UNIVERSITY OF
CAMBRIDGE
Faculty of Education

未来教育学院
COLLEGE OF EDUCATION FOR THE FUTURE

D E F I
HUGHES HALL CAMBRIDGE

Glenlead
Centre

16-17TH OCTOBER

CAMBRIDGE GENERATIVE AI IN EDUCATION CONFERENCE 2024

Human-machine collaboration and the expansion of the dialogic space: Addressing the challenges of generative AI integration in education

INFORMATIONS:

WI -FI INFORMATIONS

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CONFERENCE PROGRAM

WEDNESDAY 16 OCTOBER

08.30 - 09.00	**Registration**
09.00 - 09.10	**Welcome**
09.10 - 09.40	**Opening Keynote Address by Prof Mairéad Pratschke, University of Manchester -** *The New Hybrid*
09.40 - 10.00	**Q&A moderated by Prof Steven Watson, Faculty of Education, University of Cambridge**
10.00 - 10.30	**Coffee Break**

	SESSION 1 (A, B, C) 10.30 - 11.45		
	Session A **AI in the Higher Education Innovations**	Session B **GenAI in and Postgraduate Education**	Session C **Students' Engagement with AI**
	Chair: Dr Erik Brezovec	Chair: Dr Kevin Martin	Chair: Helen Nicholson
10.30-10.45	**Dorian Wild** Sociological Dimensions of Generative AI in Personalized and Group Learning Environments	**Dr Alona Chmilewsky** Dialogic Uses of Generative AI in PhD Scientific Writing: Expectations, Realisations, and Motivation	**Dr Bobby Whyte** Understanding Secondary Student Conceptions of AI
10.45-11.00	**Dr Isabel Fischer** Navigating the Complexities of AI Integration in Higher Education: From Tool Development to Adoption Challenges	**Dr Angela Wright** The Challenges of Generative AI for Postgraduate Research Supervision Signposts Please!	**Ana Marija Dunaj** Attitudes of Sociology Students in Croatia on the Use, Ethical and Security Implications of ChatGPT in Education
11.00-11.15	**Dr Ian Benson** AI as a component of an action research model of learning	**Dr Daniel Serig** Navigating the Inclusion of AI in a Doctoral Program of Education: Policy Creation, Student Use, and Issues of Equity	**Carrie Anne Philbin** Generative AI in Computer Science Education: Impact on Student Perceptions, Creativity, and Self-Efficacy
11.15-11.45	Discussion	Discussion	Discussion
11.45-12.15	Coffee Break		

	Session A **Policy and GenAI**	Session B **GenAI and Contemporary Global Challenges**	Session C **Inequalities in Education and GenAI**
	Chair: Kellie Mote	Chair: Dr Vaughan Connolly	Chair: Dr Alison Twiner
12.15-12.30	**Alistair Starling** Harnessing AI for Government Efficiency: The Estonian Model	**Dr Kevin Martin** Harnessing AI for Collective Intelligence: A Dialogic Approach to Mobile Learning and Knowledge Creation among Rural Communities of the Global South	**Christina Supe** Addressing Historical Inequities: Empowering Marginalized Communities Through AI Adoption and Significant Human Authorship Policies
12.30 – 12.45	**Prof Päivi Häkkinen** Human-AI collaboration and the future of education	**Dr Miné de Klerk** Navigating the Challenges of AI Integration in Global South Higher Education: A Technocritical Approach	**Peter Bannister** Fleeced and Forgotten: The Marginalisation of International Students in Global Higher Education GenAI Academic Integrity Policies
12.45-13.00	**Jonathan Romic** AIED: Regulations, Interventions & Enforcement	**Dr Lorna Waddington** GenAI and History - 'The Good, the Bad and the Ugly'	**Razoun Siddiky** Tohin Bridging the Digital Divide: Leveraging Generative AI to Address Educational Inequalities
13.00-13.30	**Discussion**	**Discussion**	**Discussion**

13.30-14.30	**Lunch**
14.30-15.15	**Panel Discussion (incl. Q&A)** AI in Education: Friend or Foe? **Chair:** **Dr Ann Kristin Glenster (Glenlead Centre)** **Panellists:** • **Prof Li Yuan (Beijing Normal University)** • **Prof Jenny Gibson (CHIA)** • **Dr. Joleen Liang (Squirrel AI)** • **Kellie Mote (JISC)**
15.15-15.30	**Coffee Break**

