

Department of Electrical and Computer Engineering
College of Engineering and Computer Science
University of Central Florida

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Yaser P. Fallah

ACADEMIC TRAINING

University of California, Berkeley, USA

Jul. 2008 - Jun. 2010

Post-Doctoral Fellow, College of Engineering, Institute of Transportation Studies (EECS and CEE dept's)

Research: Wireless vehicular networks, vehicle safety, system modeling, Intelligent Transportation Systems

University of British Columbia, Canada

Sep 2003 - Mar. 2007

Ph.D. in Electrical & Computer Engineering (GPA: A+)

Research: Analytical modeling of networks; Multimedia; scheduling and optimization in wireless networks

University of British Columbia, Canada

Jan 2000 - Dec. 2001

M.A.Sc. in Electrical & Computer Engineering (GPA: A+)

Research: Multimedia Communications, MPEG-4, Communication Networks, Video Streaming

Sharif University of Technology, Iran

July 1994 - July 1998

B.Sc. in Electrical Engineering – Electronics (GPA: A)

Ranked amongst top 10 Electrical Engineering students in the dept.

Awarded 'best EE undergrad project' in 1998: Design of an Adaptive Echo Canceller for HDSL Modems.

APPOINTMENTS and WORK EXPERIENCE

University of Central Florida, FL, USA

Aug 2016 – Present

Associate Professor

Dept. of Electrical and Computer Engineering

- Research:
 - System and Network modeling for Smart Energy and Transportation Systems.
 - Automated Vehicles, Model Based Information Networking and Situation Awareness, Model Learning (HMMs, Stochastic Switched Based Hybrid Systems) [NSF CAREER]
 - Scalable Networked Vehicle Safety Systems, Automated Vehicle (DoT CAMP, Ford)
 - Learning methods for deriving combined driver-vehicle-traffic models
 - Smart Grid Communication Strategies for Control of Networks with Integrated Renewables
- Teaching: Digital Systems, Modeling and Analysis of Networked Systems

West Virginia University, WV, USA

Aug 2011 – Aug 2016

Assistant Professor

Dept. of Computer Science and Electrical Engineering

- Research: *sponsored by NSF, USDoT, USDoE, Toyota, Hyundai, GM*
 - System and Network modeling for Smart Energy and Intelligent Transportation Systems.
 - Automated Vehicles, Model Based Information Networking (sponsor: NSF CAREER)
 - Scalable Networked Vehicle Safety Systems, Automated Vehicle (DoT CAMP, Hyundai, Toyota)
 - Smart Grid Communication Strategies for Control of Networks with Integrated Renewables (DoE)
 - Information-based Smart Powertrain Management for Electric Vehicles- EcoCAR3, (DoE, GM)

University of California, Berkeley, USA

Jul 2008 – Jun 2011

Research Scientist *from Jul'08-Jun'10 as NSERC Postdoctoral Fellow*

College of Engineering (ITS)

- Research on Wireless Networks and Modeling for Intelligent Transportation Systems
- Developed network congestion control schemes for DSRC based Cooperative Vehicle Safety Systems (sponsored by GM); currently prototyped and proposed for standardization.
- Developed the first analytical model for vehicular networks affected by heavy hidden node issue;
- Developed machine learning schemes for user preference learning in ITS safety (at California PATH)
- System modeling and specification for collaborative control of networks of embedded systems.

University of British Columbia, Canada

Nov 2003 – Jun 2008

Research Assistant (Nov'03-Mar'07), **Postdoctoral Researcher** (Mar'07-Jun'08)

Electrical and Computer Eng. (Lab for Advanced Networking & Signal, Image and Multimedia Processing Lab)

- Scheduling and resource allocation schemes for multimedia support in wireless networks
- Deterministic and Stochastic performance analysis and modeling of wireless networks
- embedded software and hardware development for 802.11e MAC in (for VxWorks, Xilinx EDK)

IBM, Canada

Jun 2002 - Nov 2003

Software Engineer, Toronto Software Lab

- Software development for the WebSphere Development Studio and the Webfacing tool (Java-based)
- Design of new intelligent features for the Webfacing tool, Working with customers (e.g., Honda, Ford)

University of British Columbia, Canada

Jan 2000 - Dec 2001

Research Assistant (Electrical and Computer Engineering)

- Contributed the reference software for MPEG-4 streaming to the ISO reference implementation
- Developed the first standard based QoS-aware MPEG-4 streaming server and client architecture/software

Informatics Services Corp., Iran

Nov 1998 - Dec 1999

Hardware Engineer (Research & Development dept.)

