

# Welcome to



## EUSPN 2019

The 10th International Conference on  
Emerging Ubiquitous Systems and  
Pervasive Networks



## ICTH 2019

The 9th International Conference on  
Current and Future Trends of  
Information and Communication  
Technologies in Healthcare

November 4 – 7, 2019  
Coimbra, Portugal

With support of

University of Coimbra, Hasselt University, Belgium  
Acadia University, Canada



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# **EUSPN / ICTH SYMPOSIA AND WORKSHOPS**

<b>EUSPN</b>	The 10th International Conference on Emerging Ubiquitous Systems and Pervasive Networks
<b>ICTH</b>	The 9th International Conference on Current and Future Trends of Information and Communication Technologies in Healthcare
<b>auICTH</b>	The 5th International Workshop on Adults Use of Information and Communication Technologies in Healthcare
<b>BDNT</b>	The 4th International workshop on Big Data and Networks
<b>CIM</b>	The 3rd International Workshop on Connected & Intelligent Mobility
<b>EICN</b>	The 6th International Symposium on Emerging Information, Communication and Networks
<b>IoT-T&amp;A</b>	The 3rd International workshop on Recent advances on Internet of Things: Technology and Application Approaches
<b>FTAT</b>	International Workshop on Future Trends in Assistive Technology
<b>HiPIS</b>	The 3rd International Workshop on Healthcare Interoperability and Pervasive Intelligent Systems
<b>IWENC</b>	International Workshop on Emerging Networks and Communications
<b>PSCare</b>	The 5th International Workshop on Privacy and Security in HealthCare

# PROGRAM AT A GLANCE

## EUSPN 2019, ICTH 2019 and Workshops Program Time Slots

Timing	Monday 4 November 2019			
17:00 - 19:00	Registration	Registration Room		
		ROOM 1	ROOM 2	ROOM 3

Timing	Tuesday 5 November 2019			
Starts 08:30	Registration	Conference Desk		
09:00 - 09:30	Opening Ceremony	Conference Room		
09:30 - 11:00	Technical Sessions (1)	EUSPN-S1	ICTH-S1	auICTH/PSCare
11:00 - 11:25	Coffee Break	Coffee Room / Meeting Foyer		
11:30 - 12:30	Keynote Speaker I	António Lindo da Cunha		
12:30 - 13:25	LUNCH	Meeting Foyer		
13:30 - 15:00	Technical Sessions (2)	EUSPN-S2	ICTH-S2	IoT-T&A
15:00 - 15:25	Coffee Break	Coffee Room / Meeting Foyer		
15:30 - 17:30	Technical Sessions (3)	EUSPN-S3	ICTH-S3	IoT-T&A

Timing	Wednesday 6 November 2019			
Starts 09:00	Registration	Conference Desk		
09:30 - 11:00	Technical Sessions (4)	EUSPN-S4	ICTH-S4	EICN/BDNT
11:00 - 11:25	Coffee Break	Coffee Room / Meeting Foyer		
11:30 - 12:30	Keynote Speaker II	Susana Sargento		
12:30 - 13:25	LUNCH	Meeting Foyer		
13:30 - 15:00	Technical Sessions (5)	EUSPN-S5	ICTH-S5	IWENC
15:00 - 15:25	Coffee Break	Coffee Room / Meeting Foyer		
15:30 - 17:30	Technical Sessions (6)	EUSPN-S6	FTAT	IWENC
19:00 - 21:00	Banquet and Award Ceremony	Banquet Room		

Timing	Thursday 7 November 2019			
08:30 - 10:00	Technical Sessions (7)	HiPIS		EICN/CIM
	Coffee Break	Meeting Foyer		
	End of Event			

# KEYNOTE I

The Role of Moving Things in Smart Environments

**Susana Sargento**

*University of Aveiro, Portugal*

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## **Abstract**

There has been a strong focus in more than 10 years on the development of vehicular network technology and mechanisms to build a reliable wireless mesh network to forward data packets in a multi-hop fashion between the vehicles and the Internet. However, vehicular networks can go much beyond cars: boats, drones (aerial and aquatic), trains, bicycles, and others. Moreover, the type of use cases that can be provided if all the moving elements can be connected is enormous, and go from self-driving and autonomous cars, to environmental monitoring in aquaculture, and rescue scenarios in remote areas.

