F L A I R
FEEDBACK AND LEARNING: AI-ASSISTED & REIMAGINED

Advancing Feedback Practice with GenAI: Pedagogical Challenges and Opportunities

09.00 - 09.30 | **Registration and refreshments** — Queens Tower Rooms

09.30 - 09.45 | **Welcome and opening remarks** — Huxley LT Clore
By Professor Alan Spivey (Interim Vice-Provost, Education and Student Experience)

09.45 - 11.15 | **Keynote Panel Discussion: International Perspectives on GenAI and Feedback** — Huxley LT Clore

This keynote panel brings together international experts to explore how GenAI is reshaping feedback practices across higher education contexts. Panellists will discuss emerging pedagogical opportunities, challenges and the implications for staff, students and institutions. The session will be followed by an audience Q&A.

Chair: Dr Tiffany Chiu, Imperial College London

GenAI and the Pedagogical Power of Recognition in Feedback
By Dr Thomas Corbin, Deakin University, Australia

Generative Artificial Intelligence (GenAI) systems seem to demonstrate impressive capabilities in providing various forms of feedback. However, in this talk I will mount the case that claims to its potential overlook a fundamental aspect of effective feedback between humans: recognition between teacher and student. This paper critically examines the role of GenAI in providing feedback within higher education contexts, drawing on both the established feedback literature and philosophical work on recognition. Effective feedback is predicated on trusting and respectful relationships, which are in turn grounded in mutual recognition of shared vulnerability and agency. GenAI systems, lacking the capacity for genuine recognition, operate outside of this relational framework. Therefore, while valuable, GenAI feedback cannot fully replicate the pedagogical efficacy of human-provided feedback. However, the limitations of GenAI feedback may at the same time offer unique pedagogical opportunities.

Understanding University Students' Engagement with Generative AI Feedback
By Dr Ying Zhan, The Education University of Hong Kong, Hong Kong

Feedback remains a vital yet challenging component of higher education policy and practice. A key obstacle is students' disengagement with feedback, often intensified by large class sizes, heavy faculty workloads, and limited curriculum time. Generative Artificial Intelligence (GenAI) presents promising opportunities to address these constraints and foster greater student engagement with feedback. However, viewing GenAI as a universal solution to feedback disengagement is problematic. Without a clear understanding of how students engage with feedback provided by advanced technology, merely exposing them to it will not ensure effective learning improvement. This talk will reveal student feedback engagement in a GenAI context through theoretical and empirical exploration.

Generative AI and the Future of Feedback: What We Must Get Right
By Dr Seyyed Kazem Banihashem, Maastricht University, the Netherlands

Generative AI is reshaping feedback in education as it becomes a powerful new source of feedback. Effective human–AI collaboration in feedback is essential for its meaningful use. In this talk, Dr. Banihashem will extend his pedagogical model for hybrid intelligent feedback and will discuss pedagogically grounded scenarios for integrating generative AI into feedback practices. He will also highlight key risks and challenges that must be addressed to ensure responsible and effective use of generative AI in feedback and outline future research directions in this rapidly evolving field.

The Care-full Craft of Feedback in an Age of Generative AI
By Professor Naomi Winstone, University of Surrey, UK

Generative AI is rapidly reshaping how students and educators engage in feedback encounters. But how is GenAI prompting us to rethink not only what effective feedback looks like, but what we value in meaningful learning? Drawing on our recent Manifesto for Feedback in the Age of GenAI, I consider how GenAI can be woven into a feedback ecosystem grounded in care, trust, and professional craft. I position feedback as a relational practice where multiple modes of feedback can enrich learning. I also consider some emerging directions for designing thoughtful, care-full feedback processes in an AI-enabled future.

FLAIR
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11.15 - 11.30 **Refreshment break**   Queens Tower Rooms

11.30 - 12.00

Parallel Session 1: Spotlight Internal Perspectives
1.1 Advancing Lab-Based Guidance Using an AI-Driven Virtual Assistant   Queens Tower Rooms
Dr Mohamed Maher, Imperial College London

This presentation shares findings from a project exploring how an AI-driven virtual assistant can enhance guidance in laboratory-based teaching environments. The initiative aimed to provide students with timely, context-aware support during practical sessions, reducing reliance on immediate instructor availability and improving learning continuity. We discuss the design and deployment of the assistant, its integration with existing lab workflows, and the impact on student engagement and autonomy. Key outcomes, challenges, and future directions are presented, highlighting how AI can complement human instruction to create more responsive and scalable lab-based learning experiences.

