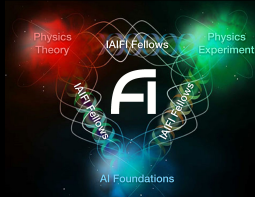




NSF AI Institute for Artificial Intelligence and Fundamental Interactions (IAIFI /aɪ-faɪ/)



Advance physics knowledge—from the smallest building blocks of nature to the largest structures in the universe—and galvanize AI research innovation

IAIFI Research

Theoretical Physics

- Nuclear & Particle Physics
- String Theory/Physical Mathematics
- Astroparticle Physics
- Automated Discovery of Models

Experimental Physics

- Particle Physics Experiments
- Gravitational Wave Interferometry
- (Multi-Messenger) Astrophysics

Foundational AI

- Symmetries & Invariance
- Speeding up Control & Inference
- Physics-Informed Architectures
- Neural Networks Theory

IAIFI Colloquia

- Biweekly talks from leaders in AI and Physics
- Broadcast live on [IAIFI YouTube Channel](#)
- Fall 2021 held every other Friday at 2 pm

IAIFI Fellowship Program

- Three-year postdoctoral appointment
- Freedom in pursuing research and collaborations
- Applications for 2023-2025 open Summer 2022

Interdisciplinary PhD Program at MIT

- Physics, Statistics, and Data Science
- Take 4 classes, 1 each in the areas of Probability, Statistics, Computation & Statistics, and Data Analysis
- Submit and defend a PhD thesis that involves the utilization of statistical methods in a substantial way

IAIFI Affiliate Program

- Senior researchers in the Boston area contributing to IAIFI mission
- Must include nomination from existing IAIFI Senior Investigator

IAIFI Resources:

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