- Project Management of a research project to study voice compression techniques for VSAT networks
- Design of network adapters for a Satellite terminal; FPGA based design
- Development of a hardware diagnostic system for DSP based satellite voice/data transceiver cards

Biomedical Eng. Research Center, Tehran University, Iran

Jun 1997 - Aug 1997

Intern- RF Designer

- Designed and implemented a short-range wireless paging device

RESEARCH PROJECTS AND FUNDING

PI or Co-PI of the following research projects:

- **PI:** "CAREER: Multi-Resolution Model and Context Aware Information Networking for Cooperative Vehicle Efficiency and Safety Systems", National Science Foundation, NSF CAREER (2015-2020)
- **PI,** "CV2X Emulator for Scalability Study", Ford Motor Co. (2018-2019)
- **PI:** "DSRC V2V Safety Networks, Communication and Congestion Control- phase 2", US-DoT (CAMP consortium, *General Motors, Ford, Nissan, Honda, etc.*) (2015-2019)
- **PI:** "Modeling and Control of Information Driven Smart Transportation Systems", collaborative project with lead PI (PR Kumar) from Texas A&M Univ., Qatar National Research Fund, QNRF (2016-2019)
- **Co-PI:** "EcoCAR3: Electrified Vehicle Educational Resources for Efficient and Sustainable Transportation", DoE, Argonne National Lab, (2014-2018).
- **PI:** "Coordinated Sensor Processing and Communication for Autonomous Vehicles", Toyota,(2016-2017)
- **PI:** "Autonomous Vehicle Information Networking", Toyota ITC, USA (2014-2016)
- **PI:** "DSRC V2V Safety Network Simulator and Congestion Control Algorithms", US-DoT (CAMP consortium, *General Motors, Ford, etc.*) (2013-2015)

- **PI:** “Vehicle-to-Pedestrian Communication, Simulation and Application Evaluation”, Hyundai-Kia Advanced Technology Center, USA (in collaboration with Qualcomm, 2014-2015)
 - **PI:** “Networked Vehicle Safety Applications: co-simulation and design”, Hyundai-Kia Advanced Technology Center, USA (2014-2015)
 - **Co-PI:** “Next Generation Power Converter: Interface and Communication Protocols”, DoE, National Energy Technology Lab, Grid Technology Collaborative research (2012-2014).
 - **PI:** “Model-Based Information Networking in Distributed Energy Systems”, WVU Senate Grant(2014-15)
- Organized and actively participated in the preparation of the following funded research proposals:
- **Senior personnel:** “Making Cloud Computing Sense, Act, and Move”, NSF CPS program (2011-2014)
 - **Senior personnel:** “V2V communication Algorithms for cooperative active safety”, *GM* (2010-2011)
 - “High dynamic range video”, NSERC Canada strategic grant, (2009-2012).
- Assisted in writing research proposals for several NSERC grants including:
- “Gigabit Wireless Multimedia Networks” (2006-2008), “New Architectures & Protocols for Tightly-Coupled Multimedia Conferencing over the Mobile Internet”, 2003-2005

TEACHING EXPERIENCE

University of Central Florida

- “Digital Systems” (undergraduate), Fall’16, Fall’17, UCF
- “Modeling and Analysis of Networked Systems”, Spring 2017, Spring 2018, UCF

West Virginia University, Dept. of Computer Science and Electrical Eng.

- “Digital Systems” (undergraduate), Fall’16, UCF
- “Microprocessor Systems” (undergraduate), *Fall’12, Spring’14, Spring’15, Spring’16*, WVU
- “Networked Sys: Modeling and Analysis”,(graduate), *Spring’12, Spring’13, Fall’13, Fall’15*, WVU
- “Vehicle Electrification – EcoCAR3”, (undergrad, capstone), *Fall’14 to Spring’16*, Instructor, WVU
- “Senior Design (Capstone) “ (undergraduate), *Fall’12, Spring’13*, co-Instructor, WVU
- “Embedded Systems, Modeling and Analysis”, (graduate – Indep. St.), *Fall’12*, WVU

University of California Berkeley, Dept. of Civil and Environmental Eng.

