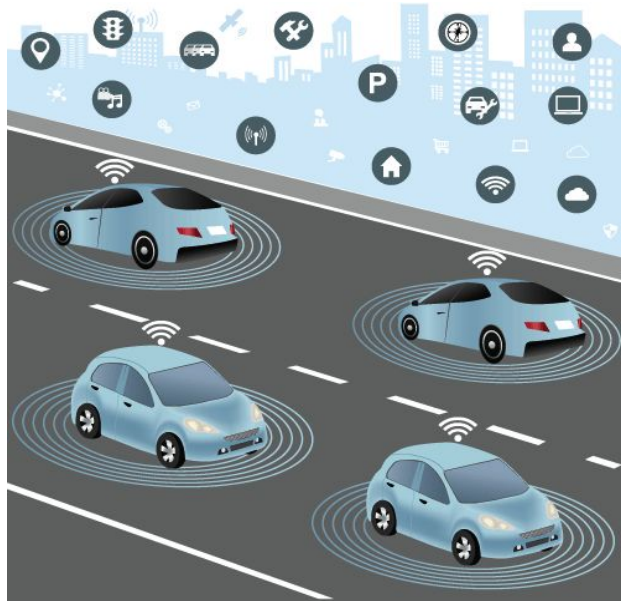




WWRF Connected Vehicle WG Update

**Presented
By
Dr. Seshadri Mohan
WWRF VIP CV WG Chair
Professor Emeritus, University of Arkansas at Little Rock
at
ITU-CITS Meeting, September 21, 2026**

Working Groups

WG DTH

DigiTel-Health

Envisions a future where AI-powered digital healthcare platforms integrate seamlessly with the latest wireless technologies, catalyzing a transformative shift across various healthcare sectors

VIP RAIL

Train-to-Track Technologies

Focuses on research that looks five to ten years ahead to meet the requirements of the railway industries based on the next generation wireless technologies

WG 6G

To peer into what is next to come after 5G (B5G) leading to the development of the standards for 6G, required research into the enabling technologies and how it is likely to be commercialized

WG CV

Connected Vehicles

Focuses on research that looks five to ten years ahead in order to meet the requirements of the automotive and transport industries based on the next generation wireless technology

WG BM

Future Business Model

Focuses on research that looks five to ten years ahead on Business Models (BM's) supported and enabled by 5G and Beyond wireless technologies in order to meet the requirements of future Business Model Ecosystems (BMES)

WG EVALUATION

Evaluation Project P401



Steering Board Members



Nigel Jefferies
Chairman



Bharat Bhatia
Vice-Chair Asia



Hendrik Berndt
Vice-Chair EMEA



Sudhir Dixit
Vice-Chair Americas



Vinod Kumar
Treasurer



Tan Bin
Sponsor Member



Thierry Lestable
Sponsor Member



Alain Mourad
Industry Member



Thabisa Faye
Full Member



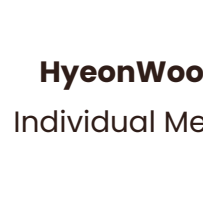
Christos Politis
AURI Member



Knud Erik Skouby
AURI Member



Simon Fletcher
Associate Member



HyeonWoo Lee
Individual Member



Steffen Ring
Individual Member



Dr. Paresh Saxena
Provisional Member



WWRF and 6G in ITU

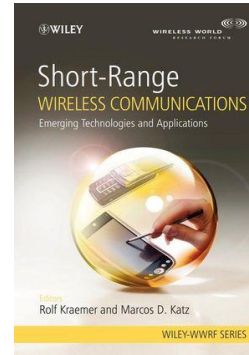
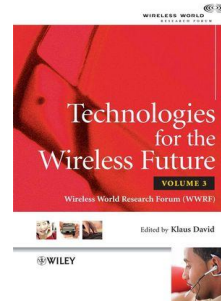
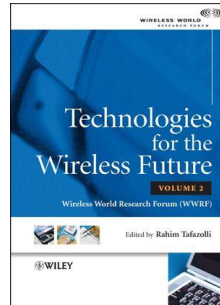
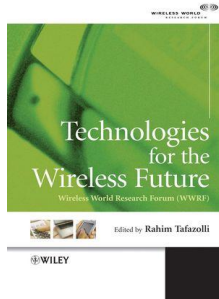
- The WWRF team made several further contributions to the IMT-2030 Vision report (now renamed IMT-2030 Framework) from ITU WP5D. These focused on clarifying the overall vision and supporting use cases such as the global internet of senses and the intelligence in future networks, and particularly on developing the ehealth use case
- Further contributions were also made to the WP5D report on networks beyond 100GHz (which may play a part in 6G)
- More information available in WWRF Outlook 33

WWRF outputs

WWRF Outlook – published version of White Paper

WWRF Library – proceedings of each meeting

WWRF – Wiley and River book series



VIP CV WG: The Connected Vehicle

Scope

The VIP CV WG focuses on research that looks five to ten years ahead in order to meet the requirements of the automotive and transport industries based on the next generation wireless technology and on the impact of Artificial Intelligence and Machine Learning on connected vehicles. It also aims to identify use cases for these industries.

