The Third International Workshop on Intelligent Transportation and Connected Vehicles Technologies (ITCVT 2020)

http://emergingtechnet.org/ITCVT2020/index.php

20 April 2020 - Budapest, Hungary (Virtual)

in conjunction with

The 32th IEEE/IFIP Network Operations and Management Symposium (NOMS 2020)

Monday 20 April 2020		
9:30- 10:00	**Opening Notes - Session Chair: Moayad Aloqaily**	
10:00 - 11:00	Keynote by **Prof. Sanjay Ranka**, University of Florida, USA Big data Computing and Machine Learning for Intelligent Transportation and Connected Vehicles.	
Break		
11:00 - 12:30	ITCVT- Session 1	**Chair:** Moayad Aloqaily • **AI Enabled Resource Allocation in Future Mobile Networks (#203694)** *Umer Rehman Mughal, Manzoor Ahmed Khan, Azam Beg Ghulam, Qadir Mughal* • **A Game-Theoretic Approach for Distributed Attack Mitigation in Intelligent Transportation Systems (#203993)** *Talal Halabi, Omar Abdul Wahab, Mohammad Zulkernine* • **STARC: Low-power Decentralized Coordination Primitive for Vehicular Ad-hoc Networks (#203771)** *Patrick Rathje, Valentin Poirot, Olaf Landsiedel* • **Management of Smart Vehicular Handovers in Overlapped V2X Networks (#203782)** *Hyundong Hwang, Young-Tak Kim*
Break		
13:00 - 15:00	ITCVT- Session 2	**Chair:** Moayad Aloqaily • **Context and Location Awareness in Eco-Driving Recommendation (#203924)** *André Campolina, Azzedine Boukerche, Antonio Alfredo Ferreira Loureiro* • **Model-based Design of a Roadside Unit for Emergency and Disaster Management (#203796)** *Nur Hilal, Arda Yurdakul* • **Adjusted Location Privacy Scheme in VANET Safety Applications (#203797)** *Ruqayah Al-ani, Bo Zhou, Qi Shi, Thar Baker, Mohamed Abdlhamed* • **A Dynamic Decentralized Traffic Light Management System: A TCP Inspired Approach (#203833)** *Omar Hiari, Ibraheem Nofal* • **Blockchain Solution for IoT-based Critical Infrastructures: Byzantine Fault Tolerance (#203829)** *Omar AlFandi, Safa Otoum, Yaser Jararweh* • **UAV-Assisted Vehicular Communication for Densely Crowded Environments (#203792)** *Ouns Bouachir, Moayad Aloqaily, Ismaeel Al Ridhawi, Omar Al fandi, Haythem Bany Salameh*
15:00 - 15:10	**Closing Remarks**	

KEYNOTE SPEAKERS

Prof. Sanjay Ranka, University of Florida, USA

Abstract: Big data Computing and Machine Learning for Intelligent Transportation and Connected Vehicles.

We are developing machine learning algorithms and software to fuse real-time feeds from video cameras and traffic sensor data to generate real-time detection, classification, and space-time trajectories of individual vehicles and pedestrians. This information is then transmitted to a cloud-based system and then synthesized to create a real-time city-wide traffic palette. I will discuss our research on:

• Smart intersections: Space-time trajectories are used to understand and improve the safety and efficiency of the intersection. Using conflict points of the vehicle-pedestrian trajectories, we identify potential collisions, or "near-misses," and how they are related to the state of the signal cycle (transition from green to yellow, from yellow to red, etc.) and the presence of other vehicles and pedestrians.

• Smart system: We are developing efficient signal re-timing for different corridors by time of day and day of the week to reflect the changes in network demand. We are also developing machine learning techniques for real-time detection of incidents and accidents on arterial networks. • Smart interactions with connected and autonomous vehicles: We have developed signalized intersection control strategies and sensor fusion algorithms for jointly optimizing vehicle trajectories and signal control for a mixture of autonomous vehicles and traditional vehicles at every intersection.

Biography:

Sanjay Ranka is a Professor in the Department of Computer Information Science and Engineering at University of Florida. His current research interests are high performance and parallel computing with a focus on energy efficiency; and big data science with a focus on datamining/machine learning algorithms for spatiotemporal applications. His work is driven by applications in CFD, remote sensing, health care and transportation. He teaches courses on data science (three course curriculum), data mining and parallel computing. From 1999-2002, he was the Chief Technology Officer at Paramark (Sunnyvale, CA). At Paramark, he developed a real-time optimization service called PILOT for marketing campaigns. PILOT served more than 10 million optimized decisions a day in 2002 with a 99.99% uptime. Paramark was recognized by VentureWire/Technologic Partners as a top 100 Internet technology company in 2001 and 2002 and was acquired in 2002. He has also held positions as a tenured faculty positions at Syracuse University and as a researcher/visitor at IBM T.J. Watson Research Labs and Hitachi America Limited. Sanjay earned his Ph.D. (Computer Science) from the University of Minnesota and a B. Tech. in Computer Science from IIT, Kanpur, India. He has coauthored four books, 280+ journal and refereed conference articles. His recent co-authored work has received a best student paper runner up award at IGARSS 2015, best paper award at BICOB 2014, best student paper award at ACM-BCB 2010, best paper runner up award at KDD-2009, a nomination for the Robbins Prize for the best paper in journal of Physics in Medicine and Biology for 2008, and a best paper award at ICN 2007. He is a fellow of the IEEE and AAAS, and a past member of IFIP Committee on System Modeling and Optimization. He is an associate Editor-in-Chief of the Journal of Parallel and Distributed Computing and an associate editor for ACM Computing Surveys, IEEE/ACM Transactions on Computational Biology and Bioinformatics, Sustainable Computing: Systems and Informatics, Knowledge and Information Systems, and International Journal of Computing. He is also an editorial board member of Applied Sciences (Computing and Artificial Intelligence).

Additionally, he is a book series editor for CRC Press for Bigdata. In the past, he has been an associate editor for IEEE Transactions on Parallel and Distributed Systems and IEEE Transactions on Computers. He was a past member of the IFIP Committee on System Modeling and Optimization, Parallel Compiler Runtime Consortium, the Message Passing Initiative Standards Committee and Technical Committee on Parallel Processing. He is the program chair for 2015 High Performance Computing, 2013 International Parallel and Distributed Processing Symposium, 2010 International Conference on Contemporary Computing and co-general chair for 2009 International Conference on Data Mining and 2010 International Conference on Green Computing. He is a series editor for CRC press on Bigdata. His work has received 11800+ citations with an h-index of 52 (based on Google Scholar).