

# PROBLEM 5



## MODELS FOR RAPID PREDICTION AND CHARACTERISATION OF HAZARDS IN URBAN ENVIRONMENTS

In emergency response, first responders use information from plume dispersion models to estimate the likely hazard area and guide field-sampling strategies.

Can we develop methods to rapidly predict, identify and characterise hazard areas from visual and uncertain information? Can we develop data-informed or physics-based mathematical models and algorithms that can be translated into rapid and computationally lightweight software or decision-aids for Defence Force elements and civilian first responders?