AI, Quantum, and Machine Learning: Emory–Microway–NVIDIA Meeting

April 23rd, 2026

Emory University, Atwood Hall, Room # 360

Working Agenda:

AM Sessions

9:00 -9:15. (15 min.)

AI, Quantum, and Machine Learning Day Welcome

Emory University x2, Microway

9:15 -9:35 (20 min)

Jamal Musaev (Emerson Center, and Department of Chemistry):

"Computing Resources of Emerson Center and Its Impact to Chemical Research"

9:35 -9:55 (20 min)

Ilias Magoulas, and Francesco Evangelista (Department of Chemistry):

"Advancing Quantum Chemistry for Quantum Computing via AI"

"This talk explores how AI helped advance research on symmetry-adapted quantum circuits for simulations of molecules, an important challenge in quantum chemistry and quantum computing."

9:55 -10:15 (20 min.)

Yuyang Xia*, **Ximing Ran***, Zhikai Li*, Zhaohui Qin, Li Xiong

(Department of Biostatistics and Bioinformatics, Rollins School of Public Health)

"Efficient Personalized Differential Privacy for Large-Scale Biomedical Machine Learning in UK Biobank"

10:15 -10:35 (20 min.)

Jo Guldi and Greg Palermo (Writing Program)

"Benchmarking AI for Pluralistic Reasoning: The Dissentometer."

10:35 -10:45 **BREAK**

10:45 -11:15

Jared Buckley, AI Solution Architect, Microway

"Proven Patterns in Building an AI Center of Excellence "

Learn about patterns in AI computing deployments that can be applied towards your next computing proposal and how campus researchers most typically come together to create an AI computing center of

excellence. We will walk through the underlying hardware architectures for different research areas, the basics of setting a campus AI blueprint, and what makes successful POC and center of excellence deployments.

11:15 -11:45

Brett Newman, VP Customer Engagement, Microway

"Trends in AI Computing Proposals and Creating Successful AI & GPU NSF Grants"

This session will share observed trends in AI research computing work on campuses across the US—as seen from observing numerous grants, creating hundreds of computing proposals, and building a wide range of AI deployments. These trends can help assist in focusing research proposals on campus to especially active areas and on how to shape them around applying the most popular techniques. We'll also walk through how to create a successful AI & GPU NSF grant: based upon real-world grants in the southeastern US. This unique approach will apply AI towards understanding the characteristics of a funded grant.

11:45 -12:15 pm

Panel: Building Research and Industry Careers in AI

Panelists will take questions about how to build a career in academic AI research, what is in demand in industry roles, and how to enter industry from a career in applied academic AI (including how to market your skills).

Emory University x2, NVIDIA, Microway

Break for personal networking and individual lunch

PM Sessions

13:30 -14:15 pm

NVIDIA AI Keynote

NVIDIA will deliver a 45 minute keynote on an important topic in AI research.

14:15 -14:35

Raphael Ribeiro:

"Molecular Phenomena in Exotic Quantum Environments"

Our group investigates how unusual quantum environments, from optical microcavities to topological materials, can reshape molecular dynamics and reactivity. These systems open up new chemistry and physics, but they are also difficult to model and interpret especially as they involve collective behavior induced by many degrees of freedom. This talk will highlight the questions driving our research and show, through a few examples how AI-enabled tools could help accelerate discovery.

14:35 -14:55

Xu Chen, and Fang Liu:

"Artificial intelligence aided quantum chemistry in realistic environments".

14:55 -15:15

Brian Zhao, and Francesco Evangelista:

"Modelling relativistic effects in molecules"

This talk will outline the classical approaches used to model relativistic effects in molecular systems and the challenges they face. We will discuss promising solutions to this problem from both an algorithmic perspective and a high-performance computing perspective.

15:15 -15:45

Brett Newman, VP Customer Engagement, Microway

"Building Productive Research Computing Resources for AI"

This AI Day Session will teach the basics of building a "productive" AI computing resource for a campus vs just any resource. It will share how to select the right kinds of GPU nodes and GPUs for different AI workloads as well as the 4 main methods to build software stacks for AI deployments. Finally, it will share tips and tricks for working with industry on your research computing and & AI deployments—so you can assertively work with vendors to get what you need, have them better serve you, rapidly identify good partners, and identify + cut through any sales-nonsense to build these productive research computing resources for AI.