Springer MTAP: Special Issue for

Signal Processing, Feature Extraction, and Machine Learning for Active Authentication

The rapid growth of technology makes people frequently rely on electronic devices, for example, personal computers, smartphones, and tablets. To protect personal privacy and identity in these devices, a system for validation is often required. However, typical identification systems usually depend on the direct involvement of users. For instance, a user may be asked to input the account name and password to gain the access into a system. Although such an approach is simple and effective for a right user, it is regarded as a passive protection from the perspective of security. If account names and passwords are illegally acquired by an unauthorized user, confidential data will be stolen. Accordingly, active authentication mechanisms for systems become increasingly important.

Active authentication systems can **implicitly** identify a user based on the behavior **without the deployment of additional sensors**, for example, keystrokes, mouse movements, or screen touching. These hidden features are often called cognitive fingerprints. As long as cognitive fingerprints do not match regular behavioral patterns of a user, the systems will prompt the user to prove the identity again. Recently, such a topic is highlighted by academia. Research on active authentication therefore becomes a hotspot.

In response to the aforementioned research trend, this special issue particularly focuses on signal processing, feature extraction, and machine learning approaches for active authentication. Via this issue, we call upon specialists in the science and engineering domains, which will advance the state-of-the-art technologies in active authentication, to contribute their creativity to this domain. Research areas relevant to the special issue include, but are not limited to, the following topics.

- Novel signal processing and feature extraction approaches for active authentication
- Distributive processing of machine learning for active authentication
- Active authentication applications for personal computers, mobile devices, and vehicular facilitates

Submissions must not have been previously published, with the exception that substantial extensions of conference papers can be considered. The authors will be required to follow the Author's Guide for manuscript submission to Multimedia Tools and Applications at: http://www.springer.com/computer/information+systems+and+applications/journal/11042 by choosing "SI: Signal Processing & Machine Learning." Full manuscripts should be submitted electronically through the manuscript track system.

Proposed Schedule:

Submission deadline:	April 1, 2015
Notification of acceptance:	May 1, 2015
Final manuscript due:	June 15, 2015
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