Signal Processing for CBR Defence

Branko Ristic, Defence Science and Technology Organisation (DSTO)

Abstract: CBR defence comprises collective measures against a chemical (C), biological (B) or radiological (R) attack. This talk will focus on statistical signal processing and data fusion algorithms for CBR defence. In particular, it will cover: autonomous search techniques for localisation of sources of (deliberate or accidental) release of CB agents in unknown structured environment; the search for sources of gamma radiation; parametric RMS gamma-ray image reconstruction; source term estimation in turbulent flow using binary sensors; forecasting of epidemic outbreaks; evolutionary dynamics with forecasting the event of extinction.