

IEEE

**VTS**

*Connecting the Mobile World*

**2021**

**Awards Program**

**Gordon Stüber,**  
Chair, VTS Awards Committee

# AWARDS

## THE VEHICULAR TECHNOLOGY CONFERENCE AWARD

For exemplary contributions to the success of the 2021 IEEE 94<sup>th</sup> Vehicular Technology Conference, VTC2021-Fall.

**General Chair**  
**Jianhua Lu**

## VEHICULAR TECHNOLOGY CONFERENCE 2021 FALL BEST PAPER AWARDS

### BEST OVERALL VTC2021-FALL PAPER

*EV-Road-Grid: Enabling Optimal Electric Vehicle Charging Path Considering Wireless Charging and Dynamic Energy Consumption*

**Yanyu Zhang, Shukai Zhou, Xinpeng Rao, Yi Zhou; School of Artificial Intelligence at Henan University and the International Joint Research Laboratory for Cooperative Vehicular Networks of Henan**

### BEST VTC2021-FALL STUDENT PAPER

*Mobility-aware Pre-cache and Incentive Mechanism Design for Efficient D2D Data Offloading*

**Yiting Luo, University of Macau; Chengkai Lou, University of Macau; Fen Hou, University of Macau; Hongwei Ding, Yunnan University; and Bo Li, Yunnan University**

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## VEHICULAR TECHNOLOGY SOCIETY BEST PAPERS AWARDS

### 2021 JACK NEUBAUER MEMORIAL AWARD

Recognizes the best systems paper published in the IEEE Transactions on Vehicular Technology

#### **Seongah Jeong, Osvaldo Simeone, Joonhyuk Kang**

for the paper entitled "Mobile Edge Computing via a UAV-Mounted Cloudlet: Optimization of Bit Allocation and Path Planning," IEEE Transactions on Vehicular Technology, Vol. 67, No. 3, pp. 2049-2063, March 2018.

### 2021 BEST LAND TRANSPORTATION PAPER AWARD

Recognizes the best paper on land transportation published in the IEEE Transactions on Vehicular Technology

#### **Arief Koedwiady, Ridha Soua, Fakhreddine Karray**

for the paper entitled "Improving Traffic Flow Prediction with Weather Information in Connected Cars: A Deep Learning Approach," IEEE Transactions on Vehicular Technology, Vol. 65, No. 12, pp. 9508-9517, December 2016

### 2021 NEAL SHEPHERD MEMORIAL BEST PROPAGATION AWARD

Recognizes the best propagation paper published in the IEEE Transactions on Vehicular Technology

#### **Vutha Va, Junil Choi, Robert W. Heath, Jr.**

for the paper entitled "The Impact of Beamwidth on Temporal Channel Variation in Vehicular Channels and Its Implications," IEEE Transactions on Vehicular Technology, Vol. 66, No. 6, pp. 5014-5029, June 2017.

### 2021 BEST VEHICULAR ELECTRONICS PAPER AWARD

Recognizes the best paper on vehicular electronics published in the IEEE Transactions on Vehicular Technology

#### **Yongzhi Zhang, Rui Xiong, Hongwen He, Michael G. Pecht**

for the paper entitled "Long Short-Term Memory Recurrent Neural Network for Remaining Useful Life Prediction of Lithium-Ion Batteries," IEEE Transactions on Vehicular Technology, Vol. 67, No. 7, pp. 5695-5705, July 2018.

### 2021 BEST MAGAZINE PAPER AWARD

Recognizes the best magazine paper published in the IEEE Vehicular Technology Magazine

#### **Hyung G. Myung, Junsung Lim, David J. Goodman**

for the paper entitled "Single Carrier FDMA for Uplink Wireless Transmission," IEEE Vehicular Technology Magazine, Vol. 1, No. 3, pp. 30-38, September 2006.

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# AWARDS

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## AWARDS RECOGNIZING THE ACCOMPLISHMENTS OF GROUPS

### VTS CHAPTER OF THE YEAR AWARD

Recognizes the outstanding Vehicular Technology Society Chapter

#### **New South Wales Australia Chapter**

##### **Chapter Chair**

##### **Wei Ni**

CSIRO Data61, Australia

# SIGNIFICANT INDIVIDUAL ACCOMPLISHMENT AWARDS

## 2021 JAMES EVANS AVANT GARDE AWARD



### **Robert Wendell Heath, Jr.**

North Carolina State University, USA

**for contributions to MIMO  
communications and millimeter wave  
vehicular communication systems**

Robert W. Heath (Fellow, IEEE) received the B.S. and M.S. degrees in electrical engineering from the University of Virginia, Charlottesville, VA, USA, in 1996 and 1997, respectively, and the Ph.D. degree in electrical engineering from Stanford University, Stanford, CA, USA, in 2002. From 1998 to 2001, he was a Senior