This talk describes how moving networks can build new approaches for smart environments and how they can be used in distinct scenarios, to provide new applications for both citizens and industry in a myriad of areas.

## **About the Speaker:**

Dr. Susana Sargento is a Full Professor in the University of Aveiro and a senior researcher in the Institute of Telecommunications, where she is leading the Network Architectures and Protocols (NAP) group (<https://www.it.pt/Groups/Index/62>). She received her PhD in Electrical Engineering in the University of Aveiro (with 7 months stay in Rice University in 2000 and 2001). She joined the Department of Computer Science of the University of Porto between 2002 and 2004, and she was a Guest Faculty of the Department of Electrical and Computer Engineering from Carnegie Mellon University, USA, in August 2008, where she performed Faculty Exchange in 2010/2011.

Since 2002 she has been leading many national and international projects and worked closely with telecom operators and OEMs. She has been involved in several FP7 projects (4WARD, Euro-NF, C-Cast, WIP, Daidalos, C-Mobile), EU Coordinated Support Action 2012-316296 "FUTURE-CITIES", EU Horizon 2020 5GinFire, national projects, and CMU-Portugal projects (S2MovingCity, DRIVE-IN with the Carnegie Mellon University). She has been TPC-Chair and organized several international conferences and workshops, such as ACM MobiCom, IEEE Globecom and IEEE ICC. She has also been a reviewer of numerous international conferences and journals, such as IEEE Wireless Communications, IEEE Networks, IEEE Communications. For more information (<https://www.it.pt/Members/Index/501>).

# KEYNOTE II

Internet of Bodies (IoB) and The Impact in Health 4.0

**António Lindo da Cunha**  
*Instituto Pedro Nunes, Portugal*

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## **Abstract**

Considering the technical aspects, it seems that the Internet of Bodies (IoB) is not more than an extension of Internet of Things (IoT), connecting bodies with the internet. But they became quite distinct if we join in the same sentence the words, human body, safety and security. For this reason it is natural to feel fear after imagine our body as a part of a pervasive network exposed to potential tech bugs and hackers control. Despite this natural feeling, the potential benefits to our health justifies to take IoB seriously.

It is a fact that we are living more years, but more is not synonymous of better if we do not preserve quality of life. That is why all the technology that can help living longer with quality are welcome even if it has risks associated.

The considerable improvements in digital health and medtech in the last years (enabled by new sensors, high performance computing, artificial intelligence algorithms, big data, among others), are offering the possibility to have better diagnostics and treatments, and as a consequence a life expectancy improvement. Nevertheless, to fully explore these enablers, it still missing a crucial step: a better connection between the human body and the systems. The Internet of Bodies approach could be this missing part.

Despite of it seems a future evidence, IoB approach opens a new type of legal, safety and security issues. In the next years we will assist to a tension between three different views, the pressure to have better health solutions, the available technology that can be used immediately, and the legal/ethical and security issues.

The presentation will have five different parts: 1) Presentation of the three generations of IoB; 2) How the IoB applications could contribute to the Health 4.0 concept, supporting the ageing process?; 3) What are the applications available now and what can we expect in the future?; 4) What are the enabling technologies behind IoB?; 5) What are the main roadblocks in the IoB innovation pathway?

## **About the Speaker**

António Lindo da Cunha has a strong experience driving Innovation and R&D contracts, and leading technology transfer processes between research organisations and the business sector, for Health and Active and Healthy Ageing, creating tangible economic and social value to the organisations involved, especially for SMES.