- Invited Lectures in graduate course “Control & Management of Information Systems”, *Fall’09, Fall’10*

University of British Columbia, Dept. Electrical & Computer Eng.

- Invited Lecture in graduate course “Advanced Topics in Computer Networking”, *Fall 2005*
- Teaching Assistant (2000 - 2006):
“Computer Communications”, “Digital Signal Processing Systems”, “Design of Digital and Microcomputer Systems”, “Electronics and Electromagnetics”, “Architecture for Learning Systems”

AWARDS and HONORS

- **NSF CAREER Award** – National Science Foundation (2015-2020)
- **Best Paper Award**, IEEE Cyber SciTech conference (2017)
- **Outstanding Researcher Award** - West Virginia University, College of Engineering: (2016)
- **NSERC Post-Doctoral Fellowship** – Canadian national award (2008-2010)
- **Bell Canada Graduate Award** – awarded to only 10 students from across Canada (2005-2006)
- **NSERC Post Graduate Scholarship** - Canadian national award (2003-2005)
- **Theodore E. Arnold Fellowship** University of British Columbia (2005,2006)

- **University Graduate Fellowship**, University of British Columbia (2005,2006)
- **Best B.Sc. Project Award**, Dept. Electrical Eng., Sharif University of Technology, (1998)
- **Outstanding Undergraduate Students Award**, Top 50 Students in the Nationwide University Entrance Exam, Sharif University of Technology, Ministry of Education, (1994)
- **National Universities Entrance Exam., Iran (1994): Ranked 13** (technical part) and **50** (general part) amongst more than **400,000** participants. **Ranked 1st** amongst Guilan province students.

AFFILIATIONS AND PROFESSIONAL ACTIVITIES

- **Editor**, IEEE Transactions on Vehicular Technology, **Jan 2016**-present
- **Chair**, Program Committee, IEEE Int. Symp. on Wireless Vehicular Comm., WiVEC **2011, 2014**
- **Steering Committee Member**, IEEE Connected Vehicle Initiative (VTS), since 2015
- **Chair** and Steering Committee member, new IEEE Connected and Automated Vehicles Conf. **2016**
- **Chair**, IEEE Workshop on V2X Communication: Applications and Technology, Oct. 2015
- **Chair**, Intelligent Transportation Networks track, IEEE PIMRC 2011 conference.
- **co-chair**, Technical Program Committee, Conf. on Smart Urban Mobility Services (SUMS) 2015
- Member of the **Standards Council of Canada** committee on MPEG (ISO/IEC SC29), 2001-2008
- Active participant and one of the organizers of the “Connecting Vehicle Systems, Border Crossings and Users” initiative, funded under **Canada-California Strategic Innovation Partnership (CCSIP)**, 2010
- Technical Program Committee: IEEE WCNC 2012-2015, IEEE Vehicular Networking Conf. 2011-14, IEEE VTC (2012-2015), IEEE WiVEC 2013, IEEE ISWCS 2010, IEEE Workshop on Mobile Cyber-Physical Systems 2010, Int. Workshop on Cyber-Physical Systems, Networks, and Apps 2011, etc.
- Session Chair: IEEE Vehicular Tech. Conf. 2010-Fall: Perf Eval. of Wireless Ad-Hoc Networks
- Guest Editor: Int. Journal of Distributed Sensor Networks, Int. Journal of Sensors
- Organizer: IEEE VTC 2010 Tutorial session on Vehicles Safety Systems enabled by Wireless Networks
- Representative of the UBC ECE department in the graduate advisory committee of British Columbia Advanced Systems Institute, 2000-2002
- Reviewer of multiple Journals and Conferences (IEEE Trans. on Wireless Communications, Trans. on Computing, Trans. on Circuits and Systems for Video Tech., Trans. on Vehicular Tech., Wireless Communications Magazine, WCNC, ICC, INFOCOM, etc.)