SESSION 3 (A, B, C)
15.30 - 17.00

	Session A **Educational Innovations and AI**	Session B **Challenges of Using GenAI in Education**	Session C **Individual and GenAI**
	Chair: Dr Isabel Fischer	Chair: Dr Vaughan Connolly	Chair: Prof Tore Hoel
15.30 – 15.45	**Dr Vahid Aryadoust** Using GenAI to Develop Adaptive Oral Communication Assessment Systems	**Dr Jane Waite** Computing teachers' views of LLM programming error messages explanations in the classroom	**Dr Jon Cardoso-Silva** The Dual Nature of Generative AI: Two Case Studies of Student Agency and Coding Assessments in Higher Education
15.45-16.00	**Amos Raban** GenAI-Assisted in Secondary-Level History Education Summative Assessment	**Dr Xinyue Li** The Impact of Artificial Intelligence on Learners and Teachers: A Mathematics Education Perspective	**Inbar Bobrovsky** The Diminishing Place of Individuals-Examining the Emergent Future Built by Prediction Algorithms in the Realm of Education
16.00-16.15	**Prof Christopher Hogg** Replacing Dali with DALL:E – Recreating a 1960's 'Happening' to understand the impact of Industrialised Creativity on Performance.	**Dr Achala Gupta** GenAI-led educational opportunities and challenges in the context of higher education	**Josh Ferry Woodard** AI for Accessible and Personalised Learning: Insights from Building an AI-Powered Note Taking and Study Tool

SESSION 3 (A, B, C)
15.30 - 17.00

	Session A **Educational Innovations and AI**	Session B **Challenges of Using GenAI in Education**	Session C **Individual and GenAI**
	Chair: Dr Isabel Fischer	Chair: Dr Vaughan Connolly	Chair: Prof Tore Hoel
16.15 – 16.30	**Prof Ivana Greguric** Transhumanism and the Future of Human - AI: Philosophical Implications for Education and Identity	**Timothy Hallas** The ethical debates, impact and relevance of using AI large language models (LLMs) in exam-driven classrooms - a sixth form college case study.	**Jessica Watson** Consulting the sector on impacts of GenAI in Education
16.30-17.00	**Discussion**	**Discussion**	**Discussion**
17.00-17.30	**Keynote Address by Prof Jean-Gabriel Ganascia** - *The braided structure of time in AI and information technologies*		
17.30-17.50	**Q&A moderated by Dr Kevin Martin**		
19.30	**Conference Dinner (Hughes Hall)**		

THURSDAY 17 OCTOBER

09.00 - 09.10	**Plenary Session**
09.10 - 09.40	**Keynote Address by Prof Wayne Holmes** *- Artificial Intelligence and Education. A Critical Studies Perspective*
09.40 - 10.00	**Q&A moderated by Prof Steven Watson**
10.00 - 10.30	**Coffee Break**

	SESSION 4 (A, B, C) 10.30 - 12.00		
	Session A **Educational institutions and GenAI**	**Session B** **Gen AI - pedagogical perspective**	**Session C** **LLM-Powered Learning**
	Chair: Kellie Mote	Chair: Dr Erik Brezovec	Chair: Prof Li Yuan
10.30 – 10.45	**Erdinç Saçan** How educational institutions can become AI-proof	**Ksenija Laskova** Towards a Theoretical Framework for Integrating Generative AI in UK School Pedagogy: Opportunities, Challenges, and Future Directions	**Prof Dong-Hyu Kim** Duality of Self-programming: Self-generated Text as a Multimodal Medium between Generative AI and User
10.45 - 11.00	**Isak Frumin** Between Fear and Hope: Current Discussions on Artificial Intelligence in Higher Education	**Prof Peter Kahn** What does it take to cultivate authentic and expansive epistemic agency on the part of students in an AI-assisted academic landscape?	**Dr Pia Kreijkes** To bot or not(e) – Effects of large language models and note-taking on text comprehension and retention
11.00 – 11.15	**Luka Medvidovic** Data Ownership and Privacy Challenges in AI-Powered Personalized Learning Environments	**Nork Zakarian** AI's Role in Adult Education	**Rashmi Perera** The use of Generative AI in Viva-voce