1.2 Transforming GTA Feedback Consistency and Usefulness with LLM: Improving Clarity, Consistency, and Actionability   Huxley 342
Dr Zohaib Akhtar, Imperial College London

This presentation addresses a key challenge in higher education: ensuring students receive consistent, clear, and pedagogically useful feedback, particularly in large cohorts assessed by multiple Graduate Teaching Assistants (GTAs). Feedback is provided for over 200 students in lab oral assessments, making it difficult to ensure quality and uniformity across the marking cohort, while moderation currently only takes into account final marks rather than quality and consistency of the written feedback. We will present our recent initiative to employ a Large Language Model (LLM)-powered tool to enhance the clarity, consistency, and actionability of GTA-generated feedback. The tool improves tone, align comments with rubrics, and promote feedforward and reflection.

1.3 AI-Supported Feedback: A Figma Plugin to Enhance Decision Making in Team Project Based Learning   Huxley LT Clore
Dr Stephen Green, Katherine Luo, Imperial College London

This session introduces a prototype Figma-based AI feedback tool designed to support students working in team project-based learning environments. The plugin provides structured, context-aware guidance to help teams analyse design decisions, reflect on their process, and improve the quality of collaborative outcomes.

12.05 - 12.35

Parallel Session 2: Spotlight Internal Perspectives
2.1 Feedback and Learning: AI Assisted & Reimagined Project (FLAIR)   Huxley LT Clore
Dr Tiffany Chiu, Dr Monika Pazio Rossiter, Dr Ian Radcliffe, Dr Nashwa Ismail, Imperial College London

This session introduces the university-wide Feedback and Learning: AI-Assisted & Reimagined (FLAIR) project, which explores how GenAI can enhance feedback practices in higher education. Drawing on cross-faculty evidence from student and staff focus groups, we will share our progress in developing two human-centred, staff-facing chatbots designed to support effective feedback. In this session, we are keen to share the empirical study findings and to showcase the bot we have developed.

2.2 Enhancing Assessment Feedback with GenAI: Towards Consistency, Clarity and Timely Support   Queens Tower Rooms
Dr Peter Atkinson, Sean O'Grady, Stephen Vaz, Imperial College London

Imperial Business School is developing an early-stage prototype GenAI tool designed to support academics in delivering high-quality feedback on formative and summative assessments. The project aims to improve the consistency, clarity and timeliness of feedback while reducing workload and mitigating potential bias. The tool acts as an assistive layer, helping academics generate structured, actionable comments aligned with module-level criteria and effective feedback principles. This work builds on our wider initiatives exploring AI Tutors and academic Digital Twins as part of a broader ecosystem of GenAI-enabled student support. In this session, we will share our approach and emerging insights to date.

12.35 - 13.30 | **Lunch break** | QTR

13:30 - 14:15

Parallel session 3: Spotlight External Perspectives

3.1 From Evaluation to Evolution: Unlocking the Power of Feedback Mining with GenAI

Dr Mustafa Akben, Elon University, USA

Huxley LT Clore

In higher education, student feedback is traditionally a one-way flow of information from instructors to learners. In this presentation, Dr. Mustafa Akben will argue that this process should be bi-directional. Instructors might consider using generative AI to analyze the feedback they receive at a scale. Dr. Akben will introduce the idea of feedback mining, which refers to using generative AI to process student feedback holistically and efficiently. He will also illustrate how unstructured feedback data can be used to generate actionable insights for teaching. He, finally, will encourage attendees to rethink the feedback loop by recognizing how generative AI can create opportunities to continuously refine and personalize teaching strategies and improve student learning outcomes.

3.2 Everything Flows: Locating Generative AI and Human Capabilities as Third Spaces for Teaching, Learning and Assessment in Uncertain Times

Professor Peter Bryant, University of Sydney, Australia

Huxley 342

Generative AI, as a conceptual, policy, and strategic influence on higher education, has accelerated the complexity of assessment and feedback design and the technological reactivity of the architectures underpinning how and what we teach. It disrupts policy, integrity, curriculum, student experience, and employability. It dominates strategic discourse, often driven by hype and vendor influence, sidelining core values, and disempowering those caught in liminal spaces of uncertainty. Engagement with AI is rarely a safe space for academics, practitioners, or students, yet its use is mandated and shaped by industry, regulators, vendors, and leadership. Yet there are also responsible, critical, and innovative ways to engage with AI in higher education. This presentation will highlight some of the most urgent and thought-provoking debates around AI. It will explore the "third spaces" that emerge when institutions and individuals take positions within these debates and offer practical examples of how they are playing out across the sector. Ultimately, this provocative and thought-provoking talk will seek to make sense of the current moment of crisis while pointing to the transformative potential of higher education to invent, ideate, and inspire the new and the novel.

