**Abstract:** The contribution of mineralogy to sustainability in the mine life cycle

It is well known that mining is an essential enabler to sustainable development. Understanding and appreciating the mineralogy of the ores and waste material we produce is a key component of this. This presentation considers the contribution of mineralogy to sustainability through the mine life cycle, looking through the lens of the domains of process mineralogy, environmental mineralogy and medical mineralogy and their relationship to the pillars of sustainability - profit, planet and people, respectively. Using several case studies, examples will be shown as to how the application of mineralogy and the tools used for characterisation have evolved over the decades from some of the early pioneering mineralogists to some of the most recent work where mineralogy is fully integrated into all aspects of ore and waste use and valorisation.