# WTS 2019 Paper Presentation Sessions

## Tuesday, April 9

**Watson Hotel**

### Interdisciplinary Workshops: Topics in Wireless Communications I:

#### Cybersecurity, Privacy, and Intelligence (CSPI 2019)

<table>
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<tr>
<th>Time</th>
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| 2:00 pm - 3:00 pm | Machine Learning-based Primary User Emulation Attack Detection In Cognitive Radio Networks using Pattern Described Link-Signature (PDSL)  
Abdulsahib Albehadili and Atif Ali (University of Toledo, USA); Farha Jahan (The University of Toledo, USA); Ahmad Y Javaid and Jared Olouch (University of Toledo, USA); Vijay Devabhaktuni (The University of Toledo, USA)  
*Design and Development of a Modular K12 Cybersecurity Curriculum*  
Ehsan Sheybani (University of South Florida, USA); Giti Javidi (University of South Florida Sarasota-Manatee, USA); Zacharias Pieri (USFSM, USA)  
*Enhancing Cybersecurity Workforce Human Factors in VUCA Environment*  
Ehsan Sheybani (University of South Florida, USA); Giti Javidi (University of South Florida Sarasota-Manatee, USA); Mitch Javidi (National Command and Staff College, USA) |

## Wednesday, April 10

**Watson Hotel**

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<th>Time</th>
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| 4:45pm – 5:30pm | Doctoral Students’ Session  
*Performance Analysis for Virtual-Cell Based CoMP 5G Networks Using Deep Recurrent Neural Nets*  
Mohamed Elkourdi, Asim Mazin and Richard D. Gitlin (University of South Florida, USA) |

