Workshop on IoT in Healthcare: Technologies, Applications and Security (HTAS'19)
(in conjunction with Global IoT Summit 2019)

Call for Papers
Healthcare is a key sector for IoT applications. IoT-based monitoring of care is a single factor that promises extensive benefits from near error-free diagnosis, early-warnings, and increasing longevity and quality-of-life; all of these while reducing costs. From a systems perspective, such benefits can accrue from building and interfacing systems across functional units of care domains. The complexity of building such a system is high and increases with the requirement for security. Security encompasses data privacy, secure transfers, secure storage and access. Regulations such as the GDPR could tend to curb data exchanges without contractual agreements. The key challenges are in being able to create technologies that are inherently secure, secure the user and data interfaces, implement electronic contracts for data exchange and ensure secure data transfer and storage. This workshop explores the feasible means of integrating IoT-based technologies, applications with security to enable building IoT-based systems that can effectively service the requirements of Smart Cities and Smart Citizens.
Designing technologies to support various levels of care, monitoring and data collection based on various care regimes, safety aspects when deploying monitoring technology, on-body monitors and their physical and operational security, using skin conductivity for on-body communication, secure data interfaces between consumer generated health data and patient databases, electronic contracts for data exchange, standards for secure data exchange, best secure practices, are all within the scope of the workshop. The workshop will include keynotes, three topical parallel sessions, a poster session (implementations, performance results, etc.), and a panel session with industrialists and academics.
The programme chairs invite original research papers and posters under one of the three categories, below. The topics of interest in each category include, but are not limited to:
IoT HealthCare Technologies for ● Self-Care and Wellness ● Chronic Illnesses ● Critical Care ● Ambulatory Care ● Healthcare Data Management ● Connected Healthcare Enablers ● Technologies for Rural Healthcare

- Body Area Networks (BANs)
- Mobile BANs

IoT Healthcare Applications
- Wearables
- IoT Garments
- In-Hospital Applications (Patient-location and tracking, Asset-tracking, ICU applications etc.)
- Diagnostic Applications (Remote Diagnostics, portable diagnostic devices/kits, performance/accuracy, etc.)
- Sports and Physiotherapy (real-time monitoring and tracking, accuracy and reliability, under-water monitoring, etc.)

Security in IoT Healthcare
- Data Privacy (Control and regulation of access, electronic contracts, data traceability, Impact of GDPR, etc.)
- Medical Device Security (Physical security, operational security, tamper resistance, Interference resilience, etc.)
- Wearables Security
- Encryption, decryption, randomness on small devices
- Secure storage
- Trusted computing mechanisms
- Blockchain Models for Health Data

Important Dates
Deadline for paper submission: 8th March, 2019 Acceptance Notification: March 31, 2019 Camera-Ready Submission: April 30, 2019
Organizing Committee
Workshop General Chairs: Dr Chitra Balakrishna, Open University, UK Dr Princy Johnson, Liverpool John Moores University, UK Prof Blaine Price, Open University, UK Mr Gopi Garge, SmartLancs Ltd, UK Prof Mesut Günes, University of Magdeburg, Germany Prof Oliver Pearce, Milton Keynes University Hospital, UK Prof Sergio Toral Marín, University of Sevilla, Spain
Technical Program Committee

- Amhmed Bhih, LJMU, UK

- Bharat Penumathsa, Dr., Ignatia Sensors Ltd., UK

- Blaine Price, Prof., Open University, UK

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- Daniel Gutiérrez Reina, Dr., University of Sevilla, Spain

- Ella Periera, Prof., Edge Hill University, UK

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- Hissam Tawfik, Prof., Leeds-Beckett University, UK

- Jerry Luo, Dr., Cranfield University, UK

- Khalid Al-Begain, Prof., KCST, Kuwait

- Kheddouci Hamamache, Prof., Lyon 1, France,

- Elizabeth Rendon-Morales, Dr., Sussex University, UK

- Martin Randles, Dr., LJMU, UK

- Malati Hegde, Dr., Indian Institute of Science, India

- Nik Bessis, Prof., Edge Hill University, UK

- Quang Huy Nguyen, LJMU, UK

- Rodrigo Amador Aviles-Espinosa, Dr., Sussex University, UK

- Venkat Sastry, Dr., Cranfield University, UK

- Wael Al-Madeny, Dr., University of Bahrain, Bahrain

Paper Submission Guidelines

All final submissions should be written in English with a maximum paper length of six (6) printed pages, see web conference for instructions. Papers must be submitted through EDAS.

"IEEE reserves the right to exclude a paper from distribution after the conference, including IEEE Xplore® Digital Library, if the paper is not presented by the author at the conference."

Important Dates

Deadline for paper submission: February 22, 2019

Acceptance Notification: March 31, 2019

Camera-Ready Submission: April 30, 2019

Tentative Schedule

9.30 - 10.00 AM	Registration and Welcome	1.30 – 2.15 PM	Keynote 2
10.00 – 10.45 AM	Keynote 1	2.15 – 4.15 PM Parallel Sessions	IoT HealthCare: Applications, IoT HealthCare: Security, Poster Sessions
10.45 AM – 12.45 PM	IoT in HealthCare: Technologies	4.15 – 4.45 PM	Panel Discussion

12.45 – 1.30 PM	Lunch & Networking	4.45 – 5.00 PM	Q&A; Close