Artisanal and small-scale gold mining (ASGM) is a critical source of income for millions of people worldwide, but it is notorious for its environmental and human health risks. Mercury use in mineral processing systems is the most salient risk, and development projects promoting cleaner and safer technologies have had limited success. This may be attributed to a lack of integrated social and technical data on ASGM systems. For example, social science analyses provide insights into the social, economic, and political contexts of ASGM but pay too little attention to the technical processes involved with mineral processing. Similarly, technical analyses involve close examinations of mercury use and its alternatives yet fail to explain why people continue to use mercury when they are aware of the risks. This talk highlights socio-technical approaches to understanding ASGM and demonstrates the ways in which faculty and students at Mines are involved in interdisciplinary research and design projects that address mercury use in ASGM mineral processing systems.

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