

MAINSTREAMING AI: IMPLICATIONS FOR THE SCIENTIFIC COMMUNITY



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#COEE2025

PRESENTED BY



After the generative AI breakthrough, AI is rapidly emerging from specialist circles to become part of the scientific mainstream. Much like the Internet did 30 years ago, scientists across all disciplines are now grappling with how to integrate AI into their field of research and practice. This symposium captures this pivotal moment when the entire scientific community is becoming a stakeholder in AI research and development. It proposes panels around three themes that should appeal to every scientist.

8:45 am | WELCOME REMARKS

8:45 am | **Daniel Jutras**, *Recteur, Université de Montréal*

8:30 am - 9:00 am | *Coffee and Pastries*

KEYNOTE ADDRESS | CAN AI MAKE A SCIENTIFIC ASSISTANT?

9:00 am | **Hugo Larochelle**, Scientific Director of Mila and Professor at *Université de Montréal*

Artificial Intelligence (AI) has progressed sufficiently that it is now used widely as a general purpose chatbot assistant. But has the technology developed enough to provide a meaningful assistant for deep scientific work? In this presentation, I'll present an overview of the growing area of AI assistants for science, from the tools that exist and are commonly used today, to the more speculative and ambitious research that aims at revolutionizing the sciences.

10:15 am | *Break*

PANEL 1 | AI AND UNIVERSITY RESEARCH

10:30 am | When Nobel Prizes are awarded to AI researchers working in private research facilities, can universities still claim to leadership in AI research? What does the future hold for AI research in universities? Some argue that a flourishing opensource and open-weight ecosystem is essential to maintaining the relevance of university research in AI. Is this a necessary condition? Is it sufficient?

Moderator **Denis Grégoire**, *HEC Montréal*

Panelists **Julien Billot**, *ScaleAI*

Aurélie Labbe, *HEC Montréal & IVADO*

Luc Vinet (FRSC) *Université de Montréal & IVADO*

11:45 am | *Lunch*

PANEL 2 | AI AND THE ORGANISATION OF SCIENCE

1:30 pm | The AI ecosystem is expanding both vertically and horizontally. At the apex, a vibrant research community is building on the momentum of generative AI in a quest for further general-purpose AI models – and ultimately, artificial general intelligence. At the same time, the base is broadening: these new general-purpose models are being leveraged to extend AI into new fields of application. How will this reshape the organisation of science? Will AI bring additional impetus towards inter-disciplinarity? Or will we witness the emergence of a series of “AI and...” sub-disciplines?

Moderator **Carolina Osorio**, *HEC Montréal*

Panelists **Laurent Charlin**, *HEC Montréal & Mila*

Foutse Khomh, *Polytechnique Montréal*

Pierre Larouche, *Université de Montréal*

2:45 pm | *Break*

PANEL 3 | AI AND SCIENTIFIC RESPONSIBILITY

3:00 pm | Policy debates around the governance of AI first focused on “responsible AI”, and now AI safety is at the forefront. AI is coming of age amid overlapping geopolitical, economic, social and environmental crises. It should come as no surprise, then, that our collective anxieties are projected onto these policy debates. The resulting governance frameworks – in the EU and elsewhere – are notably more cautious than those that accompanied previous technological waves. How can the scientific community contribute to usher in responsible and safe AI, without choking its potential benefits? Can scientists play a role in easing public concerns and helping to build trust in AI – where such trust is warranted? At the very least, can they avoid making matters worse?

Moderator **Simon Denmarkar**, *HEC Montréal*

Panelists **Golnoosh Farnadi**, *McGill University*

Joé Martineau, *HEC Montréal*

Catherine Régis, *Université de Montréal, Mila & IVADO*

4:15 pm | CLOSING REMARKS