PUBLICATIONS AND PATENTS

JOURNALS and BOOK CHAPTERS

1. E. Moradi-Pari, H Nourkhiz Mahjoub , H Kazemi, **Y. P. Fallah**,” Utilizing Model-Based Communication and Control for Cooperative Automated Vehicle Applications”, to appear in *IEEE Trans. On Intelligent Vehicles*, 2017
2. **Y.P. Fallah**, M.K. Khandani, “Context and Network Aware Communication for Connected Vehicle Safety Applications”, in *IEEE Intelligent Transportation Systems Magazine*, 2016
3. A. Tahmasbi-Sarvestani, H. Nourkhiz Mahjoub, **Y. P. Fallah**, E. Moradi-Pari, O. Abuchaar, “Implementation and Evaluation of a Cooperative Vehicle-to-Pedestrian Safety Application”, to appear in *IEEE Intelligent Transportation Systems Magazine*, 2017
4. A. Tahmasbi-Sarvestani, **Y.P.Fallah**, V. Kulathumani, “Network-aware Double-layer Distance-dependent Broadcast Protocol for VANETs”, *IEEE Trans. on Vehic. Tech.*, vol.64, no.12, pp.5536-5546, Dec 2015
5. **Y. P. Fallah**, N. Nasiriani, H. Krishnan, “ Stable and Fair Power Control in Vehicle Safety Networks”, in *IEEE Trans. on Vehicular Technology*, Vol. 65, No. 3, pp. 1662-1675, March 2016

