DESCRIPTION

With the advent of the internet as a medium for performing business transactions, the need for a secure communication channel has never been more paramount. The study of behavioral biometrics - the verification and/or identification of individuals based on the way they provide information to an authentication system - originated from the need for a small footprint, versatile alternative to expensive hardware-based, or physiological, biometrics. As an emerging alternative to these traditional and more well-known physiological biometrics such as fingerprinting or iris scans, behavioral biometrics can offer state-of-the-art solutions to identity management requirements as either a stand-alone system or part of a multi-biometric security system.

Whilst there are many existing texts that focus on physiological biometrics or algorithmic approaches deployed in biometrics, Behavioral Biometrics addresses a gap in the existing literature for a text that is solely dedicated to the topic of behavioral biometrics.

The author

• presents a thorough analysis of the latest research into well-known techniques such as signature verification and voice recognition, as well more recently developed and ground-breaking techniques including keyboard/ mouse dynamics, gait analysis, odour analysis and salinity testing, which are ever increasing in reliability;

• discusses exciting future trends that focus on the brain-computer interface using EEG technology and may one day enable human-machine interaction via brainwave patterns;
describes the central applications for the technology within e-commerce and related industries, and provides a number of comprehensive case studies of major implementations that provide the user with a strong sense of the approaches employed in the various subdomains of behavioral biometrics.

provides a comprehensive glossary of terms as well as a rich set of references and websites that enable the reader to explore and augment topics as required.

*Behavioral Biometrics* will appeal to graduate and postgraduate students, as well as researchers wishing to explore this fascinating research topic, in areas of biometrics and computer science including classification algorithms, pattern recognition, artificial intelligence & security and digital forensics. In addition, it will serve as a reference for system integrators, CIOs, and related professionals who are charged with implementing security features at their organization.

### ABOUT THE AUTHOR

**Dr Kenneth Revett** is a senior lecturer at the University of Westminster. He lectures principally at post-graduate level within Biometrics, Bioinformatics, and Neuroscience and has helped to expand and re-validate the Bioemtrics, Bioinformatics and Applied Cognitive Neuroscience MSc degree programmes. He is currently actively engaged in Biometrics related research (principally behavioural bioemtrics such as keystroke dynamics, mouse dynamics, and graphical authentiation systems). He holds a patent c/o the University of Westminster for a keystroke dynamics based based authentication system (called KBD:-Secure). He is on the international programme committees of 20+ conferences, and the editorial board for the International Journal of Electronic Security and Digital Forensics.

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