Contribution ID: **158** Type: **Talk**

Biometric authentication: Stress as a factor in keystroke dynamics

Tuesday, 2 December 2025 12:00 (20 minutes)

Biometrical authentication systems are gaining prominence and have become increasingly important to ensure compliance with privacy and safety regulations. In this paper, keystroke dynamics as a behavioral biometric approach to user authentication is evaluated in terms of the impact that stress may have on the typing pattern of a user. To achieve this, several experiments were conducted with a group of users that comprised working users from the industry as well as students. The experiments included stress factors such as a physical limitation (use of the non-dominant hand to type), a time constraint, and a knowledge constraint (typing in a foreign language). The results were compared to a baseline (normal circumstances) typing pattern. Typing data were recorded and analyzed by a keystroke software package called GenoGraphiX-Log 2.0. The study revealed that stress is indeed a factor in keystroke dynamics and that typing patterns in some cases significantly differ from the normal typing patterns. This in turn may influence the efficiency of the use of keystroke dynamics as a biometric authentication system.

Presenting Author

Email

Student or Postdoc?

CHPC User

CHPC Research Programme

Workshop Duration

Primary authors: MAC DONALD, Monique; DREVIN, Lynette (NWU | North-West University); KRUGER, Hennie

Presenter: MAC DONALD, Monique

Session Classification: ISSA