6. E. Moradi Pari, SM.O. Gani, **Y. P. Fallah**, M. Naserian, A. Lewis, "Co-Simulation of Cooperative Vehicle Safety Applications and Communication Networks", *SAE Int. Journal of Passenger Cars – Electronics and Electrical Systems* 8(2):344-349, 2015, doi:10.4271/2015-01-0285.
7. E. Moradi Pari, N. Nasiriani, **Y. P. Fallah**, P. Famouri, S. Bossart, K. Dodrill, "Design, Modeling and Simulation of On-Demand Communication Mechanisms for Cyber-Physical Energy Systems", *IEEE Trans. on Industrial Informatics*, vol.10, no.4, pp.2330 - 2339, Nov. 2014, doi: 10.1109/TII.2014.2326080
8. E. Moradi-Pari E., A. Tahmasbi, **Y.P. Fallah**, "A Hybrid System Approach to Modeling Real-Time Situation Awareness Component of Networked Crash Avoidance Systems", *IEEE Systems Journal*, ,vol. PP, no.99, pp.1,10, 25 April 2014, doi: 10.1109/JSYST.2014.2312172
9. **Y. P. Fallah**, R. Sengupta, "Protocol Design for Real-Time Estimation Using Wireless Sensors", Book Chapter, in the *Art of Wireless Sensor Networks*, Springer, Vol. 2: Advanced Topics and Applications Series: Signals & Communication Technology, Ammari, Habib M. (Ed.) 2014, ISBN 978-3-642-40066-7
10. **Y. P. Fallah**, "Networking Vehicles for Safety: Embedding Cyber Networks in Physical Networks", *ACM Crossroads Mag.*, Vol. 20, Issue 3, Spring 2014, Pages 52-58 , 2014
11. **Y. P. Fallah**, CL Huang, R. Sengupta, H. Krishnan, "Analysis of Information Dissemination in Vehicular Ad-Hoc Networks with Application to Cooperative Vehicle Safety Systems", *IEEE Trans. on Vehicular Technology*, Vol 60, Issue 1, pp. 233-247, Jan 2011
12. V. K. Kulathumani, **Y. P. Fallah** and R. A. Moparthi, "VCAST: Scalable dissemination of vehicular information with distance-sensitive precision", *Int. Journal of Distributed Sensor Networks*, vol. 2013, Article ID 586193, 14 pages, 2013
13. C.L. Huang, H. Krishnan, R. Sengupta, **Y. P. Fallah**, "Implementation and Evaluation of Scalable Vehicle-to-Vehicle Safety Communication Control", *IEEE Communications*, vol.49, pp.134-141, Nov 2011
14. C.L. Huang, **Y. P. Fallah**, R. Sengupta, H. Krishnan, "Inter-vehicle Transmission Rate Control for Cooperative Active Safety System", *IEEE Trans. on Intel. Trans. Systems*, vol 12, pp 645-658, Sep. 2011
15. C.L. Huang, **Y. P. Fallah**, R. Sengupta, H. Krishnan, "Adaptive Inter-Vehicle Communication Control for Cooperative Safety Systems", *IEEE Network*, Vol. 24, Issue 1, pp. 6-13., Jan.-Feb. 2010.
16. H. Mansour, **Y. P. Fallah**, P. Nasiopoulos, V. Krishnamurthy, "Dynamic Resource Allocation for MGS/AVC H.264 Video Transmission over Link-Adaptive Networks", *IEEE Transactions on Multimedia*, Vol. 11, Issue 8, pp.1478 – 1491, Dec. 2009.
17. **Y. P. Fallah**, F. Agharebparast, M. Minhas, H. M. Alnuweiri, V.C.M. Leung, "Analytical Modeling of Contention-Based Bandwidth Request Mechanism in IEEE 802.16 Wireless Networks", *IEEE Transactions on Vehicular Technology*, vol. 57, no. 5, pp. 3094–3107, September 2008.
18. **Y. P. Fallah**, H. Mansour, S. Khan, P. Nasiopoulos, and H. Alnuweiri, "A Link Adaptation Technique for Efficient Transmission of H.264 Scalable Video Over Multirate WLANs," *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 18, no. 7, pp. 875–887, July 2008.
19. **Y. P. Fallah** and H. Alnuweiri, "Analysis of Temporal and Throughput Fair Scheduling in Multi-Rate IEEE 802.11e WLANs" *Journal of Computer Networks, Elsevier*, vol.52, no.16, pp.3169-3183, Nov.2008.
20. **Y. P. Fallah**, S. ElHousseini, H. Alnuweiri, "A Generalized Saturation Throughput Analysis for IEEE 802.11e Contention-Based MAC", *Wireless Personal Comm., Springer*, Vol.47- 2 pp. 235-245, Oct. 2008.
21. **Y. P. Fallah**, H. Alnuweiri, "Hybrid Polling and Contention Access Scheduling in IEEE 802.11e WLANs", *Journal of Parallel and Distributed Computing, Elsevier*, Vol.67, Iss 2, pp.242-256., Feb. 2007
22. H. Alnuweiri, **Y. P. Fallah**, P. Nasiopoulos, S. Khan, "OFDMA-Based Medium Access Control for Next-Generation WLANs", *EURASIP Jnl. Wireless Comm. & Networking*, Article ID 512865, vol. 2009
23. **Y. P. Fallah**, P. Nasiopoulos, H. Alnuweiri "Efficient Transmission of H.264 Video over Multirate IEEE 802.11e WLANs", *EURASIP Jnl. Wireless Comm. & Networking*, Article ID 480293, 14 pages, vol. 2008
24. **Y. P. Fallah**, K. Asrar-Haghighi, H. Alnuweiri, "Internet delivery of MPEG-4 Object-based Multimedia", *IEEE Multimedia*, Vol. 10 , Issue: 3, pp. 68 - 78 , July-Sept. 2003
25. **Y. P. Fallah**, K. Asrar-Haghighi, H. Alnuweiri, "Streaming Multimedia over the Internet", *IEEE Potentials*, Volume 23, Issue 1, pp.34 - 37 , Feb.-March 2004

26. E. Moradi Pari, P. Vallapu, **Y. P. Fallah**, P. Famouri, "Detection and Location of Faults in Wide Area Systems Utilizing Event-Based Communication Scheduling",
27. H. Kazemi, H., Y.P. Fallah, A. Nix, S. Wayne, "Predictive AECMS: Utilizing ITS-based Vehicle Movement Information for Optimal Control of Hybrid Electric Vehicle Powertrain," under review at *IEEE Transactions on Intelligent Vehicles*, submitted 2016