## Thursday, April 11

**Watson Hotel**

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<tr>
<th>Time</th>
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| 4:00pm – 4:45pm | Poster Paper Session  
*Flow-based Transmission Scheduling Assuming WLAN for Industrial Automation*  
Yoshihisa Kondo (ATR Adaptive Communications Research Lab., Japan); Tatsuya Yoshioka (Advanced Telecommunications Research Institute International, Japan); Akio Hasegawa (ATR Adaptive Communications Research Lab., Japan) |
| An IOT based low cost environment monitoring system using single board sensor integration and ThingSpeak server for developing countries  
M Samiul Ehsan, Shukla Biswas, Anika Nawar, Rumali Siddiqua and Belal Bhuian (BRAC University, Bangladesh) |
|---|
| **Friday, April 12**  
**Watson Hotel** |
| **8:10 am – 10:10 am** |
| I-A Internet of Things, WSN & Smart Devices I  
IEEE Xplore Papers  
*Uncovering the True Potentials of the Internet of Things*  
Abdulrahman Yarali (MSU, USA); Manu Srinath (Murray State University, USA)  
*Localization of Passive UHF RFID Tags Based on a Frequency-Stepped Continuous-Wave Approach*  
Martin Scherhäufl (Linz Center of Mechatronics GmbH, Austria); Markus Pichler-Scheder (LCM, Austria); Andreas Stelzer (Johannes Kepler University Linz, Austria)  
*RFID Implementation in Supply Chain Management Using P2P Network Overlays*  
Pouyan Ahmadi, Khondkar Islam and Pooja Podduturi (George Mason University, USA); Trevor Maco (Virginia Tech, USA)  
*Design and Evaluation of a Novel MAC Protocol for Multi-Implantable UHF-RFID Transmitters for Brain-Computer Interface Applications*  
Albena Mihovska (Aarhus University, Denmark); Harshini Harikrishnan (SDSU, USA); Aarjish Sarkar (Mt. Carmel High School, USA); Christopher Paolini (San Diego State University, USA)  
*Emerging Technology Trends in Vehicle-to-Everything Connectivity*  
Neelu Sinha (Fairleigh Dickinson University, USA)  
*An Experimental Study on Energy Consumption of Wireless Multipath TCP Connections*  
Atef Abdrabou, Monika Prakash, Ahmed AlShehi, Sirag-Eldin Ahmed and Mohamed Darwish (UAE University, United Arab Emirates) |
| I-B Physical and MAC Layers I  
IEEE Xplore Papers  
*Alternating Renewal Theory Based MAC-Layer Sensing Period Optimization in CRNs with Hybrid OFF/ON Channel State Length Distributions*  
Zhiwei Mao (Fairleigh Dickinson University, USA); Xianmin Wang (Cypress Semiconductor Corp., Hazlet, New Jersey)  
*Energy-efficient Techniques for Combating the Influence of Reactive Jamming Using Non-Orthogonal Multiple Access and Distributed Antenna Systems*  
Joumana Farah and Jacques Akiki (Lebanese University, Faculty of Engineering, Lebanon); Eric Pierre Simon (University of Lille, France)  
*Self-Synchronizing Time-Division Multiple-Access Network Protocol*  
Andres Monterrosas (Johns Hopkins University Applied Physics Laboratory, USA); William Kight (JHU/APL, USA); Emre Gunduzhan (Johns Hopkins University Applied Physics Laboratory, USA); David Coleman (JHU/APL, USA)  
*Blind Parameters Estimation for Universal Filtered Multicarrier: a Cyclostationarity Approach*  
Kawtar Zerhouni (University of Cadi Ayyad, Information Technology and Modeling Laboratory, Morocco; IFSTTAR, LEOST, France); Fouzia Boukour Elbahhar (IFSTTAR, France); Raja Elassali (Cadi Ayyad |
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<th>Time</th>
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<tr>
<td>10:10 am – 10:20 am</td>
<td><strong>Break</strong></td>
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| 10:20 am – 12:00 pm | **II-A** Internet of Things, WSN & Smart Devices II | Kinetic Threats and IoT Cybersecurity Issues Facing the Interconnected Society and its Digital Resilience  
J Shim (Georgia State University, USA)  
Monitoring Coverage Holes with Mobile Nodes in Wireless Sensor Networks  
Arunita Jaekel and Dhruvi Patel (University of Windsor, Canada)  
A Multi-Layered Reliability Approach in Vehicular Ad-Hoc Networks  
Hasita Kaja (University of Missouri, Kansas City, USA); Cory Beard (University of Missouri-Kansas City, USA)  
Reliability-Secrecy Tradeoff for Implantable Medical Devices  
Alaa Awad Abdellatif, Lutfi Samara and Amr Mohamed (Qatar University, Qatar); Mohsen Guizani (University of Idaho, USA); Abdulla K Al-Ali and Aiman Erbad (Qatar University, Qatar)  
Lower-limb Rehabilitation at Home: A Survey on Exercise Assessment and Initial Study on Exercise State Identification Toward Biofeedback  
Seanglidot Yeon, Bu Sung Lee and Chai Kiat Yeo (Nanyang Technological University, Singapore) |
<p>| 10:20 am – 12:00 pm | <strong>II-B</strong> Network Layer &amp; NGNs I | IEEE Xplore Papers                                                                                       |</p>
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<tr>
<th>Time</th>
<th>Session</th>
<th>Paper Title</th>
<th>Authors</th>
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<tr>
<td>10:20 am</td>
<td>II-C Modeling, Simulations, and Analytics I</td>
<td><strong>IEEE Xplore Papers</strong> <strong>QoE-driven Anomaly Detection in Self-Organizing Mobile Networks using Machine Learning</strong> Chetana V Murudkar and Richard D. Gitlin (University of South Florida, USA) <strong>Performance of Optically-Preamplified, Direct-Detection, M-ary PPM for Inter-Satellite Links</strong> Sanaa Hamid Mohamed (University of Leeds, United Kingdom (Great Britain)); Aly Elrefaie (W&amp;Wsens Devices, USA); Mohamed Hassan and Taha Landolsi (American University of Sharjah, United Arab Emirates) <strong>A Probabilistic Closed-form Expression for the Amount of Data Secondary Users Can Transmit in Cognitive Radio Networks</strong> Maram Helmy, Yousuf Aborahama, Mohamed Hassan and Mahmoud H. Ismail (American University of Sharjah, United Arab Emirates) <strong>Clustering Algorithms and Validation Indices for mmWave Radio Multipath Propagation</strong> Bogdan Antonescu, Miead Tehrani Moayyed and Stefano Basagni (Northeastern University, USA) <strong>Digital Recording System Identification Based on Blind Deconvolution</strong> Michel Kulhandjian (University of Ottawa &amp; Carleton University, Canada); Hovannes K. Kulhandjian (California State University, Fresno, USA); Claude D’Amours (University of Ottawa, Canada); Dimitris A. Pados (Florida Atlantic University, USA)</td>
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<td>12:00 pm</td>
<td>Lunch Best Paper Awards Ceremony</td>
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<td>1:10 pm</td>
<td>III-A Internet of Things, WSN &amp; Smart Devices III IJITN &amp; Other Papers</td>
<td><strong>A Novel Congestion Avoidance Algorithm for Autonomous Vehicles Assessed by Queue Modeling</strong> Khashayar Kotobi (The University of Tennessee at Chattanooga, USA); Mina Sartipi (University of TN at Chattanooga, USA) <strong>Low-Cost RFID Authentication Protocol Based on Elliptic Curve Algorithm</strong> Rania Baashirah, Abdelshashour A. Abuzneid, Salah Addine Mellouki, Zeba Siraj and Cheng Zhan (University of Bridgeport, USA)</td>
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<td>1:10 pm –  3:10 pm</td>
<td>III-B</td>
<td>Physical and MAC Layers II</td>
<td><strong>IJITN &amp; Other Papers</strong></td>
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<td><em>Adaptive Complex Filtering for Narrowband Jamming Mitigation in Resource-Constrained Wireless Network</em></td>
<td>Georgi Iliev (Technical University of Sofia, Bulgaria); Albena Mihovska (Aarhus University, Denmark); Dimitriya Mihaylova and Zlatka Valkova-Jarvis (Technical University of Sofia, Bulgaria)</td>
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<td><em>Performance of Uplink Non-Orthogonal Multiple Access (NOMA) in the Presence of Channel Estimation Errors</em></td>
<td>Faeik Al Rabee and Richard D. Gitlin (University of South Florida, USA)</td>
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<td><em>Second-Order Statistics of MRC Reception with a Transparent Amplify-and-Forward Relay</em></td>
<td>Jia-Chin Lin (National Central University, Taiwan)</td>
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<td><em>Optimum Receiver Based on Principal Component Analysis for Spatially Correlated Nakagami-m Fading Channels</em></td>
<td>Jia-Chin Lin (National Central University, Taiwan)</td>
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<td><em>A Trust Framework for Centralized TDMA Scheduling Mechanism in Vehicular Ad hoc Networks</em></td>
<td>Mohamed Hadded (VDECOM, France); Toumi Khalifa (IRT SYSTEMX, France); Anis Laouiti (TELECOM SudParis, France); Paul Muhlethaler (INRIA, France)</td>
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<td><em>Implementation and Performance Analysis of PPS and PCO-based Time Synchronization using USRP</em></td>
<td>Hyun Jae Park (Siliconsapiens Corporation, Korea); Cheol-Woong Lee, Taeyoung Shin and Byeong-hee Roh (Ajou University, Korea); SooBum Park and Jungwook Choi (LIG Nex1 Co., Ltd., Korea)</td>
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<td>3:10 pm –  3:30 pm</td>
<td>III-C</td>
<td>Cybersecurity, Privacy, Assurance &amp; Business Policy</td>
<td><strong>IJITN &amp; Other Papers</strong></td>
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<td><em>The Convergence of Blockchain, Internet of Things (IoT) and Building Information Modeling (BIM): The Case of the Smart Museum</em></td>
<td>Konstantina Siountri (University of Piraeus, Greece); Emmanouil Skondras (UNIPI, Greece); Theodoros Mavroeidakos and Dimitrios D. Vergados (University of Piraeus, Greece)</td>
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<td><em>IACAP: Internet-exposed Assets Cybersecurity Analysis Platform</em></td>
<td>Yan Sun (Queen Mary University of London, United Kingdom (Great Britain)); Mingsheng Yin (Queen Mary University of London, USA); Saoia Arrizabalaga and Santiago Figueroa (Ceit &amp; Universidad de Navarra, Tecnun, Spain); Javier Añorga (Ceit-IK4 &amp; Universidad de Navarra, Tecnun, Spain)</td>
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<td><em>Business Models Evolution in the Wireless Industry: A Case Study of Xiaomi in China</em></td>
<td>Min Zhang and Katia Passerini (St. John's University, USA); Michael Bartolacci (Penn State University - Berks, USA)</td>
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### IV-A  Network Layer & NGNs II

