

Call for Papers  
**IEEE Journal of Translational Engineering in Health and Medicine**  
Special Issue on  
**“Advanced Internet of Things in a Personalized Healthcare System:  
Validation, Analysis and Utilization”**

Due to the exponential growth of wearable devices and mobile apps, healthcare as a field is being transformed by Internet of Things (IoT)-enabled technology. The traditional hubs of healthcare, such as hospitals and clinics, are being transformed into personalized healthcare systems--especially the mobile environment. However, most research in IoT-enabled healthcare has focused on domain-specific studies on designated sensors, algorithms and applications. There is still a paucity of research on a methodological level that explores and delivers high-level innovative and comprehensive informatics methods in the field. Innovative informatics methodologies in IoT-enabled healthcare will benefit the establishment and enhance the efficiency of practical, interoperable IoT systems for care delivery and research, as well as adequate data and knowledge standards for self-empowerment and sound clinical decision-making. The goal of this special issue, *Advanced Internet of Things in a Personalized Healthcare System: Validation, Analysis and Utilization*, is to bring together researchers and practitioners from both academia and industry into a single forum, to explore state-of-the-art research and applications in innovative technology for IoT-enabled personalized healthcare systems, including improvement of quality of life, clinical diagnosis, mental health, diet/exercise, and chronic disease self-management. Accepted papers will present efficient scientific and engineering solutions, address the needs and challenges for integration with new technologies, and provide a vision for future research and development. The special issue is especially focused on four major aspects of IoT-enabled healthcare: (1) Artificial Intelligence patterns or data mining algorithms for effectively and efficiently analyzing IoT-based personalized healthcare and clinical data. (2) Personalized knowledge models or systems to assist clinicians in decision-making for diagnosis and medication selection. (3) Interoperable and interactive IoT systems or applications to support heterogeneous devices in accessing, sharing, visualizing and exploring long-term individual behavior information.

Topics to be covered include, but are not limited to:

- Personalized preventive medication in IoT-enabled personalized healthcare systems
- Clinical decision support systems
- Clinical translation and healthcare innovation in IoT-enabled healthcare
- Clinical data storage and communication
- Virtual reality, mixed and augmented reality
- Mobile sensing and interaction techniques
- Behavior change and analysis models in IoT-enabled personalized healthcare systems
- Data mining and exploration of health data
- Healthcare monitoring
- Knowledge acquisition, discovery, modeling and management for IoT-enabled personal health
- Ontologies, knowledge technologies, semantic web systems
- Technology and models for behavioral intervention development
- Evidenced-based approaches in behavioral health
- IoT technology for social and emotional support
- Emerging eHealth IoT application
- IoT technology for medication management and adherence
- Life-logging devices and technologies

**Important Dates**

Submission deadline: August 31, 2017

Completion of first round of reviews: November 30, 2017

Revised manuscript submission: January 31, 2018

Notification of final decision: March 15, 2018

Final manuscript submission: April 20, 2018

Papers should be submitted through <https://mc.manuscriptcentral.com/jtehm-embs>.

Choose the paper type: Special Issue: Advanced Internet of Things

For detailed submission information, please refer to “Information for Authors” at <http://health.embs.org/>

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