He is Executive Director of the Automatics Lab of Instituto Pedro Nunes (IPN) and member of the board of Caritas Diocesana de Coimbra. In the last years he coordinated different initiatives related with Telemedicine, Hospital@home, Home-Care and Care-Home. He is member of the Ageing@Coimbra coordination group (European Reference Site for Active and Healthy Ageing, EIP AHA), IPN representative in EIT Health (Knowledge and Innovation Communities) initiative, and was member of the board and research director of the Critical Move S.A. a spin-off from IPN and Critical group. He is the coordinator of the "Technologies to Support the Quality of Life" innovation platform for Smart Specialization Strategy implementation (RIS3) in Portugal Centro Region.

# DETAILED PROGRAM

**Monday, November 4, 2019**

**Registration 17:00-19:00**

**Room:** Registration Room

**Tuesday, November 5, 2019**

**Registration Starts 08:30**

**Room:** Registration Room

**Opening 09:00 - 09:30**

Opening Ceremony

**Room:** Conference Room

**Technical Sessions (1) 09:30 - 11:00**

**EUSPN Session S-1:** Adaptive Systems, Intelligent Computing and Applications

**Session Chair:** Mohamad Khairi Ishak, Universiti Sains Malaysia, Malaysia

**Room:** Room 1

User-oriented cache deletion algorithm in a delayed update-tolerant web cache server for supporting a non-formal education

*Yudai Kurashita and Kazumasa Takami*

Data-driven prediction system for an environmental smartification approach to child fall accident prevention in a daily living space

*Tsubasa Nose, Koji Kitamura, Mikiko Oono, Michiko Ohkura and Yoshifumi Nishida*

Development of a Computer Player for Seejeh (A.K.A Seega, Siga, Kharbga) Board Game with Deep Reinforcement Learning

*Ahmad Aljaafreh and Naeem Al-Oudat*

Unmanned Aerial Vehicle in the Machine Learning Environment

*Asharul Khan and Yaseen Al-Mulla*

**ICTH Session S-1**

**Session Chair:** Patricia Macedo, Instituto Politécnico de Setúbal, Portugal

**Room:** Room 2

Data exchanges based on blockchain in m-Health applications

*Antonio Clim, Razvan Daniel Zota and Radu Constantinescu*

Fog IoT for Health: A new Architecture for Patients and Elderly Monitoring.

*Olivier Debauche, Saïd Mahmoudi, Pierre Manneback and Abdessamad Assila*

Platform to Support the Codification of Clinical Information According to the International Classification of Functioning, Disability and Health

*Nelson Rocha*

SmartCGMS as an Environment for an Insulin-Pump Development with FDA-Accepted In-Silico Pre-Clinical Trials

*Martin Ubl and Tomas Koutny*

## **aulCTH/PSCare Workshops**

**Session Chairs:** Heiko Gewalt and Philipp Brune, The Neu-Ulm University of Applied Sciences, Germany

**Room:** Room 3

Why do I feel younger? – A critical view on cognitive age and IT adoption

*Maximilain Haug, Heiko gewald, Laura Burth*

Evaluating the Usability and Usefulness of a Mobile Application for Training Visual Mnemonic Techniques in Participants with Subjective Cognitive Decline: An Exploratory Pilot Study

*Sebastian Hermes, Martin Lurz, Markus Böhm, Helmut Krcmar*

As They Like It - Outcome of A User-Centric Design Approach For An Online Health- And Well-Being Service Platform For Transition-Agers