	SESSION 4 (A, B, C) 10.30 - 12.00		
	Session A **Educational institutions and GenAI**	Session B **Gen AI - pedagogical perspective**	Session C **LLM-Powered Learning**
	Chair: Kellie Mote	Chair: Dr Erik Brezovec	Chair: Prof Li Yuan
11.15-11.30	**Dr Imogen Casebourne** A framework for Design Based Research into AI to support education for Collective Intelligence	**Dr Stefan Schweiger** Just Ask ChatGPT, and It'll Tell You What to Think: Sustainability, Morality, and Ideology in ChatGPT	**Sam Clarke** Education in the age of GenAI: the potential for deconstruction of digital architecture of knowledge
11.30-12.00	**Discussion**	**Discussion**	**Discussion**
12.00-13.30	Lunch		

SESSION 5 (A, B, C)
13.30 - 15.00

	Session A **Meaning and AI**	Session B **GenAI in Classroom**	Session C **AI Revolution in Education**
	Chair: Dr Kevin Martin	Chair: Helen Nicholson	Chair: Prof Tore Hoel
13.30 – 13.45	**Dr Erik Brezovec** The Social Meaning of Generative AI	**Niklas Scholz** Balancing Human and AI Control: Insights from Students and Teachers on the Use of Generative AI in Classrooms	**Tony Thompson-Starkey** Let the Robots Do the Work: Revolutionizing Lesson Planning with AI
13.45 - 14.00	**Dr Salimeh Pour Mohammad** Would Gen-AI and LLMs change the core identity and viability of "golden goose" courses in HE?	**Joanne McGovern** AI Enthused Classroom	**Dr Canh Thien Dang** Distinguishing Fact from Fiction: Student Traits, Attitudes, and AI Hallucination Detection in Business School Assessments
14.00 – 14.15	**Dr. Chanjin Zheng** LLM-powered Assessment and Learning: A Design Science Perspective	**Dr Areej Mawasi** Using a Human-Centered Design Method for Examining Teachers' Hopes and Concerns for Classroom Orchestration with AI Assistants	**Dr Catherine Mulligan** AI - Impacts on Cognitive Load for Learning

SESSION 5 (A, B, C)
13.30 - 15.00

|	Session A **Meaning and AI**	Session B **GenAI in Classroom**	Session C
	Chair: Dr Kevin Martin	Chair: Helen Nicholson	Chair: Prof Tore Hoel
14.15-14.30	**Discussion**	**Matej Nakić** ChatGPT & Metacognitive Confidence: The Role of Generative AI in Promoting False Certainty Over Critical Thought	**Dr Joleen Liang** Squirrel AI Revolutionizing Education: Commitment to Personalized Learning Through Large Adaptive Model (LAM)
14.30-15.00	**Discussion**	**Discussion**	**Discussion**
15.00-15.30	**Coffee Break**		
15.30 - 16.00	**Closing Keynote Address by Prof Rupert Wegerif -** *Generative AI and expanding dialogic space*		
16.00-16.20	Q&A moderated by Prof Steven Watson		
16.20 – 16.35	**Closing of Conference**		

KEYNOTE SPEAKERS

Prof Mairéad Pratschke
The University of Manchester

Title: The new hybrid
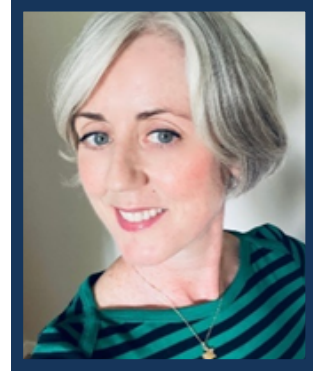
Abstract:

A recent report (Hirabayashi et al, August 2024) on the use of generative AI by undergraduate students shows that it has been widely adopted. Two years after the release of ChatGPT-3.5, the knowledge gap is growing wider by the day, as students adopt and adapt to this fast-moving technology, while educators operate within a system resistant to change. The growing gap has been dramatically illustrated in the terrain of assessment but academic integrity is only the tip of this iceberg. From research to teaching, from learning design to assessment, academic practice across all stages and in all disciplines is set to change as a result of the interaction between humans and AI. This has tremendous implications for how, where and what we teach. It is already clear that it will change the role of the educator, from being the sole source of authority to one of multiple presences in our learning community. But how do we design education for a world in which we construct, define and disseminate knowledge in collaboration with machine intelligence? In this keynote, Mairéad will introduce the concept of the new hybrid, a social, generative, constructivist and human-centred model of education that is defined by collaboration with AI.

Biography:

Mairéad is Chair in Digital Education in the School of Arts, Languages and Cultures at the University of Manchester. She is a Research Fellow at the USA's National AI Institute for Adult Education and Online Learning (AI-ALOE) and a member of the Advisory Board. Mairéad holds a Ph.D. in History from McMaster University in Canada and an M.A. in European Studies from K.U.Leuven in Belgium. Irish born and raised in Canada, she has worked internationally in digital education in Canada, the USA, the UK, Belgium, Spain and Ireland, and across sectors in higher education, and professional and executive education, and lifelong learning. Her first book, Visions of Ireland (Peter Lang, 2015), is on the representation of minority identity in Irish-language film and the use of modern media as a vehicle for language revival. She joined the University of Manchester in 2022 as SALC Chair in Digital Education, where she led the Faculty of Humanities working group on AI and Assessment in 2023 and currently sits on University's central AI Strategy committee. She has been invited to deliver keynote talks on generative AI in education in Canada, Ireland, the Netherlands, Portugal, Spain, Singapore, South Africa, the USA and the UK. Her book on Generative AI and Education is forthcoming in October 2024.

KEYNOTE SPEAKERS

Prof Dr Wayne Holmes
University College London

Title: Artificial Intelligence and Education. A Critical Studies Perspective
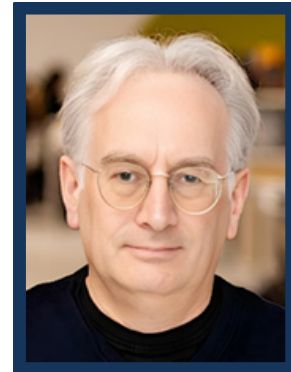
Abstract:

Artificial Intelligence (AI) is frequently hailed as a 'solution' to many of education's core problems (e.g., OECD, 2021) – problems such as the lack of qualified educators, student underachievement, and better preparing learners for 21st century careers. However, such claims tend to be aspirational rather than evidence-based (Miao & Holmes, 2021), and overly simplistic, forgetting issues such as agency, pedagogy, surveillance, efficacy, and ethics (Holmes et al., 2021; Holmes et al., 2022; Holmes & Porayska-Pomsta, 2022). In fact, teaching and learning with AI (AIED) all too often aims to replace educator roles rather than empower educators; while teaching and learning about AI (AI Literacy) almost always focuses on the technological dimension of AI to the exclusion of the human dimension (its ethical, human rights, and social justice implications). Accordingly, this presentation will explore Artificial Intelligence and education (AI&ED) from a critical studies and human rights perspective. It will identify and address many of the key myths, it will explore the untruths of generative AI, and will pose more questions about AI and education than it answers.

Biography:

Wayne Holmes (PhD, University of Oxford) is Professor of Critical Studies of Artificial Intelligence and Education at University College London (UK). His research takes a critical studies perspective to teaching and learning with and about Artificial Intelligence (AI&ED), and their ethical, human rights, and social justice implications. Wayne is leading the Council of Europe's AI&ED expert group, for which he co-wrote 'AI and Education. A Critical View through the Lens of Human Rights, Democracy, and the Rule of Law', and which is developing legislation to protect the human rights of students and teachers engaging with AI-enabled systems. He is also Consultant for UNESCO, for which he co-wrote 'AI and Education: Guidance for Policy-makers' and 'Guidance for Generative AI in Education and Research'; a Senior Researcher in AI&ED for the International Research Centre on Artificial Intelligence under the auspices of UNESCO; and an AI&ED expert for the United Nations and the EU JRC. Wayne has also co-written 'Artificial Intelligence in Education. Promise and Implications for Teaching and Learning', 'State of the Art and Practice in AI in Education', and 'The Ethics of AI in Education. Practices, Challenges and Debates'. He has given invited keynotes about AI&ED in countries around the world.