Member of the Technical Staff then a Senior Consultant with Iospan Wireless Inc., San Jose, CA, USA, where he worked on the design and implementation of the physical and link layers of the first commercial MIMO-OFDM communication system. From 2002 to 2020, he was with The University of Texas at Austin, Austin, TX, USA, most recently the Cockrell Family Regents Chair of engineering and the Director of UT SAVES. He is currently a Distinguished Professor with North Carolina State University, Raleigh, NC, USA. He is also the President and the CEO of MIMO Wireless Inc. He authored Introduction to Wireless Digital Communication (Prentice Hall, 2017) and Digital Wireless Communication: Physical Layer Exploration Lab Using the NI USRP (National Technology and Science Press, 2012), and coauthored Millimeter Wave Wireless Communications (Prentice Hall, 2014) and Foundations of MIMO Communication (Cambridge University Press, 2018). He is currently the Editor-in-Chief of the IEEE SIGNAL PROCESSING MAGAZINE and is a Member-at-large of the IEEE Communications Society Board of Governors. He was a Distinguished Lecturer and a Member of the Board of Governors in IEEE Signal Processing Society. In 2017, he was selected as a Fellow of the National Academy of Inventors. He is also a licensed Amateur Radio Operator, a Private Pilot, a registered Professional Engineer in Texas. He has been a co-author of a number award winning conference and journal papers, including recently 2016 IEEE Communications Society Fred W. Ellersick Prize, 2016 IEEE Communications and Information Theory Societies Joint Paper Award, 2017 Marconi Prize Paper Award, 2019 IEEE Communications Society Stephen O. Rice Prize, and 2020 IEEE Signal Processing Society Overview Paper Award. He was the recipient of 2017 EURASIP Technical Achievement Award and 2019 IEEE Kiyo Tomiyasu Award.

# SIGNIFICANT INDIVIDUAL ACCOMPLISHMENT AWARDS

## 2021 EARLY CAREER AWARD



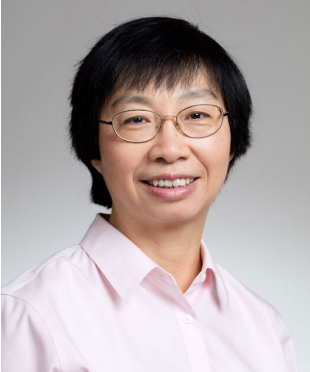
### **Xingqin Lin**

Ericsson Inc., Santa Clara, USA

**for contributions to mobile communication systems and connected aerial vehicles**

Xingqin Lin received the B.Eng. degree in electronic information engineering from Tianjin University, Tianjin, China, in 2009, the M.Phil. degree in information engineering from The Chinese University of Hong Kong, Hong Kong, in 2011, and the Ph.D. degree in electrical and computer engineering from The University of Texas at Austin, Austin, TX, USA, in 2014. He held summer internships at Qualcomm CR&D, Bridgewater, NJ, USA, in summer 2014; Nokia Siemens Networks, Arlington Heights, IL, USA, in summer 2013; and Alcatel-Lucent Bell Labs, Murray Hill, NJ, USA, in summer 2012. He is currently a master researcher and standards delegate with Ericsson Research, Santa Clara, CA, USA. He leads 4G/5G research and standardization in the areas of non-terrestrial communications and networking (satellites/HAPS/airplanes/drones). He has contributed to 5G NR, NB-IoT, and LTE standards. He received special recognition from Ericsson for outstanding contributions to Narrowband Internet-of-Things (NB-IoT) research and standardization in 2015, and was nominated for Ericsson Business Innovation Leader in 2017. His general research interests include communications and networking, with emphasis on 4G/5G mobile broadband systems, machine type communications, and air-ground communications (drones, airplanes, and satellites). In these areas, he has published more than 35 refereed journal and conference papers and holds 50+ pending/granted patents. He is co-author of the book *Wireless Communications and Networking for Unmanned Aerial Vehicles*. His publications have been cited over 1,500 times according to Google Scholar Citations. His research on the interplay between massive MIMO and D2D was featured in IEEE ComSoc TECH FOCUS - 5G Technology Drivers. His work on carrier aggregation in heterogeneous networks was selected as one of the IEEE Best Readings on Multi-Tier Cellular by the IEEE Communications Society. He received the Microelectronics and Computer Development (MCD) fellowship from UT Austin. He served as an Editor of IEEE Communications Letters from 2015 to 2018 and is serving as the Industry Liaison Officer for the IEEE ComSoc Emerging Technology Initiative on Aerial Communications.

## 2021 WOMEN'S DISTINGUISHED CAREER AWARD



### **Weihua Zhuang**

University of Waterloo, Canada

**for exceptional leadership  
and contributions to wireless  
communications and networks**

Weihua Zhuang (Fellow, IEEE) received the B.Sc. and M.Sc. degrees from Dalian Maritime University, China, and the Ph.D. degree from the University of New Brunswick, Canada, all in electrical engineering.

