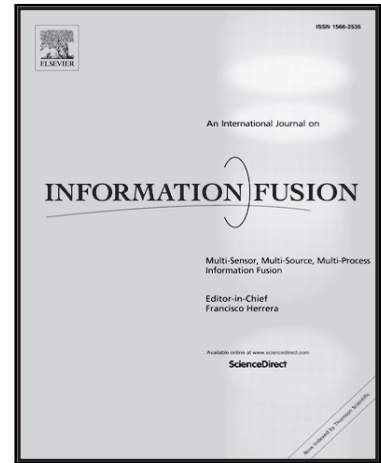


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A Sensor Fusion Approach for Drowsiness Detection in Wearable Ultra-Low-Power Systems

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Highlights

- A Wearable Drowsiness Detector based on sensor fusion is presented.
- EEG and IMU sensors are used to detect 5 levels of drowsiness with 95% of accuracy.
- Efficient HW/FW co-design permits 6 hours of operation with a 200mAh battery.
- Further energy saving was investigated by porting the FW in a PULP platform.
- Results shows a 63x gain in energy efficiency extending 7 times battery duration.

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