

# Security Informatics and Law Enforcement

## **Series editor**

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## **Editor's Note:**

The primary objective of this book series is to explore contemporary issues related to law enforcement agencies, security services and industries dealing with security related challenges (e.g., government organizations, financial sector insurance companies and internet service providers) from an engineering and computer science perspective. Each book in the series provides a handbook style practical guide to one of the following security challenges:

**Cyber Crime** - Focuses on new and evolving forms of crimes. Books describe the current status of cybercrime and cyber terrorism developments, security requirements and practices.

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**Serious Games** – Provides an introduction into the use of serious games for training in the security domain, including advice for designers/programmers, trainers and strategic decision makers.

**Social Media in Crisis Management** – explores how social media enables citizens to empower themselves during a crisis, from terrorism, public disorder, and natural disasters

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The books pertain to engineers working in law enforcement and researchers who are researching on capabilities of LEAs, though the series is truly multidisciplinary – each book will have hard core computer science, application of ICT in security and security / policing domain chapters. The books strike a balance between theory and practice.

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Babak Akhgar  
Editor

# Serious Games for Enhancing Law Enforcement Agencies

From Virtual Reality to Augmented Reality

 Springer

*Editor*

Babak Akhgar

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*Dedicated to Aryan H. Akhgar You are always in our hearts.*

## PREFACE

It is my privilege to present readers with this book on *Serious Games for Enhancing Law Enforcement Agencies*. This volume explores the lesson learned from a number of applied research projects in the context of serious games conducted by the Centre of Excellence in Terrorism, Resilience, Intelligence and Organised Crime Research (CENTRIC, Sheffield Hallam University, UK) in close collaboration with law enforcement agencies (LEAs) and colleagues across Europe. CENTRIC's mandate has always been to bridge the gap between the operational reality of policing and security and the original research and expertise brought by academia. This book bears witness to the potential of such collaborations to bring research excellence into reality and operational practice.

Recent years have seen a rise in the popularity of serious games for organisations tasked with the security and safety of our societies, be it police forces, military or first responders. The growing interest in serious games is driven by the twin challenges of increasingly complex security challenges and limited resources for LEAs. Serious games can support police organisations in addressing and preparing for many of the new complexities and insecurities. Their special value lays in offering realistic scenarios to understand, learn, comprehend and gain new insights into how to manage complex situations in the context of police operations.

For instance, many of the most harrowing events police forces and other first responders encounter are singular and rare incidents. Terrorist attacks by groups or lone actors such as the 2017 London Bridge attack and the 2019 Christchurch attacks in New Zealand or man-made disasters such as the 2017 Grenfell Tower fire in London spring to mind. How can

we prepare law enforcement officers to deal with such situations, physically, mentally and practically?

Serious games enable LEAs to prepare and experience decision-making in complex and fast-changing situations within a safe and secure environment. Serious games can thus serve as an important knowledge management tool – enhanced by the fact that trainings can be conducted collaboratively across geographical and professional boundaries. Virtual and augmented settings make it possible for LEAs from multiple countries or personnel from different organisations to train together in a realistic scenario. This book presents a wide variety of serious games examples that demonstrate their potential for areas as diverse as handling the aftermath of terrorist attacks and preparing field personnel for life-threatening situations to enhancing cyber-resilience in local businesses to community engagement in the context of community policing.

Examples do not all stem from the law enforcement area – authors in this book strategically showcase serious games also from other areas such as healthcare, military, marketing, sports and arts. These areas can provide fascinating lessons for law enforcement applications.

Given that the resources of law enforcement agencies to keep citizens safe and secure have never been more keenly tested, police, governments and other security services require innovative, and often technological, solutions to face current and emerging security challenges. Serious games – and with them virtual and augmented reality applications – are one of the technological advances that enable police forces to better address the ever-changing threat landscape of today's and tomorrow's security domain.

Sheffield, UK

Babak Akhgar

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