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Title: Bayesian Estimation for Radionuclide Detection

Abstract:

Computational imaging and sensing combines measurement and computational methods often when the measurement conditions are weak, few in number, or highly indirect (e.g. when the measurements are few in number, the information of interest is indirectly observed, or in challenging observation conditions). The recent surge in the development of sensors, together with a new wave of algorithms allowing on-chip, scalable and robust data processing, has induced an increase of activity with notable results in the domain of low flux imaging and sensing.

In this talk, I will provide an overview of the identification of radionuclide signatures from weak sources in the presence of a high radiation background.