KEYNOTE SPEAKERS

Professeur Jean-Gabriel Ganascia
Sorbonne Université - LIP6

Title: The braided structure of time in AI and information technologies

Abstract:

With reference to the evolution of information technologies, i.e. the history of cybernetics, machine translation, AI, computer networks, etc., we will show that innovation in digital technologies is surprising because its progress usually defies prediction and therefore seems chaotic. The curve of its actual development often goes back into the past, while nobody cares. Paths that were taken and then abandoned in the course of basic research suddenly reappear and are successful as has many times been the case with neural networks. Some strands of change are divided and subdivided to such an extent that the thread of time seems to be forked and twisted rather than simply linear, as the classical idea of progress would seem to imply because of its cumulative nature. The structure of time, then, is not really ordered like shelf space, but somewhat tangled. In other words, at any given point in time, there are several alternatives, some of which the most brilliant minds are working on, while others seem to be in retreat, hidden from the general public. Then, from time to time, what seemed hidden reappears, and what has gradually come into view disappears. Time, then, is a tangled strand, a braid of hair, the strands of which scatter and even move out of sight before reappearing in a new light and disappearing again. In this sense, we can speak of the time of information technologies in the contemporary modernity as a braided time.

Biography:

Engineer and philosopher by training, Jean-Gabriel Ganascia is currently Professor Emeritus of Computer Science at the Sorbonne University, a EurAI Fellow, an honorary member of the Institut Universitaire de France and a member of LIP6 (Laboratory of Computer Science of the Sorbonne University). His current research activities focus on artificial intelligence, computational ethics, computer ethics and digital humanities. He has published more than 500 papers in conference proceedings, scientific journals and books. He is also the author of a dozen books for the general public, the latest of which, entitled "AI Explained to Humans", has been published by Éditions du Seuil in 2024.

Jean-Gabriel Ganascia is currently Chairman of the Ethics Committee of France Travail that is the French National Employment Agency, of AFAS ("Association Française pour l'Avancement des Sciences"), that is one of the oldest French scientific societies and of the Steering Committee of the CHEC (Cycle des Hautes Études de la Culture). He was also President of the CNRS Ethics Committee (COMETS) between 2016 and 2021.

KEYNOTE SPEAKERS

Prof Dr Rupert Wegerif
Faculty of Education - University of Cambridge

Title: Generative AI and expanding dialogic space
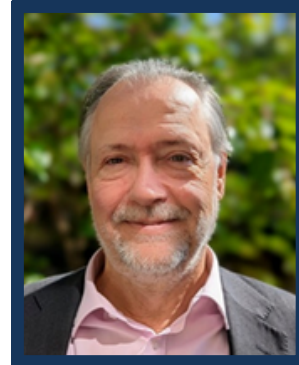
Abstract:

Education has always been bound up with technology. Advances in technology mean that we need to re-think not only how we conduct education but also what education is for. If the pedagogical affordances of generative AI challenge many of the current goals of education this might be because these current goals are often too narrowly tied to the limits of print literacy. I argue, with examples, that we can use this technological advent to return to an education that foregrounds a more fundamental goal of education which is teaching for dialogue. Dialogues supported by AI can help teach students how to think better in every area and help induct them into participation in the long-term global dialogue.

Biography

Rupert Wegerif is a professor in the Faculty of Education at the University of Cambridge and academic director of the Digital Education Futures Initiative at Hughes Hall, Cambridge. He is the author of several influential books and articles in the area of educational theory, educational psychology and education with technology. His most recent book, written with Louis Major 'The Theory of Educational Technology: A Dialogic Foundation for Design' (Routledge, 2024). His research focuses on the theory and practice of education with technology in the digital age, especially technology supported education for dialogue. He offers a new approach to education in the Internet Age: education as expanding dialogic space.

Panel discussion AI in Education: Friend or Foe?

