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Special Session

Code: 3y3qc

Title
AI for Human Performance Monitoring (AI4HPM)

Proposer / Main Organizer
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IEEE Member or SMC Society Member
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Category
Human-Machine Systems

Number of Expected Paper Submissions:
6 or more

Keywords
Human performance monitoring, wearables, artificial intelligence, applications

Brief Description and Justification (200-250 words):
Artificial intelligence (AI) is on its way to become the main technology for digital transformation. At the same time, the wearable industry is experiencing a very rapid boom which will lead to a major technological revolution. It is expected that wearables will majorly impact many fields including healthcare, sports, aging, disability, safety, security, fashion, and gaming. The growing partnership between AI and wearables opens up many possibilities for harvesting the real benefit out of physiological data. Human performance measurement and monitoring in real-time has attracted a lot of research focus in recent years. It involves the study and investigation of biomechanical, biochemical, physiological and

psychological factors that play a decisive role in defining physical and mental performance.
The goal of this special session is to provide an in-depth discussion of the latest academic and industrial research findings of AI-based human performance monitoring. The session will get together prominent and upcoming scientists conducting research in this field. Topics of interest include, but are not limited to:

- AI-based human performance monitoring
- Wearable technologies
- Signal processing and data representation
- Multimodal information fusion
- Reactive and predictive analytics
- Performance improvement through live feedback
- Wearable simulation
- Real world applications