Summary of VIP CV Activities

- Completed a white paper on connected vehicles 'AI/Machine Learning Based Connected Vehicles in the Era of 5G, 6G, and Beyond.'
- Another white paper on the Impact of 6G on Connected Vehicles is underway.
- Since the last update on March 16, 2026, Connected Vehicles Sessions/Workshops were organized at the following meetings:
 - WWRF 6G Huddle in Istanbul, Hosted by Istanbul Medipol University on September 17, 2026, Türkiye.

WWRF HUDDLE 2025

- A CV session titled Connected Vehicles and Smart Cities was scheduled at WWRF 6G Huddle in Istanbul, Hosted by Istanbul Medipol University on September 17, 2026, Türkiye.
- **Session Details:**
 - **14:00 – 16:00 Session 7: Mini Huddle Connected and Autonomous Vehicles**
 - **Moderator/Organiser:** Dr. Seshadri Mohan

Connected Vehicles

Mini-Huddle Summary

Panelists:

- Dr. Seshadri Mohan, Chair WWRF Connected Vehicles Working Group, Professor Emeritus, UA Little Rock, Arkansas, USA
- Dr. Kentaro Ishizu, Director of Beyond Connectivity Design Initiative, Executive Director of Research, NICT, Japan
- Dr. Nidhal Bouaynaya, Associate Vice President for Artificial Intelligence, a Professor of Electrical and Computer Engineering at Rowan University, and the Director of Rowan's Machine, Artificial Intelligence & Virtual Reality Center (MAVRC).

CV Session Details

This session's objective was to explore the Following Topics

- Overview of connected vehicle technologies: ITS, V2X
- Spectrum bands currently used and emerging spectrum opportunities for Connected Vehicles (e.g., 5.9 GHz ITS band, new mm Wave allocations)
- Role of 5G and future 6G networks in supporting connected and autonomous vehicles
- Role of AI/ML for Connected Vehicles
- Use cases, trials, Security, privacy, and reliability considerations in vehicular communications
- Future outlook for policy and technology to accelerate adoption

Beyond Connectivity: Envisioning the Future of Connected Vehicles – Dr. Kentaro Ishizu, NICT, Japan

WIRELESS WORLD
RESEARCH FORUM

Connected Vehicles in the future



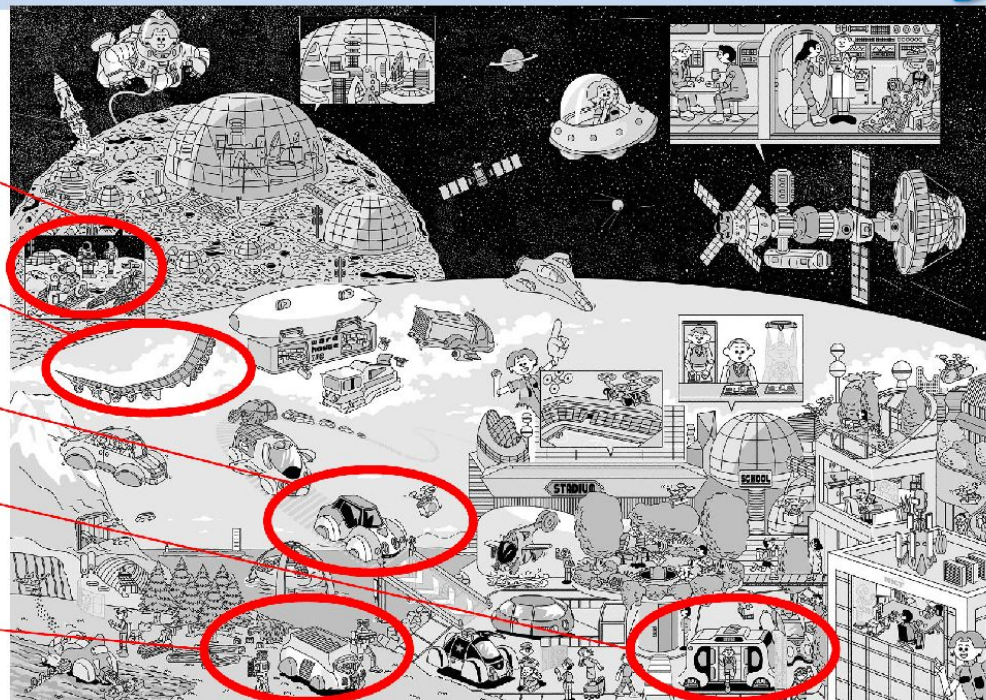
Construction
on the moon

HAPS
for resilience

Flying cars / drones
for logistics

Autonomous cars
for transportation

Humanoid robots
for agriculture



Beyond Connectivity: Envisioning the Future of Connected Vehicles

- After providing a vision of the future of connected vehicles, the talk delved into the ongoing research supporting the vision:
 - Beyond 5G
 - Non-terrestrial Networks
 - Cybersecurity
 - NICTER
 - AI Communication
 - Multilingual simultaneous interpretation
 - Quantum AI
 - Ultra-long range quantum communications

Beyond Connectivity: Envisioning the Future of Connected Vehicles

- Cooperative flight control of autonomous drones
 - Autonomous collision avoidance
 - Autonomous follow-me flight

Towards Self-Aware and Adaptive Artificial Intelligence

Nidhal Carla Bouaynaya | Rowan University

From confident predictions to systems that know when—and how—to learn

Core question: How certain am I, and what should change when the world changes?