CONTRIBUTION TO STANDARDS

28. SAE J2945/1 – The scalability solution – called SUPRA – is a direct derivation of the SUPRA algorithm in "**Y. P. Fallah**, et.al., " Stable and Fair Power Control in Vehicle Safety Networks", published in *IEEE Trans. on Vehicular Technology*, 2016
- **Y. P. Fallah**, C.L. Huang, R. Sengupta, S. D. Gupta, H. Krishnan, "Cooperative Vehicle Safety Systems, Achieving Scalability through Congestion Control", presented at IEEE 1609 standard meeting, Oct 2010
- **Y. P. Fallah**, K. Asrar-Haghighi, and H. Alnuweiri, "Implementation of MPEG-4 DMIF Remote Retrieval Instance and Streaming Server", Contribution document m7668 submitted to the *58th MPEG Meeting*, 2001, - video streaming software contributed to the MPEG-4 reference implementation.

PATENTS

- Invention Disclosure filed at UC Berkeley, 2011: "Inter-Vehicle Communication Control for Cooperative Active Safety Systems", C.L. Huang, Y.P. Fallah, R. Sengupta

CONFERENCE PAPERS

1. H. Rubaiyat, A. Sidiya, X. Li, Y.P. Fallah, "Multi-sensor data fusion for vehicle detection in autonomous vehicle applications", in proc. of *IS&T Electronic Imaging 2018 Symposium*
2. A. Jamialahmadi, Y. P. Fallah, "Analysis of the Impact of Driver Behavior Models on Performance of Forward Collision Warning Systems", in proc. of *IEEE Cyber Science and Tech. Conf. 2017 [Best Paper Award]*
3. M. Kalantari-Khandani, W. Mikhael, Y. P. Fallah, and K. Goseva-Popstojanova, "Data-Based Analysis of Sampling and Estimation Methods for Vehicle Tracking over Wireless Networks", in proc. of *IEEE Cyber Science and Technology Conf. (CST) 2017*
4. H. Nourkhiz Mahjoub, A. Tahmasbi-Sarvestani, H. Kazemi, and Y. P. Fallah, "A Learning-Based Framework for Two-Dimensional Vehicle Maneuver Prediction over V2V Networks", in proc. of *IEEE Cyber Science and Technology (CST) 2017*
5. **Y.P. Fallah**, "A Model-Based Communication Approach for Distributed and Connected Vehicle Safety Systems", in proc. *IEEE Systems Conference, 2016*
6. P. Vallapu, E. Moradi-pari, P. Famouri, **Y.P.Fallah**, "Detection and Location of Faults in Wide-area Systems Utilizing Event-based Communication Scheduling", *North American Power Sym., 2017*
7. S. Mehdi Iranmanesh, E.Moradi-Pari, **Y.P. Fallah**, S. Das, M. Rizwan, "Robustness of Cooperative Forward Collision Warning Systems to Communication Uncertainty", in proc. *IEEE Systems Conf 2016*
8. SM Gani, A. Tahmasbi, YP. Fallah, "High Fidelity DSRC Receiver Model for ns-3 Simulation Using Large-scale Field Data", Proc. *IEEE Wireless Comm. and Networking Conf (WCNC) 2016*
9. S.M.O. Gani, A. Tahmasbi, Y.P. Fallah, G. Bansal, T. Shimizu, "Evaluating Performance of Content and Rate Control Schemes for Scalable Automated Vehicles Communication," in Proc. ITS World Congress 2016, Melbourne, Australia, Oct. 2016.
10. **Y.P. Fallah**, M. Kalantari-Khandani, " Analysis of the Coupling of Communication network and Safety Application in Cooperative Collision Warning Systems ", in proc. *2015 ACM/IEEE Int. Conference on Cyber-Physical Systems (ICCPS)*, pp. 228-237, 2015
11. H. Kazemi, B. Khaki, **Y.P. Fallah**, A. Nix, S. Wayne, "Utilizing Situational Awareness for Efficient Control of Powertrain in Parallel Hybrid Electric Vehicles", In Proc. of *IEEE Int Conf. on Ubiquitous Wireless Broadband, Workshop on V2X Communication and Applications*, Oct. 2015

