2026-2027 Annual Call for Research Proposals

This document provides a summary of the 2026-2027 call-for-proposals (CFP) details and process for our university partners. It includes CFP details, topics, timelines, deadlines, and instructions for applying through our new research portal. These details can be added to our university partner website and shared via outreach channels. We plan to open for submissions on 2/24/2026. Questions should be directed to Kathleen Allen allenkdh@amazon.com.

About this CFP

AICE is a partnership between UIUC and Amazon dedicated to bridging academic and industry research in artificial intelligence. With support from Amazon, AICE annually funds multiple research projects and doctoral fellowships. We invite proposals that take innovative approaches to a broad range of artificial intelligence topics. 2026-2027 proposals should advance research in one or more of the following topic areas of interest.

Topics of Interest

**Proposers will select primary and secondary categories in the application process (e.g. Responsible Generative AI).*

Foundation Model Improvements

- Novel model architectures
- Novel training algorithms and methodologies
- Multi-modal (e.g., text, image, video, audio) understanding and generation
- Multi-lingual understanding and generation
- Algorithms and workflows for acquiring and curating high-quality and diverse datasets for training
- Continual learning
- RL Methodologies including verifiable and unverifiable rewards

Foundation Model/Agentic Evaluation

- Creation of new benchmarks for assessing foundation model capabilities
- Methodologies for robust evaluation of generative AI systems, including agents

Efficient Generative AI & Efficient Inference

- Efficient training and inference for cloud and on-device applications
- Compute and memory efficient handling of multi-modal long/infinite context
- Improving efficiency of models, including diffusion models
- Novel and efficient approaches for inference-time scaling
- Novel methods for accelerating LLM inference (speculative sampling and beyond)

Reasoning

- Commonsense and domain-specific (e.g., math, coding) reasoning

- Temporal and spatial reasoning
- Reasoning for planning

Knowledge Grounding

- Approaches to ground (multi-modal) generation on up-to-date world, domain-specific, enterprise, or personal knowledge
- Memory-augmented generative AI systems
- Efficient and accurate multimodal retrieval across heterogeneous sources (Knowledge Graphs, People Graphs, Databases, Web Content, Local Search)
- Blending and fusion of multiple knowledge sources for effective grounding
- Improved interaction between LLMs and external knowledge sources

Agentic AI

- Creation of autonomous systems capable of performing tasks, making decisions, and interacting with their environments and humans
- Informal reasoning
- Low-code/no-code for business agentic applications
- Multi-Agent systems and agent orchestration framework improvements
- Customization and continual improvement of agents post deployment
- Agent-Environment Simulation Research and world models
- Internationalizing agentic systems
- Agentic AI applications including Agentic Coding, Deep Research Agents, and Cybersecurity

Personalization

- System-level personalization
- Personalization of dialog-based applications
- Prompt-based personalization of large language models
- Personalized retrieval and ranking for RAG-LLM systems

Responsible Generative AI

- Red teaming (e.g., advanced approaches; for multi-modal models)
- Improvement of foundation model RAI performance (e.g., robustness to jailbreaking and membership inference attacks; watermarking approaches; deepfake detection)
- Responsible agentic AI (e.g., robustness of multi-agent systems; adherence to guardrails)
- Measurement and alignment against frontier risks (e.g., scheming, deception, AI autonomy)
- International/cultural alignment

AI Accelerated Science and Engineering Innovation

- Systems that leverage Generative AI for advancing science and technology in areas such as physics, mathematics, chemistry, biology, hardware design, materials science, engineering, economics, healthcare, climate

Timeline

March 7, 2026: Call for abstracts open. Please apply through the portal following the instructions below.

March 24, 2026: Abstract proposal submissions are due. Interested faculty complete this application form and upload/submit a 1-page abstract. This abstract should be an overview of a research project idea, one-page maximum, excluding references. This step is required to be invited to submit a full proposal.

April 10, 2026: Invitations to submit full proposals. Amazon will review abstracts and provide responses by April 10th. Amazon will invite a subset of the Abstract proposers to submit a full proposal.

April 13-24: Amazon will host optional research discussion/feedback sessions. This exchange is designed to serve as a matchmaking exercise, enabling the development of well-focused full proposals that are aligned with the interests of both the PI and Amazon.

April 27, 2026: Full proposal submissions are due. Full proposal details and process will be shared on April 10th. PIs can expect proposals to be 3 pages plus references.

June 30, 2026: Proposal acceptance notification. All PIs will be notified by or before this date.

August/September 2026: Projects begin. We anticipate that the majority of funded projects would begin in Fall and run for one year.

Eligibility Requirements

Full-time tenure-track, research-track and teaching faculty members at UIUC are eligible to submit proposals as PIs.

Instructions for Applying

Amazon now uses a dedicated proposal management portal for all submissions. To submit your research abstract proposal:

1. **Register**: Complete the user registration form at https://home.academic-research-portal.amazon.science/login
2. **Set Up Your Profile**: Select your Institution and choose "Faculty" or "Research Scientist" as your Professional Role to access open Calls for Proposals (CFPs)
3. **Submit**: Click "Submit New Proposal" in the top banner and select your target CFP
4. **Review Requirements**: Carefully read the submission requirements, instructions, and deadlines
5. **Prepare Materials**: Complete the abstract details form and upload your maximum 1-page abstract