

# **ICCAE 2019 & ICVARS 2019, Perth, Australia - Keynote Talk**

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## **Visual perception, cognitive skills and behavioral features in security protocols and cryptography**

### **Abstract**

New generation information systems and advanced security solutions are developing rapidly due to the application of the latest achievements in machine learning, cognitive technologies, and biologically-inspired computational approaches. What are especially important in creation of such systems are techniques applied for securing strategic or classified data, and allowing its intelligent transmission and management in distributed infrastructures or in the Cloud.

There is no doubt that such security technologies will become more important in the future, as a result of the very dynamic development of advanced information systems dedicated for ubiquitous computing, cyberspace security, and smart city infrastructure.

During this presentation will be described new opportunities for developing innovative solutions for security areas and cryptography, which will be based on cognitive, behavioral, and bio-inspired approaches. Such techniques can be applied for evaluation of the meaning of encrypted information, and involved into the personally oriented encryption process. It also allows using some crypto-biometric solutions to extend cryptographic techniques, and define a new security area called cognitive cryptography.