



FPT FRONTIER INNOVATORS



SHAPING NEW BOUNDARIES OF TECHNOLOGY

Quantum AI & Cyber Security Institute (QACI)



Mission: Mastering core technologies for FPT & Vietnam — advancing national technology sovereignty and training the next generation of scientists and experts.

US\$100M

committed investment

Dec 2025

institute founded

Pioneer

among Vietnam's first corporate quantum research center

PhD-level

talent & expert training



Artificial Intelligence

Advanced AI research and solution development — building models, data resources, and applications that serve Vietnamese language, society, and industry.



Quantum Technology

Quantum computing and quantum-era technologies — pioneering one of the first enterprise-led quantum research programs in Vietnam.



Cyber Security

Security research protecting Vietnam's digital infrastructure — safeguarding data, systems, and national technology sovereignty.



Research & solution development



Training PhDs & senior experts



International & Vietnam universities collaboration



Continuing Proven Legacy: FPT AI Residency



Over five years, **FPT AI Residency** has nurtured top AI talent and driven frontier research. In 2026, it evolves into **FPT Frontier Innovators**, FPT's flagship research talent program under QACI, bringing together exceptional researchers to advance breakthrough technologies and create real-world impact.

~2000

Applications
2021-2026

80+

Talents Nurtured
6 elite cohorts

3-7%

Acceptance Rate
highly competitive

168

Publications
AI conferences & journals

130

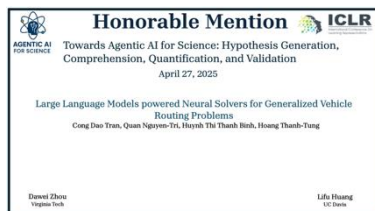
Top-tier Papers*
A*/A-rank conferences & Q1 journal

5

Granted Patents
AI Innovation



ACM SIGSOFT Distinguished Paper Award
ICSE 2026



Best Paper Award Honorable Mention
ICLR Workshop 2025



Best Paper Award
IDE – ICSE Workshop 2024



Best Tool Award
NLBSE – ICSE Workshop 2024



Top 3% Paper Recognition
ICASSP 2023

Alumni Pursuing PhD/ Master's at Top CS/ Maths Institutions and Universities



Top-tier papers counted by A/A conferences (CORE Portal) & Q1 journals (Scimago)

SELECTION CRITERIA

- 1** Recent Bachelor's/Master's graduate or final-year student in Maths/STEM disciplines
- 2** Minimum GPA of 3.2/4.0 or 8.0/10 (or equivalent)
- 3** Strong background in Maths, Machine Learning/ Quantum/ Cybersecurity and Coding
- 4** Good command of English (especially Speaking & Writing)
- 5** Preference for candidates with records at national/international Maths, Science or Programming competitions: IMO, IPhO, IOI, ICPC, VMO, etc.

COMMITMENT ON JOINING

- ✓ **Full-time for at least 18 months**
Full-time research commitment of at least 1.5 years from contract signing
- ✓ **70% research — 30% applied**
70% of effort on high-quality research; 30% on innovation development.

SHARED VISION

- ✓ **Where great minds unite to tackle large-scale challenges**
Join multidisciplinary teams of world-class scientists, fellow researchers and engineers empowered by advanced resources to build breakthrough AI, Quantum, and Cybersecurity technologies with real-world impact.

Offer Package & Benefits



Competitive Compensation

VND 26M/month (~US\$1,000) for Frontier Researchers. Performance review once a year.



Top-tier publication bonus

Incentive for top-tier publications accepted during the full-time period.



GPU & AI resources

Dedicated GPU access plus compute and data infrastructure for research.



International research exchange

Short-term onsite exchanges at Mila (Canada/Japan) and partners in the US, EU, UK, Australia and Singapore.



Top-tier conference funding

Opportunities for funded attendance and presentation at leading conferences.