*Fabian Kaimer, Philipp Brune*

Robust Hybrid Security Protocol for HealthCare Systems

*Ibrahim Albarki, Mohamed Rasslan, Ayman M. Bahaa-Eldin and Mohamed Sobh*

## **Coffee Break**

**11:00 - 11:25**

**Room:** Meeting Foyer

## **Keynote I**

**11:30 - 12:30**

***Internet of Bodies (IoB) and The Impact in Health 4.0***

António Lindo da Cunha, Instituto Pedro Nunes, Portuga

**Session Chair:** Ansar Yasar, Hasselt University, Belgium

**Room:** Conference Room

## **Lunch Break**

**12:30 - 13:25**

**Room:** Meeting Foyer

## **Technical Sessions (2)**

**13:30 - 15:00**

**EUSPN Session S-2: Emerging Systems**

**Session Chair:** Ma'en Saleh, Tafila Technical University, Jordan

**Room:** Room 1

Validation of SDN policies: a property-based testing perspective

*Laura M. Castro and Nicolae Paladi*

Context-aware Gossip in Ad hoc Vehicular Networks

*Ahmad Bennakhi, Abdulhusain Ben Nakhi and Abdullah Marafie*

Study of Named Entity Recognition Methods in Biomedical Feld

*Anna Sniegula, Aneta Poniszewska-Maranda, Łukasz Chomatek*

A Comparative Study of Predictive Approaches for Load Forecasting in Smart Buildings

*Sarah Hadri, Youssef Naitmalek, Mehdi Najib, Mohamed Bakhouya, Youssef Fakhri and Mohamed Elaroussi*

## **ICTH Session S-2**

**Session Chair:** Răzvan Daniel Zota, The Bucharest University of Economic Studies, Romania

**Room:** Room 2

A Systematic Review of Smart Cities' Applications to Support Active Ageing

*Nelson Rocha*

Semantic Interpretation of the map with Diabetes-Related Websites

*Hongyi Shi, Marie-Christine Jaulent and Fabien Pfaender*

A Platform of Services to Support Community-Dwelling Adults Integrating FHIR and Complex Security Mechanisms

*Nelson Rocha*

Asistranto: An Assistive Educational Platform for the Promotion of the Interest in Autistic Children

*Roceli Lima, Liliana Passerino, Renato Ventura B. Henriques, Evandro Preuss and Magda Bercht*



### **IoT-T&A Workshop S-1**

**Session Chair:** Mukhdeep Singh Manshahia, Punjabi University Patiala, India

**Room:** Room 3

Analysis of robust weed detection techniques based on the Internet of Things (IoT)

*Fenil Dankhara, Kartik Patel and Nishant Doshi*

A Survey of Smart City Infrastructure via Case study on New York

*Jigar Shah, Jinal Kothari, Nishant Doshi*

A Review of Smart Parking Using Internet of Things (IoT)

*Sahil Rupani and Nishant Doshi*

Voice-Controlled Autonomous Vehicle using IoT

*Sumeet Sachdev, Joel Macwan, Chintan Patel and Nishant Doshi*

Smart cities-A case study of Porto and Ahmedabad

*Aniket Singh Solanki, Chintan Patel and Nishant Doshi*

Open Communication Protocols for Building Automation Systems

*Karan Lohia, Yash Jain, Chintan Patel and Nishant Doshi*

### **Coffee Break**

**15:00 - 15:25**

**Room:** Meeting Foyer

### **Technical Sessions (3)**

**15:30 - 17:30**

### **EUSPN Session S-3: Security, Privacy, and Trust**

**Session Chair:** Laura M. Castro, Universidade da Coruna, Spain

**Room:** Room 1

Exploiting stack-based buffer overflow using modern day techniques

*Ştefan Sabin Nicula and Răzvan Daniel Zota*

JavaNeighbors: Improving ChuckyJava's neighborhood discovery algorithm

*Léopold Ouairy, Hélène Le Bouder and Jean-Louis Lanet*

Convolutional Neural Network Biometric cryptosystem for the protection of the Blockchain's private key

*Alfaisal Albakri and Chafic Mokbel*

Secure Tilted-Rectangular-Shaped Request Zone Location-Aided Routing Protocol (STRS-RZLAR) for Vehicular Ad Hoc Networks

*Maen Saleh*

A Conceptual Model for a Metric Based Framework for the Monitoring of Information Security Tasks' Efficiency

*Ferda Özdemir Sönmez*

### **ICTH Session S-3**

**Session Chair:** Roceli Lima, Instituto Federal de Educação do Amazonas, Brazil

**Room:** Room 2

A GraphQL approach to Healthcare Information Exchange with HL7 FHIR

*Suresh Kumar Mukhiya, Fazle Rabbi, Violet Ka I Pun, Adrian Rutle and Yngve Lamo*

