# CBS Research Seminar

THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

中文及雙語學系

# In Contempt of Reality: Some Thoughts on Legal Hallucinations

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**FJ302, Main Campus**
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*Speaker*

**Abstract:** The general assumption underlying discussions of hallucinations in Large Language Models ("LLMs") is that the generated output can be evaluated with reference to a ground truth, a verifiable set of facts or generally accepted knowledge. In such instance, hallucinations are equated with falsehoods or blatant nonsense. Things get complicated when LLMs are deployed in tasks requiring the application of substantive legal knowledge. In many such tasks, such as legal QA or contract drafting, there is no accepted ground truth, no single correct answer. In complex domains governed by a multitude of legal sources, the correctness of an answer lies in the eye of the beholder and depends on his or her competence. Sometimes, the very definition of a seemingly foundational legal principle is contentious. Determining whether the output constitutes a hallucination or an unusual but feasible approach to a legal problem requires an understanding how it was arrived at. Evaluating whether the output is feasible is premised on the ability to explain the underlying reasoning. Explainability, however, remains elusive as LLMs can generate convincing but false explanations of their outputs. The problem is not alleviated by the recently introduced reasoning models: LLMs can not only hallucinate but also gaslight! As the generated output often appears plausible, "legal hallucinations" are extremely difficult to detect and cast doubts on the very idea of using LLMs in high-risk areas like law.

**Bio:** Dr Eliza Mik has joined the CUHK Faculty of Law in January 2021. Before joining academia, she worked in-house for a number of software and telecommunications companies in Australia, Poland, Malaysia and the United Arab Emirates. She advised on software licensing, technology procurement, digital signatures, and e-commerce regulation. Dating back to her PhD thesis, Eliza's interests have always centered on the private law aspects of e-commerce and on general problems of transaction automation, particularly with the use of technologies commonly referred to as Artificial Intelligence. Eliza is also one of the most cited authors on the topic of "smart contracts." In recent years, as part of a research grant, her academic explorations also include the use of large language models in the legal profession. At present, she is a member of the UNCITRAL Expert Group for the Digital Economy, a member of the Inclusive Global Legal Innovation Platform on ODR (iGLIP, Hong Kong), a Research Associate at the Tilburg Institute for Law, Society and Technology (TILT, Netherlands) and an Affiliate Researcher with the Centre for AI and Digital Ethics at the University of Melbourne (CAIDE, Australia).