She has been with the Department of Electrical and Computer Engineering, University of Waterloo, Waterloo, ON, Canada, since 1993, where she is a Professor and a Tier I Canada Research Chair in Wireless Communication Networks. Dr. Zhuang was a recipient of the 2021 R.A. Fessenden Award from the IEEE Canada, 2017 Technical Recognition Award in Ad Hoc and Sensor Networks from the IEEE Communications Society, and a co-recipient of several Best Paper Awards from IEEE conferences. She was the Editor-in-Chief of the IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY from 2007 to 2013, Technical Program Chair/Co-Chair of IEEE VTC 2017/2016 Fall, and Technical Program Symposia Chair of IEEE Globecom 2011. She is an elected member of the Board of Governors and Vice President for Publications of the IEEE Vehicular Technology Society. She was an IEEE Communications Society Distinguished Lecturer from 2008 to 2011. Dr. Zhuang is a Fellow of the Royal Society of Canada, Canadian Academy of Engineering, and Engineering Institute of Canada.

**SIGNIFICANT INDIVIDUAL ACCOMPLISHMENT AWARDS**

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**2021 HALL OF FAME AWARD**



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## Harold Vincent Poor

Princeton University, USA

for major contributions to the modern wireless revolution through pioneering fundamental and applied research advances enabling the remarkable evolution of innovative wireless technologies

H. Vincent Poor (Life Fellow, IEEE) received the Ph.D. degree in EECS from Princeton University in 1977. From 1977 to 1990, he was on the faculty of the University of Illinois at Urbana–Champaign. Since 1990, he has been on the faculty at Princeton, where he is currently the Michael Henry Strater University Professor of Electrical Engineering. From 2006 to 2016, he served as the Dean of Princeton’s School of Engineering and Applied Science. He has also held visiting appointments at several other universities, including most recently at Berkeley and Cambridge. His research interests include information theory, machine learning and network science, and their applications in wireless networks, energy systems and related fields. Among his publications in these areas is the recent book *Multiple Access Techniques for 5G Wireless Networks and Beyond* (Springer, 2019). Dr. Poor is a member of the National Academy of Engineering and the National Academy of Sciences and a foreign member of the Chinese Academy of Sciences, the Royal Society, and other national and international academies. Recent recognition of his work includes the 2017 IEEE Alexander Graham Bell Medal, and a D.Eng. (honoris causa) from the University of Waterloo in 2019.

DANIEL E. NOBLE FELLOWSHIP AWARD



**Yiwen Wu**

University of Electronic Science and Technology of China

for outstanding research contributions to intelligent and connected transportation systems

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## IEEE TRANSPORTATION ELECTRONICS FELLOWSHIP



**Peiran Dong**

The Hong Kong Polytechnic University

for outstanding research contributions to machine learning in vehicular communications and intelligent transportation systems

## FELLOW RECOGNITION

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### VTS CLASS OF 2021 IEEE FELLOWS

#### **Haris Gacanin**

for development of operations and management systems for home broadband networks

#### **Honggang Wang**

for contributions to low power wireless for IoT and multimedia applications

#### **Jiandong Li**

for leadership in heterogeneous self-organizing wireless networks

#### **Chau Yuen**

for contributions to energy efficient wireless communications

#### **David Matolak**

for contributions to wireless channel modeling and applications

#### **Zhinong Ying**

for contributions to mobile terminal antenna technology

#### **Ai-chun Pang**

for contributions to resource management and service provisioning for mobile edge networks

#### **Chan-byoung Chae**

for contributions to MIMO design and prototypes for emerging communication systems

#### **Hyundong Shin**

for contributions to the analysis and design of wireless communication and networking

#### **Wonjun Lee**

for contributions to multiple access and resource allocation in wireless networks

## FELLOW RECOGNITION

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### VTS CLASS OF 2021 IEEE FELLOWS

#### **Rongxing Lu**

for contributions to security and privacy in vehicular communications

#### **Hongke Zhang**

for contributions to high-speed railway communications

#### **Wing Kwan Ng**

for contributions to resource allocation for wireless communication networks

#### **Tara Javidi**

for contributions to stochastic resource allocation and active hypothesis testing

#### **Edward Tiedemann**

for innovation and standardization of digital cellular communications

#### **Jin Wang**

for development of high density power converters and their use in electric cars

#### **R Vannithamby**

for contributions to resource allocation for cellular and internet of things technologies

#### **Matthew Mckay**

for contributions to random matrix theory in statistical signal processing

#### **Zhaocheng Wang**

for contributions to pilot design and modulation of OFDM wireless systems

Thank you  
**2021**  
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