Energy-efficient Sensor-based EEG Features' Extraction for Epilepsy Detection

*Sarah Alhassan, Mohammed Aldammas and Adel Soudani*

An Agent-based Approach to Physical Rehabilitation of Patients affected by Neurological Diseases

*David Vallejo, Santiago Schez-Sobrino, Javier Albusac, Jose Jesus Castro-Schez and Carlos Gonzalez-Morcillo*

**IoT-T&A Workshop S-2**

**Session Chair:** Mukhdeep Singh Manshahia, Punjabi University Patiala, India

**Room:** Room 3

FMD and Mastitis Disease Detection in Cows Using Internet of Things (IoT)

*Shivank Vyas, Vipin Shukla and Nishant Doshi*

Security and Privacy Issues in Cloud, Fog and Edge Computing

*Shalin Parikh, Dharmin Dave, Reema Patel and Nishant Doshi*

A Survey on Blockchain Technology and its Proposed Solutions

*Dharmin Dave, Shalin Parikh, Reema Patel and Nishant Doshi*

Smart Farming Using IoT, A Solution for Optimally Monitoring Farming Conditions

*Jash Doshi, Tirthkumar Patel and Santosh Kumar Bharti*

**End of Tuesday Technical Sessions**

**Wednesday, November 6, 2019**

**Registration Starts 09:00**

Room: Registration Room

**Technical Sessions (4) 09:30 - 11:00**

**EUSPN Session S-4: Mobile Computing and Wireless Communications**  
**Session Chair:** Karim Zkik, International University of Rabat, Morocco  
**Room:** Room 1

NSGA-II based Joint Topology and Routing Optimization of Mesh Networks with Flying Access Points  
*Sérgio Sabino and António Grilo*

Anticipatory Session Management and User Plane Function Placement for AI-Driven Beyond 5G Networks  
*Sebastian Peters and Manzoor Ahmed Khan*

Characterizing Instructional Leader Interactions in Social Learning Management System using Social Network Analysis  
*Orven Llantos and Maria Regina Justina Estuar*

An enhancement of Greedy Perimeter Stateless Routing Protocol in VANET  
*Meriem Houmer and Moulay Lahcen Hasnaoui*

**ICTH Session S-4**

**Session Chair:** Vicente Ferreira de Lucena Junior, Federal University of Amazonas, Brazil  
**Room:** Room 2

A Conversational Agent in mHealth to Support People coping with Parkinson's Disease  
*Patricia Macedo, Carla Pereira, Pedro Mota and Rui Neves Madeira*

Prevention-oriented ECG Teleconsulting That Involves Consumer Wearables: Exploration of Service Adoption Patterns and Institutional Impact  
*Michal Dolezel*

A Behavior Normalization Method to Enable Comparative Understanding of the Elderly's Interaction with Consumer Products using a Behavior Video Database  
*Kei Hirano, Yoshifumi Nishida, Yusuke Miyazaki and Koji Kitamura*

Competency Questions for Biomedical Ontology Reuse  
*Sabrina Azzi, Michal Iglewski and Véronique Nabelsi*

**EICN/BDNT Workshops**

**Session Chair:** Ayman Atia, October University of Modern Sciences and Arts, Egypt  
**Room:** Room 3

An Architecture for Providing Data Usage and Access Control in Data Sharing Ecosystems  
*Andres Munoz-Arcenales, Sonsoles López-Pernas, Alejandro Pozo, Álvaro Alonso, Joaquín Salvachúa, Gabriel Huecas*

Personalized Micro Service Recommendation System for Online News  
*Marchela Asenova and Christos Chrysoulas*

Manifesto for Improved Foundations of Relational Model  
*Witold Litwin*

Distributed Trust & Reputation Models using Blockchain Technologies for Tourism Crowdsourcing Platforms  
*Bruno Veloso, Fátima Leal and Benedita Malheiro*