**IJITN & Other Papers**

*Performance Evaluation of MANET Algorithms in an Emergency Response Environment*
Pouyan Ahmadi and Khondkar Islam (George Mason University, USA); Trevor Maco (Virginia Tech, USA); Subhankar Ghosh (George Mason University, USA)

*A Review of Low Altitude Platform (LAP) Wireless Network Deployment for Emergency Communications*
Practitioners
Michael Bartolacci (Penn State University - Berks, USA); Larry LeBlanc (Vanderbilt University, USA); Thomas Grossman (University of San Francisco, USA)

*FANET for Precision Agriculture Domains: Recruiting Strategy based on ACO*
Floriano De Rango, Mauro Tropea, Giuseppe Potrino and Amilcare Santamaria (University of Calabria, Italy)

### IV-B  Modeling, Simulations, and Analytics II

**IJITN & Other Papers**

*Real-Time Indoor Geolocation Tracking for Assisted Healthcare Facilities*
Albena Mihovska (Aarhus University, Denmark); Christopher Paolini, Mahasweta Sarkar and Kinjal Gala (San Diego State University, USA); Paul Bryden (University of Strathclyde, United Kingdom (Great Britain)); Matthew Wang (UCLA, USA)

*Conceptual Modeling of an IP Phone Communication System: A Case Study*
Sabah S. Al-Fedaghi and Ghadeer Aldamkhi (Kuwait University, Kuwait)

*RF-Based Machine Learning Solution for Indoor Person Detection*
Pedro de Santana (Samsung SIDIA, Brazil); Vicente A. de Sousa Jr. (Federal University of Rio Grande do Norte & Group for Researching and Fast Prototyping Solutions for Communication (GPPCOM), Brazil); Thiago Scher (Samsung SIDIA, Brazil); Alvaro Augusto M. de Medeiros (Federal University of Juiz de Fora, Brazil); Juliano Bazzo (Samsung SIDIA, Brazil)

*On the Enabling of Efficient Coexistence of LTE with WiFi: A Machine Learning-Based Approach*
Mohamed Hassan, Mahmoud H. Ismail and Mohamed El-Tarhuni (American University of Sharjah, United Arab Emirates)

*GPS Location Spoofing using Software Defined Radio*
Chai Kiat Yeo (Nanyang Technological University, Singapore)

*The Key Impacts of Softwarization in the Modern Era of 5G and the Internet of Things*
Opeoluwa T Eluwole (BDO LLP, United Kingdom (Great Britain)); Mike Ojo (University of Pisa, Italy)