Georgia Institute of Technology

2025 Generative AI Summit

Organizing Committee

General Chairs

- Kishore Ramachandran, SCS & Director, Cloud Hub
- Aaron Drysdale, IDEaS

Summit Co-chairs

- Alexey Tumanov, SCS, ML@GT
- Anand Padmanabha Iyer, SCS

Agenda

7:30am - 8:30am | Registration & Breakfast

8:30am - 9:00am

Welcome - Kishore Ramachandran; Director, CloudHub @ GT

Introductory Remarks - Vivek Sarkar, Dean, College of Computing | Timothy Lieuwen, Exec. VP-Research | David Sherrill; Director, IDEaS

9:00am - 10:00am

Keynote Talk – Allen Stewart, Director of Software Engineering in the Microsoft Strategic Missions and Technology Divisions

10:00am - 10:30am | Coffee Break

10:30am - 12:00pm | Invited Talks Session 1 (10 mins each)

Session Chair: Celine Lin

- Chao Zhang | An Agentic Multi-Modal Foundation Model for Accelerating Chemical Discovery
- Yunan Luo | Programmable Protein Design with Multi-Modal Generative AI Models
- Philip Si & Peng Chen | Generative AI for Advanced Bayesian Data Assimilation in Real-Time Flood Prediction
- Anqi Wu | Diffusion-Based Discovery of Semantic Latent Groups in Higher Visual Cortex

- **Daniel Saeedi & Amirali Aghazadeh Mohandesi | Agentic AI in Pursuit of Life's Origins: Reassessing Histidine's Prebiotic Viability**
- **Neha Kumar | Social Audits of AI: Towards Participatory Impact Evaluations of AI-Based Systems**

12:00pm - 1:00pm | Lunch

1:00pm - 3:00pm | Past Project Success Stories (20 mins each)

Session Chair: Vijay Ganesh

- **Yunan Luo | Designing New and Diverse Proteins with Generative AI**
- **Supratim Pait & Noura Howell | Applying Generative AI for STEM Education**
- **Neha Kumar | Towards Responsible Integration of Generative AI in Creative Game Development**
- **Abigale Stangl | Best Practices in Generative AI Used in the Creation of Accessible Alternative Formats for People with Disabilities**
- **Xing Zhou & Annalisa Bracco | Modeling the Dispersal and Connectivity of Marine Larvae with GenAI Agents**
- **Haorui Wang & Victor Fung | – Intelligent LLM Agents for Materials Design and Automated Experimentation**

3:00pm - 3:30pm | Coffee Break

3:30pm - 4:30pm | Breakout Sessions

Session Chairs: Alexey Tumanov, Anand Padmanabha Iyer

1. **Agentic GenAI: Systems Challenges and Opportunities - led by Anand Padmanabha Iyer (Room 222)**
2. **AI4Science via combinations of LLMs with domain knowledge (symbolic) tools - led by Vijay Ganesh (Room 324)**
3. **Algorithmically Addressing Hallucination in GenAI - led by Judy Hoffman (Room 334)**

4:30pm - 4:45pm | Breakout Session Report Back – Topic Leads

4:30pm - 6:00pm | Poster Session & Reception

Keynote - The Journey: Science & AI

Allen Stewart, Director of Software Engineering in the Microsoft Strategic Missions * Technology Divisions

Abstract: This keynote will explore Microsoft's journey in creating *Discovery*, an AI-driven platform designed to accelerate scientific breakthroughs. By leveraging intelligent AI agents, domain-specific models, and curated datasets, Discovery empowers researchers to tackle complex challenges and unlock new insights across scientific disciplines.

Bio: Allen Stewart is the Partner Director of Software Engineering in the Microsoft Strategic Missions and Technology Divisions Office of the CTO. He leads all Software Engineering efforts in the CTO'S office including next generation AI agent development for various use cases: Autonomy and Science. Allen's expertise is in the following areas: Building AI applications and services, Cloud Native Application Development, Cloud Services Design, and Intelligent Edge Solutions. Allen is an IASA board Certified Distinguished Architect and is very active in the Cloud Software and AI Architect community. Allen is also a member of the Cloud Native Compute Foundation (CNCF) that governs various Cloud Native Open Source projects. Allen is a frequent conference speaker mainly focusing on the following topic areas: Building -designing new cloud-native applications and building AI applications and services. Prior to Microsoft Allen spent several years doing software development in the Financial Services Industry. Allen is the author of Inside Hyper-V and has published numerous articles and blogs. Allen is also the founder of Project Lift which is focused on highlighting AI uses cases for any scenario and showing the world how to Elevate any activity using generative AI.