14.20 - 15.20

Parallel Session 4: Interactive Workshop

4.1 Emotional Intelligence Meets Artificial Intelligence: Exploring the Use of AI as Emotional Mediator

Dr Monika Pazio Rossiter, Dr Kate Ippolito, Imperial College London

Huxley 342

Recent scholarship highlights the affective dimensions of feedback and the need for both students and staff to manage emotions effectively when engaging with feedback. Emotional intelligence (EI), the ability to anticipate and respond to emotional impact, is central to this process, but it is not innate and must be developed. This workshop explores both how the differing impact of human feedback and AI feedback on learner and teacher emotions can be leveraged, and how AI can support the development of EI, moving beyond automated feedback systems toward using AI as a mediator to enhance emotional understanding. Through interactive activities, participants will reflect on the role of emotions in feedback, compare the strengths and limitations of human feedback and AI feedback with a focus on affective impact, and critically consider the opportunities and challenges of these approaches.

4.2 Show & Tell: Innovations in Feedback Practice

Chair: Dr Nashwa Ismail, Imperial College London

Queens Tower Rooms

4.2.1 Generative AI for Automated Feedback on Software Design

Dr Robert Chatley, Imperial College London

This talk will share our experience using LLMs to provide automated feedback on student coding and software design exercises. Rather than testing functional correctness with pre-written unit tests, we want to give feedback on how the code is designed, not the output that it produces. Doing this on a regular basis at scale requires a large

human effort. Using the latest LLM models, we can now generate rich, personalised feedback for hundreds of students much more quickly, supporting consistent and timely formative assessment at scale. I will discuss examples from a recent undergraduate software engineering course and reflect on lessons learned about methodology, effectiveness, and student perceptions.

4.2.2 Using Generative AI to Give Feedback on Formal Proofs
Dr Marie-Amelie Lawn, Imperial College London

Can large language models improve feedback on undergraduate proof writing without lowering standards? I present a practical way to guide an LLM so its comments are focused, consistent, and aligned with course aims—while academic judgement stays with the instructor. In a pilot with first-year work, this approach surfaced common misconceptions early and shortened feedback cycles. I'll outline the idea, note what helped and what failed, and discuss where AI can responsibly sit alongside human marking.

4.2.3 Lambda Feedback - Timely, Automated Feedback on Self-Study
Dr Peter Johnson, Imperial College London

Timely formative feedback on self-study is valuable but practically challenging. Automation of task-level feedback, such as on answers to exercises, can meet this need. This workshop will introduce you to Lambda Feedback, a self-study platform that provides automated feedback, including on essays and handwritten mathematics. Lambda Feedback was developed at Imperial over the past four years. Its use across the University includes over 60 modules, 10,000+ questions, and over 1 million feedback events.

4.2.4 Designing Pedagogical Frameworks for Effective AI-Assisted Feedback
Dr Rhodri Nelson, Imperial College London

Large language models (LLMs) are increasingly used to support assessment and feedback, but their effectiveness depends less on the model itself and more on the pedagogical framework wrapped around it. In this talk, I frame the LLM as a "clever GTA": broadly knowledgeable and linguistically sophisticated, but lacking the local, tacit understanding of how you teach the module and what counts as good performance. I will argue that effective AI-assisted feedback requires designed context (not incidental context), explicit learning outcomes, carefully structured rubrics, and prompt workflows that decompose marking into clear, answerable questions. By encoding assessment criteria in a machine-readable yet pedagogically meaningful way, and by orchestrating prompts that progressively build and refine feedback, we can align the model's judgments with our domain-specific expectations. Drawing on live deployments in MSc teaching, I will show how such frameworks can produce feedback that is more consistent, transparent, and educationally useful than ad hoc prompting, while keeping academic staff firmly "in the loop" as the final arbiters of quality.

Time	Session	Location
15.20 - 15.35	**Refreshment break**	Queens Tower Rooms
15.35 - 16.50	**Student-Staff Panel Discussion, followed by a Q&A from the audience** Chair: Dr Monika Pazio Rossiter, Imperial College London Panellists: Emina Hogas, Student Union; Sam Ahadi, Department of Physics; Emma Blyth, Faculty of Medicine; Dr Tim Kimber, Department of Computing; Parastoo Salah, Department of Earth Science Engineering; Shawn Huang, PhD student, Department of Materials This session brings together students and staff for a panel discussion on how feedback practices are evolving in the age of Generative AI. Panellists will share their experiences of what works, what doesn't and how GenAI is reshaping feedback processes across disciplines. The conversation will highlight perspectives, practical examples and emerging challenges, offering valuable insights for staff involved in teaching, learning, or educational development. The panel discussion will be followed by a live Q&A, giving the audience an opportunity to contribute reflections, ask questions and engage directly with the speakers	Huxley LT Clore
16.50 - 17.00	**Closing remarks** By Professor Sophie Rutschmann (Associate Provost, Digitally-Enhanced Learning & Teaching)	Huxley LT Clore