Towards Self-Aware and Adaptive Artificial Intelligence

Moment Propagation represents uncertainty at parameter/feature and predictive levels.

Parameter uncertainty helps identify what to protect and what remains available for adaptation.

Guidance mechanisms: per-parameter learning rates, Bayesian regularization, feature masking, and dynamic neural pathways.

Predictive/logit uncertainty can identify untrained or out-of-distribution data and signal when adaptation is needed.

Across benchmarks, these mechanisms reduce forgetting while learning new tasks.



River Publishers

Official Magazine of the
**WIRELESS WORLD
RESEARCH FORUM**



Upcoming Conferences 57

WWRT

Wireless World Research and Trends Magazine

Editor-in-Chief

Sachin Dixit, Basic Internet Foundation, USA

Editorial Board

Angeliki Alcaio, University of Piraeus, Greece

Ebtisam Almazrouei, AIH3, UAE

Hendrik Berndt, WWRF, Germany

Bharat B. Bhatia, ITU-APT Foundation of India (IAIT), WWRF, India

Mérouane Debbah, Centrale Supélec, France and Mohamed bin Zayed University of Artificial Intelligence, UAE

Nigel Jeffries, Montreal Consulting Ltd, WWRF

and Huawei Technologies

Vinod Kumar, (Retd) Alcatel-Lucent Bell Labs, France

Seshadri Mohan, University of Arkansas, USA

Christos Politis, Kingston University London, UK

Steffen Ring, RING Advocacy LLC, Denmark

Knut Erik Skrobby, Aalborg University, Denmark

Vino Vindras, Vindras & Associates Inc, Canada

and WWRF

How to Reach Us

We welcome letters to the editor, but, we reserve the right to edit for space, style, and clarity.

Include address and daytime phone number with your correspondence.

E-mail: sachin.dixit@gmail.com

If you would like to submit an article, please visit our submission portal for details:
<https://wireless-magazine.com/index.php/WWRT/about/submissions>

Official Magazine of the
**WIRELESS WORLD
 RESEARCH FORUM**

Official Magazine of the
**WIRELESS WORLD
 RESEARCH FORUM**


River Publishers

EDITORIALS**From the Desk of the Editor-in-Chief**

Sachin Dixit iii

EXPERTS COLUMN**Will 6G Become the Global Standard for Mobile AI Agents?**

Mérouane Debbah v

PEER REVIEW ARTICLES**Quantifying the Mutual Requirements Driving AI and 6G Co-Evolution**

Brabim Mejjouda, Antonio de Domenico, Lina Bariah, Clarissa Marquezan, Riccardo Trivisonno and Mérouane Debbah 1

Design and Analysis of Millimeter-wave Antenna for New Radio (NR)

5G Bands Supporting a Green Wireless Future
Monstafa M. Nasralla, Moh E. Mounir, Haleem Farman and Nikumani Choudhury 9

SDN-Enabled Energy-Aware Routing and Distribution for Circular Sustainable Industrial Ecosystems: A Dynamic Optimization Approach

Sivaleela Arimatti, Rajesh Gade, Peter Lindgren and Suresh D. Mane 15

Edge-Optimized Cloud Detection and Segmentation Using ResNet

Zayem Ahmed Sheikh, Ramesh Kumar Panneerselvam, Imran Shaik and Bhannu Tej Polisetti 21

Lightweight Anomaly Detection in WBANs with One-Class SVM

Sireca Bose and Chittaranjan Hota 29

A Review on Emotion and Fluency Analyzer using Image Processing and Audio Extraction

Swati Mishra, Arshita Verma, Disha Verma and Mayank Kunal 35

Predictive Analysis of Mental Health Using Machine Learning for Depression Prediction

Swati Mishra and Divyanshi Srinivasana 43

NEWS AND INFORMATION

Call for Papers for Huddle in Brazil 51

Call for Papers for Kingston WWRF 54 Meeting 53

Upcoming Conferences/Events 55

FUTURE CV WORKING GROUP ACTIVITIES

CV SESSIONS/WORKSHOPS WILL BE ORGANIZED AT THE
FOLLOWING EVENT:

- October 27-29, WWRF MEETING 55, University of Strathclyde, Glasgow, UK.

Contact

WIRELESS WORLD
RESEARCH FORUM

Dr. Nigel Jefferies, Chair WWRF, chair@wwrf.ch

Prof. Seshadri Mohan, UA Little Rock, sxmohan@ualr.edu

THANK YOU
