

Homeland Security: What Can Discrete Science Do?

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Abstract

Methods of discrete science have become important tools for homeland security, especially when combined with powerful, modern computer methods for analysis and simulation. We will describe the use of such methods tracing back to World War II and describe modern homeland security applications of discrete science: text analysis, disease event detection, author identification, bioterrorism sensor location, port of entry inspection, protection against invasive species, response to natural disasters, and privacy-preserving data analysis.