12. E. Moradi Pari; SM.O. Gani, **Y.P. Fallah**, M. Naserian, A. Lewis, "Co-Simulation of Cooperative Vehicle Safety Applications and Communication Networks", in proc. *SAE World Congress 2015*, Track on Vehicle to Vehicle and Vehicle to Infrastructure, 2015
13. A. Tahmasbi-Sarvestani, H. Kazemi, **Y.P. Fallah**, M. Naserian, A.Lewis, "System Architecture for Cooperative Vehicle-Pedestrian Safety Applications Using DSRC Communication". in proc. *SAE World Congress 2015*, Track on Vehicle to Vehicle and Vehicle to Infrastructure, 2015
14. M. Fanaei, A. Tahmasbi, **Y.P. Fallah**, G. Bansal, M. Valenti, J. Kenney, "Adaptive Content Control for Communication amongst Cooperative Automated Vehicles", in Proc. *Wireless Vehicular, Communications (WiVeC), 2014 IEEE 6th Int. Symp. on* , pp.1,7, 14-15 Sept. 2014
15. **Y.P. Fallah**, H. Krishnan, "The Need for An Application-Centric Networking Paradigm for Large Scale Transportation Cyber-Physical Systems", *NSF National Workshop on Transportation Cyber-Physical Systems*, position paper, Jan. 2014
16. **Y.P. Fallah**, P. Famouri, S. Bossart, "Why an Application Agnostic Internet Model May Not Work for Communication in Cyber-Physical Energy Systems", *NSF National Workshop on Energy Cyber-Physical Systems*, position paper, Dec. 2013
17. E. Moradi-Pari, A. Tahmasbi-Sarvestani, **Y.P. Fallah**, "Modeling Communication and Estimation Processes of Autonomous Crash Avoidance Systems", in Proc. *IEEE Systems Conference - SysCon 2013*
18. J. Ghorbani, **Y.P. Fallah**, A. Feliachi, M. Choudhry, "Investigation of Communication Media Requirements for Self-Healing Power Distribution Systems", In proc. of *IEEE EnergyTech 2013*
19. N. Nasiriani, R. Ramachandran, K. Rahimi, **Y. P. Fallah**, P. Famouri, S. Bossart, K. Dodrill, "An Embedded Communication Network Simulator for Power Systems Simulations in PSCAD" *Proc. of IEEE PES General Meeting, 2013*
20. N. Nasiriani, **Y.P. Fallah**, H.Krishnan "Stability Analysis of Congestion Control Schemes in Vehicular Ad-Hoc Networks", in Proc of *IEEE Cons. Comm. and Networking Conf. 2013*
21. N. Nasiriani, **Y.P. Fallah**, "Performance and Fairness Analysis of Range Control Algorithms in Cooperative Vehicle Safety Networks at Intersections", Proc. of *IEEE Conf on Local Comp Netw. 2012*
22. V. Kulathumani, Y. P. Fallah, "VCAST: An infrastructure-less vehicular traffic information service with distance-sensitive precision", in Proc. of *IEEE Vehicular Technology Conf. (VTC), Fall 2012*
23. **Y. P. Fallah**, R. Sengupta "A Cyber-Physical Systems Approach to the Design of Cooperative Vehicle Safety Networks", in Proc. of *IEEE Int. Conf. on Distributed Computing Systems (ICDCS), 2nd workshop on Cyber-Physical Networking Systems(CPNS), 2012*.
24. S.D. Gupta, **Y.P. Fallah**, S. Shaldiver, "Sharing Vehicle and Infrastructure Intelligence for Assisted Intersection Safety", Proc. of *IEEE PIMRC 2011*.
25. S.D. Gupta, **Y.P. Fallah**, C.L. Huang, R. Sengupta, H. Krishnan, "Scalable Cooperative Vehicle Safety Systems: Adaptive Inter-Vehicle Communications", Proc. *IEEE Symp. on Wireless Vehic. Comm. 2011*.
26. **Y. P. Fallah**, C.L. Huang, R. Sengupta and H. Krishnan, "Design of Cooperative Vehicle Safety Systems based on Tight Coupling of Communication, Computing and Physical Vehicle Dynamics", in Proc. of *ACM/IEEE Int. Conf. on Cyber-Physical Systems, ICCPS 2010*.
27. **Y. P. Fallah**, C.L. Huang, R. Sengupta and H. Krishnan, "Congestion Control based on Channel Occupancy in Dedicated Vehicular Broadcast Networks", Proc. of *IEEE Veh. Tech. Conf, VTC-2010*.
28. Y. Xuan, R. Sengupta, **Y.P. Fallah**, "Crowd Sourcing Indoor Maps with Mobile Sensors", Proc. *ACM Mobiquitous 2010*
29. C.L. Huang, R. Sengupta and H. Krishnan, **Y. P. Fallah**, "Implementation and Evaluation of Scalable Vehicle-to-Vehicle Transmission Control Protocol", Proc. of *IEEE Vehicular Networking Conf. 2010*
30. **Y. P. Fallah**, P. Nasiopoulos, R. Sengupta, "Fair Scheduling for Real-Time Multimedia Support in IEEE 802.16 Wireless Networks", Proc. *IEEE Sym. World of Wireless, Mobile & Multimedia Netw. 2010*
31. C. Manasseh, **Y. P. Fallah**, R. Sengupta, J. Misener, "Using Smartphones to Enable Situation Awareness on Highways", Proc. of *Intelligent Transportation Society of America annual conf. ITSA 2010*
32. C. Manasseh, **Y. P. Fallah**, R. Sengupta, J. Misener, "Learning User Perception to Traveler Situation Awareness Alerts on Mobile phones", Proc. of *ITS World Congress 2010*