**Coffee Break 11:00 - 11:25**

Room: Meeting Foyer

**Keynote II 11:30 - 12:30**

***The Role of Moving Things in Smart Environments***  
Susana Sargento, University of Aveiro, Portugal

**Session Chair:** Nuno Varandas, F6S (Where Founders Grow Together), Portugal  
**Room:** Conference Room

**Lunch 12:30 - 13:25**

Room: Meeting Foyer

**Technical Sessions (5) 13:30 - 15:00**

**EUSPN Session S-5: Internet of Things**

**Session Chair:** Johan Holmgren, Malmö University, Sweden

**Room:** Room 1

Trackify: A Robust System For Preserving Money Transactions

*Kareem Mohamed, Belal Mohamed, Khaled Abdel-Hakeem, Amr Aziz, Mostafa Mostafa and Ayman Atia*

Smart Home is Not Smart Enough To Protect You- Protocols, Challenges and Open Issues

*Muneer Bani Yassein*

IoT-Based Home and Community Energy Management System in Jordan

*Naeem Al-Oudat, Ahmad Aljaafreh, Ma'En Saleh and Murad Alaqtash*

Modeling and Graph Analysis for Enhancing Resilience in Smart Homes

*Amir Modarresi and John Symons*

**ICTH Session S-5**

**Session Chair:** Yoshfumi Nishida, Tokyo Institute of Technology, Japan

**Room:** Room 2

Obturator ring fracture detection using anteroposterior view x-ray

*Pascal Damien, Ralph Bou Nader, Charles Yaacoub and Jean-Claude Lahoud*

Predicting Lung Healthiness Risk Scores to Identify Probability of an Asthma Attack

*Quan Do*

Generative Adversarial Network (GANs) based training set enhancement for Stomach Adenocarcinoma Computed Tomography (CT) scan

*Paawan Sharma, Kartik Patel, Sourabh Kuvera and Fenil Dankhara*

**IWENG Workshop S-1**

**Session Chair:** Karim Zkik and Youssef Baddi, International University of Rabat, Morocco

**Room:** Room 3

Formal Verification of Confidentiality in DNSSEC and E-DNSSEC Protocols using pi-calculus and ProVerif

*Kaouthar Chetioui, Ghizlane Orhanou, Hicham Bensaid, Ilias Cherkaoui and Youness Chibi*

Mobile AdHoc networks for Intelligent Transportation System: Comparative Analysis of the Routing protocols

*Hamza Zemrane, Youssef Baddi and Abderrahim Hasbi*

Wavelength Assignment Vs. Wavelength Converter Placement in Wavelength-Routed Optical WDM Networks

*Amiyne Zakouni, Hicham Toumi, Abdelali Saidi and Abdelfettah Mabrouk*

Fuzzy Approach for Locating Sensors in Industrial Internet of Things

*Sarah Elhamdi, Abdellah Abouabdellah, Mustapha Oudani and Anass Sebbar*

Detection of Timestamps Tampering in NTFS using Machine Learning

*Mohamed Alji and Khalid Chougali*

PSO Based Intrusion Detection A Pre-Implementation Discussion

*Mohamed El Bekri and Ouafaa Diouri*

**Coffee Break 15:00 - 15:25**

Room: Meeting Foyer

**Technical Sessions (6)****15:30 - 17:30****EUSPN Session S-6: Transportation Systems & Big Data****Session Chair:** Fatma Outay, Zayed University, UAE**Room:** Room 1

Optimal placement of Charging Stations for Electric Vehicles in large-scale Transportation Networks

*Henrik Fredriksson, Mattias Dahl and Johan Holmgren*

Unique Message Authentication Security Approach based Controller Area Network (CAN) for Anti-lock Braking System (ABS) in Vehicle Network

*Mohamad Khairi Ishak and Faizan Kaleem Khan*

Efficiently Predicting Frequent Patterns over Uncertain Data Streams

*Chuan-Ming Liu and Kuan-Teng Liao***FTAT Workshop****Session Chairs:** Teodiano Freire Bastos, Universidade Federal do Espírito Santo, and Vicente de Lucena Jr, Federal University of Amazonas, Brazil**Room:** Room 2

Evaluation of Task Workload and Intrinsic Motivation in a Virtual Reality Simulator of Electric-Powered Wheelchairs