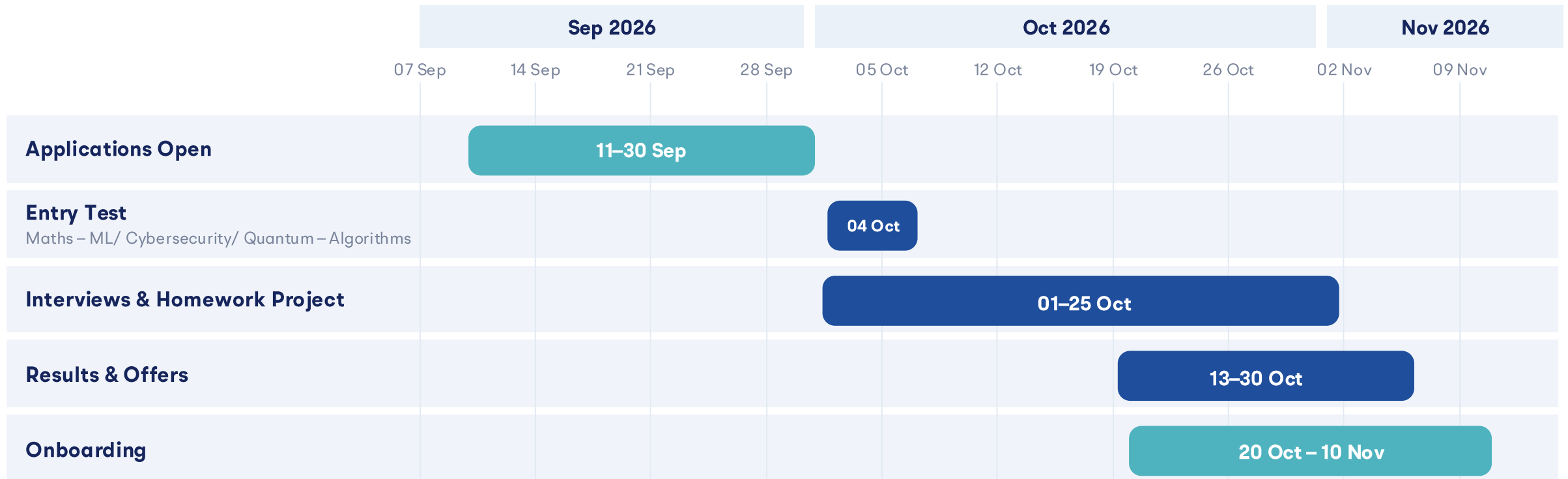
PhD pathway

A pathway to pursue a PhD through the Institute's academic partner network.

Recruitment Timeline



Applications open 11 Sep · Fast-track interviews applied for Outstanding Candidates



APPLY NOW

<https://forms.gle/tLr8Fi22HrwaLYt96>



FPT Frontier Innovators

Research Programs



Four Frontier Themes



Talent Researchers join multidisciplinary teams to turn bold ideas into impactful systems, products, and scientific breakthroughs



Physical AI

Embodied intelligence for the real world

Robotics

VLA

World Models

UAV

Earth Observation



Agentic AI

Verified autonomy for software, science and operations

AgentOS

Agents for Science

AI for Software Engineering

Cloud Operation



Quantum

Practical pathways to quantum-enabled discovery

QML

Generative Modelling

Quantum-inspired Optimization

Quantum Error Correction



Cybersecurity

Trustworthy autonomy and resilient digital infrastructure

Prompt Injection

Secure Agents

Threat Detection

Post-quantum Security

PRINCIPAL INVESTIGATORS



Prof. Ngan Le

Associate Professor
University of Arkansas · AICV Lab



Prof. Anh Nguyen

Associate Professor
Univ. of Liverpool · Smart Robotic Lab



Prof. Tan Nguyen

Assistant Professor, Mathematics, NUS



Prof. Minh-Tan Pham

Associate Professor
Université Bretagne Sud · IRISA

ROBOTICS · VISION-LANGUAGE-ACTION · EARTH OBSERVATION · UAV

Build Embodied Intelligence That Can Perceive, Predict And Act

Robots, drones and satellites must make sense of messy environments, predict the consequences of their actions and act safely, often on limited onboard compute. Researchers in this theme build the models, memory and verification that let physical systems work reliably at scale.



World and action models

Lightweight prediction of future states and actions for real-time manipulation and mobile robotics.



Trustworthy long-horizon robotics

Persistent 4D world memory, graph-grounded reasoning, safety steering, recovery and efficient VLA execution.



