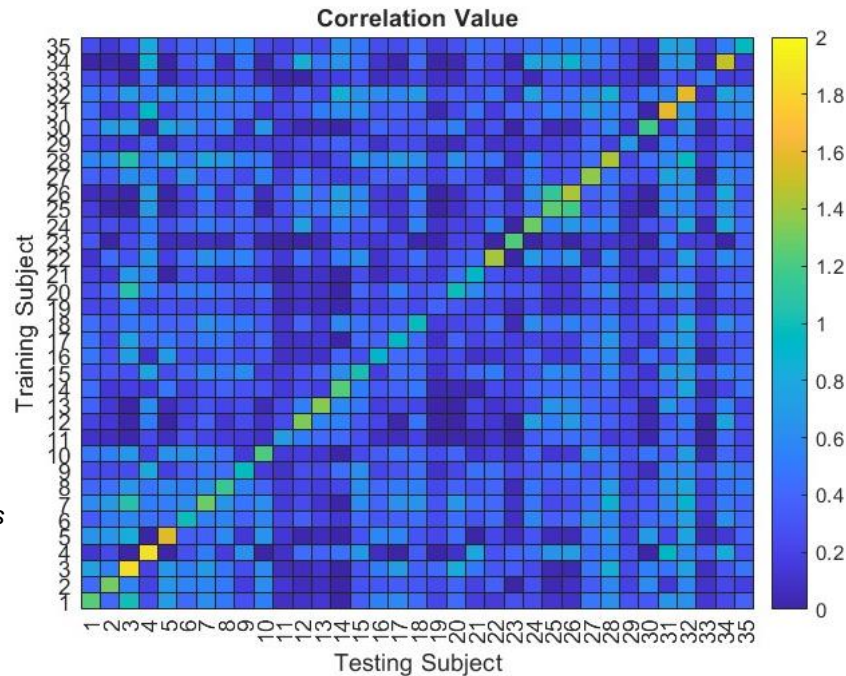
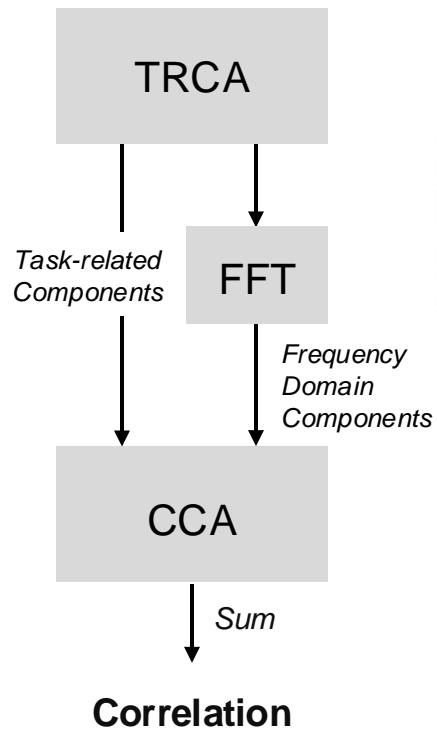


BrainPrint: Innovative Head-Mounted EEG Technology for Secure Personal Identification

Yu-Lin Chu, Ching-Chih (Amber) Tsao, Chi-Ming Chung, Cian-Fong Hung, Yao-Yu Lee, Jui-Bang Lu, Yang Wu, Yi-Huan Chen, Yu-Te Wang

Authentication algorithm and portable BCI for efficient and accurate SSVEP-based person identification.

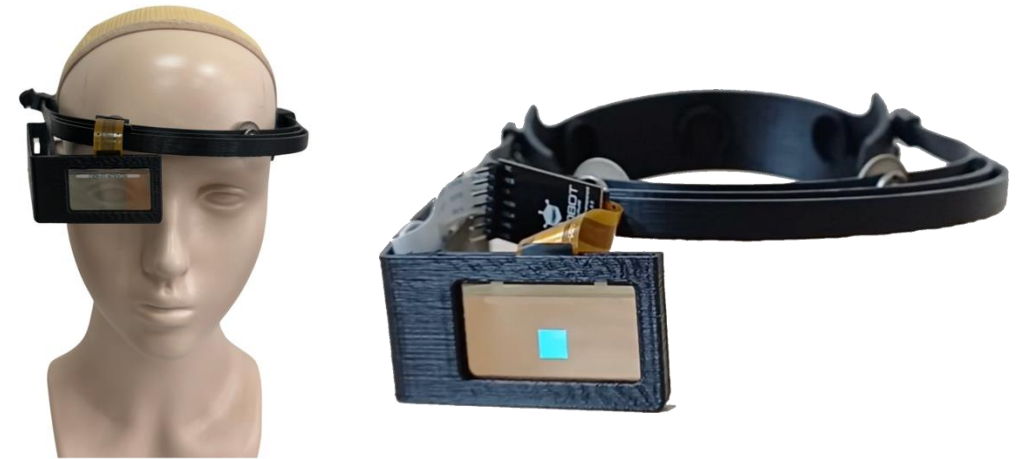
Algorithm - TRCCA + fdTRCA



Higher correlation for corresponding subject
(warm diagonal highlights)

Accuracy: 0.9592; FPR: 0.0392; FNR: 0.0952
(8Hz, 6 Trials, 10 Channels)

Device - Monocular Display BCI Device



Monocle visual stimulus on transparent screen →
minimize visual interference

Few channels (3 channels + 2 reference)
→ lightweight and portable, lower accuracy as a trade-off

