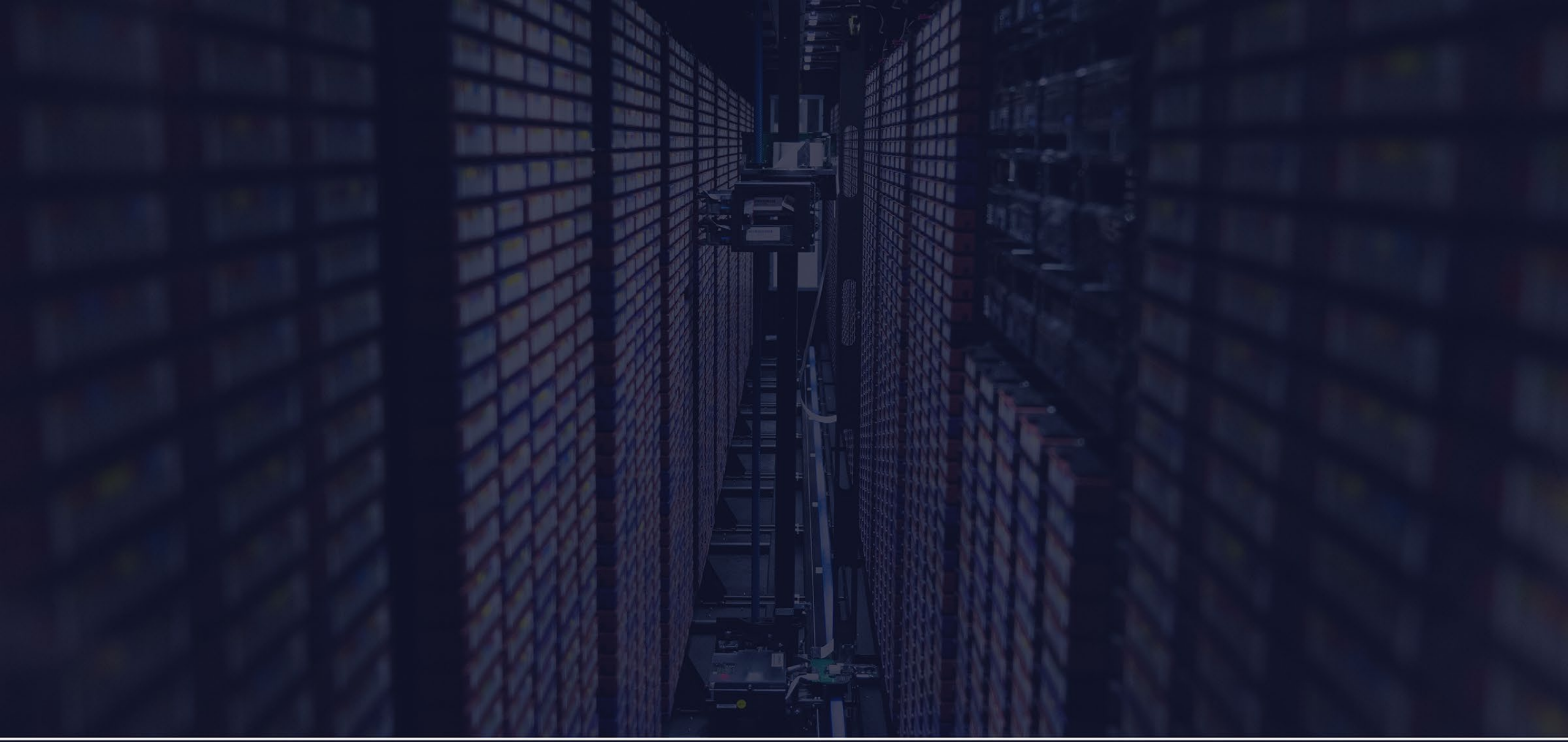
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For more information

The NOFO is the authoritative source for this competition: Funding Opportunities | U.S. DOE Office of Science (SC)

Genesis Mission's Workforce Development site: Workforce Development | Department of Energy

If you still have questions: GM-Uni-Engagement@doe.gov



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