Panel Chair:
Dr Ann Kristin Glenster
Executive director of Glenlead Centre

Biography:

Ann Kristin is the Executive Director of the Glenlead Centre, a consortium of independent researchers who aim to bridge the gap between high-quality research and public policy. Ann Kristin is a Technology and Human Rights Fellow at the Carr Centre for Human Rights Policy at the Harvard Kennedy School; a Senior Policy Advisor on Technology Governance and Law at the Minderoo Centre for Technology and Democracy, and an affiliate of the Centre for Intellectual Property and Information Law (CIPIL) at the University of Cambridge. She has taught law at the University of Oxford, University of Cambridge, London School of Economics (LSE), and Brown University. She has been a Teaching Fellow at Harvard College where she taught moral philosophy for Professor Michael Sandel. She holds a PhD in Law from the University of Cambridge with a dissertation entitled The Commodification of Personal Data. She has published on AI, intellectual, property, and personal data with Edward Elgar and held a workshop on deceptive design for legislators, regulators and civil society in Washington D.C. as part of the Nobel Prize Summit 2023.

Panel discussion AI in Education: Friend or Foe?

Prof Jenny Gibson
Faculty of Education, University of Cambridge

Biography:

Prof. Jenny Gibson is Professor of Neurodiversity and Developmental Psychology at the Faculty of Education, University of Cambridge. Jenny is a co-director of CHIA, the Centre for Human-Inspired AI, and her research interests include the use of technology to support inclusion and access to education for those with communication difficulties. Jenny is also researching young children's attitudes and relationships with non-human conversational agents such as chatbot enabled toys.

Prof. Li Yuan
College of Education for the Future at Beijing Normal University

Biography:

Professor Li Yuan is the director of Centre for Connective Intelligence in Education at the College of Education for the Future at Beijing Normal University and she is also a senior researcher in AI Innovate Lab at the Digital Education Future Initiative (DEFI) at University of Cambridge. For the last 20 years, Professor Yuan has worked in the UK, including Cetis (a National Innovation Support Centre for UK Higher Education), University of Cambridge and University of Belfast, researching and investigating the impact of technology in education and support innovative use of digital technology in teaching and learning. She has led and involved in a number of large technology enhanced learning and educational future projects in Europe, including,"TEL-Map", "LACE" and "RAGE" etc. Her main research interests including: AI literacy for teachers; AI support dialogic education and collective intelligence; Learning Analytics and Educational Assessment and MOOCs & Online/Blended Learning.

Panel discussion AI in Education: Friend or Foe?

Kellie Mote
JISC

Biography:

With over 25 years' experience in the field of assistive and accessible technology in education, Kellie works in the spaces where people and technology meet, with a strong focus on the strategic deployment of technology to liberate and empower disabled people. She facilitates large solution-focused professional communities, and is co-chair of Accessible Digital Futures, a Jisc-Glenlead project which explores unlocking the potential for accessible digital and AI technologies in higher education. Published research includes Technology acceptance and trust: Overlooked considerations in young people's use of digital mental health interventions. Jisc is the UK digital, data and technology agency focused on tertiary education, research and innovation. It is a not-for-profit organisation and believes education and research improves lives and that technology improves education and research.

Dr. Joleen Liang
Squirrel Ai Learning

Biography:

Dr. Joleen Liang, co-founder of Squirrel Ai Learning and a distinguished academic with a Ph.D. in Intelligent Science and Systems has significantly contributed to the fields of AI and adaptive learning. As a visiting professor at The Research Institute for Innovation and Technology in Education (UNIR iTED), she focuses on personalized learning and the application of AI in education. Dr. Liang has shared stages at prestigious global forums like the World Summit AI with luminaries such as Yoshua Bengio and has been featured at international summits and by media outlets like Bloomberg. Her research spans AI adaptive learning, intelligent education systems, Large Adaptive Model (Squirrel Ai's LM) and multimodal learning analytics, leading to influential publications in esteemed journals and conferences, including publications in esteemed journals like IEEE Transactions, continue to shape the landscape of intelligent education. Under her leadership, Squirrel Ai has revolutionized smart education, impacting over 20 million users by integrating AI into learning systems and hardware across thousands of schools.