Research Partnerships in Artificial Intelligence
Pacific Northwest National Lab & The Texas A&M University System

Summary: Texas A&M faculty interested in exploring research partnerships in AI with Pacific Northwest National Laboratory are invited to submit short presentations on their research.

The Department of Energy’s Pacific Northwest National Laboratory (DOE PNNL) and the Texas A&M Institute of Data Science (TAMIDS), in association with the Texas A&M University System National Laboratories Office (TAMUS NLO), are cultivating partnerships between PNNL researchers and TAMUS faculty to address problems germane to PNNL’s internal investments in Artificial Intelligence (AI).

PNNL’s current areas of focus in AI are:
- Mathematics for artificial reasoning, including the mathematics of deep learning and scientific machine learning.
- Foundational models for science and security, including human factors in AI; assured & fieldable AI, trustworthy AI, learning with limited data, and scalable AI architectures.
- AI for materials characterization, prediction, and control.

PNNL’s mechanisms to support external research partnerships include proposal collaboration, visitor programs, and joint appointments. PNNL seeks to identify areas of institutional strength in US universities that can inform the design of future collaboration funding programs.

The first stage in the engagement was a TAMIDS Tech Talk delivered in November 2022 by Michael Henry, a PNNL Senior Data Scientist holding a joint appointment in the Texas A&M System Center for Applied Research and Experiential Learning (CAREL) as Director of the Human-Machine Ecosystem Laboratory (HML), who provided an overview of PNNL’s research programs. A recording of this talk is available.

As a second stage, Texas A&M faculty are hereby invited to submit a short (2-3 slide) presentation summarizing their research interests and connections to PNNL’s focus areas described above. An online meeting will be convened between PNNL and selected faculty to prepare for a joint research workshop to be held later in 2023.

Submission: Interested Texas A&M faculty should send their presentation by email to Angie Rollins at a-rollins@tamu.edu with the subject “PNNL-TAMU” by Monday April 17, 2023. All submissions will be acknowledged.

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