33. Yiguang Xuan, Raja Sengupta, **Y. P. Fallah**, "Making Indoor Maps with Portable Accelerometer and Magnetometer", in Proc. of *Ubiq. Positioning Indoor Nav. & Location Based Services 2010*
34. C. L. Huang, **Y. P. Fallah**, R. Sengupta, H. Krishnan, "Information Dissemination Control for Cooperative Active Safety Applications in Vehicular Ad-Hoc Networks," *IEEE GLOBECOM 2009*.
35. C. L. Huang, **Y. P. Fallah**, R. Sengupta, "Analysis of Aggregated Power Level and Rate-Power Control Designs for Status Update Messages in VANETs," *IEEE Mobile Adhoc & Sensor Systems, MASS '2009*.
36. R. Sengupta, **Y. P. Fallah**, "The Rise of the Mobile Internet: What does it mean for Transportation", *National Workshop for Research on High-Confidence Transportation Cyber-Physical Systems*, 2008.
37. C. L. Huang, X. Guan, **Y. P. Fallah**, R. Sengupta, H. Krishnan, "Robustness Evaluation of Decentralized Self-Information Dissemination Control Algorithms for VANET Tracking Applications," Proc. of *IEEE Vehicular Technology Conference VTC-Fall 2009*.
38. A. Connie, **Y. P. Fallah**, P. Nasiopoulos, V. Leung, "Efficient Utilization of Error Protection Techniques for Transmission of Data-Partitioned H.264 Video in a Capacity Constrained Network", *IEEE ICC 2009*.
39. A. Connie, P. Nasiopoulos, V. Leung, Y.P. Fallah, "Trade off between source and channel distortion for a data-partitioned video in a capacity constrained network," proc. of *Int. Conf. Consumer Electronics (ICCE), 2010, Digest of Technical Papers*, vol., no., pp.57-58, 9-13 Jan. 2010
40. **Y. P. Fallah**, H. Mansour, S.Khan, P.Nasiopoulos, H. Alnuweiri, "An Optimized Link Adaptation Scheme for Efficient delivery of scalable H.264 video over IEEE 802.11n", *IEEE Int. Symp. Circ. & Systems, ISCAS2008*.
41. H. Mansour, **Y. P. Fallah**, P. Nasiopoulos, V. Krishnamurthy, "Combined Link Adaptation and Traffic Control Scheme for MGS H.264/AVC Video Transmission", *IEEE conf. Digital Signal Processing*, 2009
42. Masoumeh K. Khandani, P. Saeedi, **Y. P. Fallah**, Mehdi K. Khandani, "A Novel Data Clustering Algorithm Based on Electrostatic Field Concepts", *IEEE Symp. Comp. Intelligence & Data Mining 2009*.
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