**How Rapid Leaps in AI Methods Accelerate Comminution Modelling**

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For a few years, AI has been revolutionizing many fields, including comminution, by predictive modelling, AI driven calibration, optimization and process control or via the use of surrogate models. By building quick to apply digital twins of experiments, simulations or translations of both, iteration speeds can be leveraged by orders of magnitude. Very recently in addition to these narrow AI systems, specializing on one task only, another kind of general purpose AI, of much greater impact, is emerging. Many researchers see these generative AI systems like large language models (LLM) or large multi-modal models as well as diffusion models, as early examples of the holy grail of AI research, Artificial General Intelligence (AGI). In this talk, an overview of both narrow AI as well as general purpose AI will be given, showing practical examples of surrogate and predictive models as well as LLM and agent based systems in comminution.