*Hamilton Rivera-Flor, Kevin A. Hernandez-Ossa, Berthil Borges Longo and Teodiano Bastos-Filho.*

Evaluating the spasticity level during the rehabilitation process: a survey of traditional methods and a new trend

*Isabela A. Marques, Camille M. Alves, Andressa R. Rezende, Marco Aurélio M. Silva, Robson G. da Cruz, Vicente F. Lucena Jr., Eduardo L. M. Naves*

Integration Between ATIoT Architecture and Wearable Device Applied to Assistive Technologies

*Carlos Solon Soares Guimarães Junior, Yves Ludovico Coelho, Wagner da Silva Silveira, Francisco de Assis Souza dos Santos, Renato Ventura Bayan Henriques, Teodiano Freire Bastos Filho and Carlos Eduardo Pereira*

Device for Guide Hand Rehabilitation Routines based on Pressure Signals

*Miguel Solis Peña and Ana Cecilia Villa Parra*

The Effect of Cybersickness of an immersive wheelchair simulator

*Débora Pereira Salgado, Thiago Braga Rodrigues, Eduardo Lázaro Martins Naves and Niall Murray*

The Raising Role of Virtual Reality in Accessibility Systems

*Mauro Teófilo, Alvaro Lourenço, Juliana Postal, Vicente F. Lucena Jr***IWENG Workshop S-2****Session Chairs:** Karim Zkik and Youssef Baddi, International University of Rabat, Morocco**Room:** Room 3

Signaling Game-Inspired Model for Ubiquitous Security in VANETs

*Abdelfettah Mabrouk, Amiyne Zakouni and Mohammed El Koutbi*

Fuzzy Single-commodity model in Wireless Sensor Networks

*Mustapha Oudani and Karim Zkik*

Implementing Hy-IDS, Mobiles Agents and Virtual Firewall to Enhance the Security in IaaS Cloud

*Hicham Toumi, Fatima Zahra Fagroud, Amiyne Zakouni and Mohamed Talea*

New context-based node acceptance CBNA framework for MitM detection in SDN Architecture

*Anass Sebbar, Karim Zkik, Mohammed Boulmalf and Mohamed Dafir Ech-Cherif El Kettani*

A novel approach for improving MPLS VPN security by adopting the software defined network paradigm

*Faycal Bensalah, Najib El Kamoun and Youssef Baddi*

Inline detection of Denial of Service Attacks in Software Defined Networking using the Hotelling Chart

*Faycal Bensalah, Najib El Kamoun and Mohammed-Alamine El Houssaini,***End of Wednesday Technical Sessions****Banquet and Award Ceremony****19:00 - 21:00**

Banquet Room

Thursday, November 7, 2019

**Technical Sessions (7) 08:30 – 10:00**

**HiPIS Workshop**

**Session Chair:** Filipe Portela, Manuel Filipe Santos, University of Minho, Portugal

**Room:** Room 1

Towards PWA in healthcare

*Felipe Rêgo, Filipe Portela and Manuel Filipe Santos*

Automatically detect diagnostic patterns based on clinical notes through Text Mining

*João Ribeiro, Júlio Duarte, Filipe Portela and Manuel Filipe Santos*

Benchmarking Business Analytics Techniques in Big Data

*Cátia Oliveira, Tiago Guimaraes, Filipe Portela and Manuel Filipe Santos*

**EICN/CIM Workshops**

**Session Chair:** Ferda Özdemir Sönmez, Middle East Technical University, Turkey

**Room:** Room 3

The COVCRAV Project: Architecture and Design of a Cooperative V2V Crash Avoidance System

*Fatma Outay, Hichem Bargaoui, Anouar Chemek, Faouzi Kamoun, Ansar Yasar*

A Cloud-IOT Based Decision Support System for Potato Pest Prevention

*Karim Foughali, Karim Fathallah and Ali Frihida*

Grey Wolf Algorithm Based Energy-Efficient Data Transmission in Internet of Things

*Mukhdeep Singh Manshahia*

**END of Event**