Earth observation and UAV intelligence

Lightweight multi-agent systems turn satellite and drone imagery into disaster, urban-change and deforestation insights.

Ideal background

Computer vision

Robotics

Reinforcement learning

Efficient DL

PRINCIPAL INVESTIGATORS



Prof. Tien N. Nguyen

Full Professor, UT Dallas



Prof. Bach Le

Senior Lecturer, University of Melbourne



Prof. Nghi Bui

Assistant Professor, CAIR, VinUni



Prof. Harry Nguyen

Associate Professor, UCC



Prof. Sonny Vu

Assistant Professor, Lund University



Dr. Tran The Hung

Director of Agentic AI Lab, FPT QACI



Prof. Tung Kieu

Associate Professor, Aalborg University



Prof. Tan Nguyen

Assistant Professor, Mathematics, NUS

AUTONOMOUS AGENTS · SOFTWARE ENGINEERING · AI FOR SCIENCE & ENTERPRISE

Build A Verified Autonomy Platform

AI agents now write code, operate computers and run business workflows, yet they still struggle to know when they have succeeded, to stay on track over long tasks, and to improve without fooling themselves. This theme builds the foundations for agents that plan, act and verify their own work.



AI for software engineering

Specification-guided, repository-scale migration and repair of legacy code, with verification in the loop.



Trustworthy, verifiable agents

Formal verification for computer-use agents, reliable self-improvement, evidence-grounded reasoning and long-horizon continuity.



Agents for science & enterprise

AI for math discovery, autonomous cloud operations, forecasting and decision intelligence

Ideal background

LLMs & agents

Program analysis

Formal methods

RL & optimization

PRINCIPAL INVESTIGATORS



Dr. Duc-Trong Le

Head of Department of Computer Science
VNU University of Engineering and Technology



Prof. Thang Dinh

Associate Professor, Virginia Commonwealth University



Dr. Tuan Vo

Director of Quantum Lab, FPT QACI

QUANTUM ML · OPTIMIZATION · ERROR CORRECTION

Develop Rigorous Quantum Methods With Credible Near-term Validation

Quantum computing promises new ways to represent data and solve hard problems, but advantage demands rigorous theory, honest benchmarking and noise-resilient design. We develop quantum algorithms on simulators today, with a clear path to quantum hardware.



Quantum machine learning

Quantum representations for data-scarce medical imaging and measurement-based generative models for scientific data.



Quantum-inspired optimization

Physics-based thermal sampling that finds diverse, robust solutions for routing, scheduling and logistics.



Quantum error correction

Self-correcting bosonic qubits that suppress noise without costly measure-and-feedback loops.

Ideal background

Quantum information

Linear algebra

Physics

PennyLane / Qiskit

PRINCIPAL INVESTIGATOR



Dr. Quang Tran

Director of Cyber Security Lab (CySeL), FPT QACI

PROMPT INJECTION · ATTACK TECHNIQUES · LAYERED DEFENSE

Break and Defend LLM Agents Against Prompt Injection

As LLM agents run code, call APIs and read untrusted data, one injected instruction can slip past guardrails and trigger unauthorized actions. We develop new direct and indirect injection attacks to expose these gaps, and design layered, multi-LLM defenses that stop them.



Prompt injection attacks

New and improved techniques for direct and indirect prompt injection, focused on bypassing an agent's guardrails and harness engineering.



Prompt injection defense

Layered architecture and access controls filter prompts before they are processed, while multiple LLMs monitor each other's inputs and outputs to limit successful attacks.

Ideal background

Security

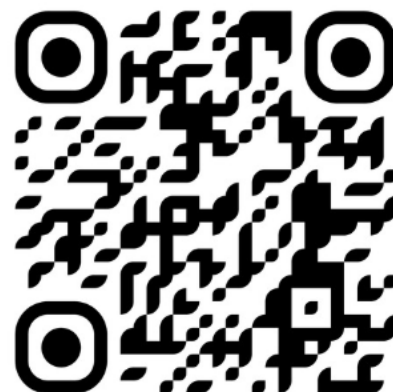
LLMs

Adversarial ML

Security architecture



THANK YOU!



APPLY NOW

<https://forms.gle/tLr8Fi22HrwaLYt96>