3 Day Proficiency Improvement Programme (PIP) on **Connected & Autonomous Mobility**

SPEAKERS

Mr. Hemant Kamat: He is Electronics and Communications Engineer with a Master's degree in Industrial Electronics from NITK, Surathkal in 1986. Hemant's career spans 32 years in Academic, Research and Entrepreneurship. He is currently the Chief Technology Officer with **Shalaka Connected Devices.**

Mr. Muthu Vasudev: He is working as a Domain Head EAPS (Electrical & Power Solution) at **SAFRAN**. He is a result driven professional with 19 years of experience in the area of Aerospace, Railways & Automotive Design. He has an extensive experience in Product Development, Product life cycle Management, Electrical Wire Interconnect System (EWIS), etc.

Vaisakh Venugopal: He is currently working as a **consultant** for advance technology development which includes Autonomous, Connected & Shared mobility-focused solution development. He has over 11 years of experience in automotive research & development sector working with Major OEMs like TATA Motors Ltd. & Mahindra & Mahindra Ltd.

Mr. Swadeep Bijja: He heads industrial vertical with focus on automobile at **Vodafone Idea** Internet of Things (IoT) business in India. His work centers around performance improvement, growth and innovation in IoT market. An engineer and alumni of SIBM, Pune, he comes with around 12 years of experience in consulting. In his previous role at IBM, he has delivered transformational projects in automotive, manufacturing and consumer goods industries. He actively works with OEM's and eco system partners to deliver M2M/IoT solutions.

Dr. S. A. Patil : He is Dy. General Manager, Academy, **ARAI**, Pune. He has his Ph.D. from University of Texas at Dallas. He has academic and research experience of 15+ years in the varied domain of speech under stress, speaker variability under stress, adult-child interaction for language learning, non-linear modeling of speech and driver distraction modeling.

Mr. Abhishek Deouskar: He is Firmware Engineer with **Devise Electronics Pvt. Ltd.** He has completed his M.S. in Computer Engineering, USA, B.E. in Electronics Engineering, Mumbai University. His expertises are in the field of developing firmware for Embedded Systems, developing customized IoT solutions.

Mr. Mandar Bapat: He is currently working with **Cognizant**. He is an Automotive Innovation Leader with 22+ years of experience. His expertise area includes Embedded Systems (Body Electronics) and Application Software, etc. His core competencies includes ADAS / Autonomous, Strategic / Large Program Ownership & Delivery& Innovation.

Mr. Vijai Gopalakrishnan: He is Engineering Manager at **General Motors Technical Centre-**India, Bangalore. His key roles include Body & Exterior Design, Dimensional Engineering, Autonomous Vehicles, Cognitive Psychology, AI, Deep Learning and Computer Vision. He has a total experience of 15yrs. He is also affiliated to SAE India.

Ms. Farhana Haque: She heads the **Vodafone Idea** Internet of Things (IoT) business in India. Her key focus area in the region is to increase adoption of M2M/IoT as an enabler for creative business model transformation in established and new industries. An alumni of NIT and SPJIMR she comes with around 15 years of experience in consulting. She was previously with IBM global business services and was responsible for retail and manufacturing industries.

Mr. Gaurav Dhingrolia: He is currently working as a **consultant** in the area of validation and development of advance technologies such as advance telematics, Electric and Autonomous Vehicles. He has experience of over 8 years in automotive research & development sector with two major OEMs TATA Motors Ltd. & Mahindra & Mahindra Ltd.

Mr. M. M. Desai: He is General Manager, Automotive Electronics Department, **ARAI**, Pune. Presently he is responsible for Evaluation, Testing of Automotive Electronics (EMI/EMC) and Certification, testing of Electric and Hybrid Electric Vehicles. He is working with ARAI for last 12 years.

Besides, speakers from ARAI & other Industries are expected

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3 Day Proficiency Improvement Programme on Connected & Autonomous Mobility

at The Automotive Research Association of India

(ARAI-FID, Chakan, Pune)

05th to 07th December 2018

REGISTRATION FORM

Name, Designation, Dept., Office No., Mobile No. & Email ID :	
Delegate - 1	
Delegate - 2	
Delegate - 3	
Company Name & Address	
Co-ordinator's Name, Designation, Contact No., Email ID	
100% Advance Payment Details	

Please email/post duly filled-in registration form on or before 03rd Dec 2018
Dr. K. C. Vora, Sr. Dy. Director & Head, ARAI Academy
ARAI-Forging Industry Division, Chakan, B-16/1, MIDC Chakan, Taluka Khed, Dist Pune 410 501 (INDIA)
Contact No: 02135-39 6695 / 6693 / 6691 / 6690 or 02135-630 795 / 793 / 791 / 790
Email: training.pga@araiindia.com; nadeshmukh.pga@araiindia.com;
patil.pga@araiindia.com; diwanji.pga@araiindia.com
Please visit www.araiindia.com & academy.araiindia.com for more information.

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2015

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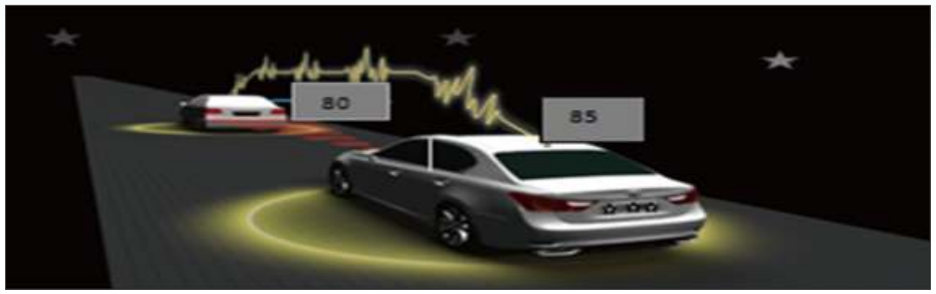
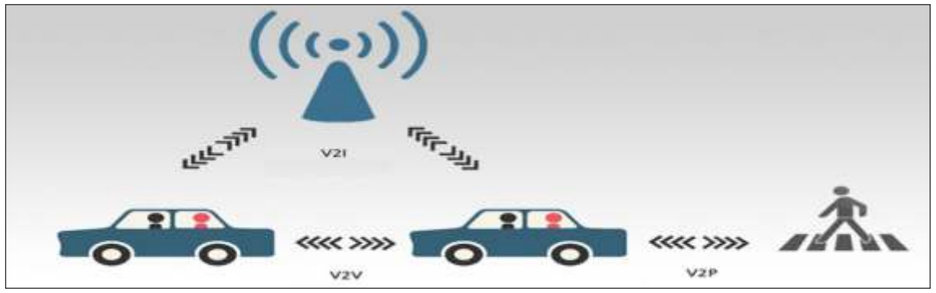
2011

Training Delivered by Industry Experts

3 Day Proficiency Improvement Programme on

Connected & Autonomous Mobility





at

The Automotive Research Association of India

(ARAI-FID, Chakan, Pune)
Plot No.B-16/1, MIDC, Chakan, Taluka: Khed, Dist: Pune 410 501.

05th to 07th December 2018

organized by

ARAI®
Progress through Research

BACKGROUND & OBJECTIVES

As technology is rapidly advancing in Automotive industries and the involvement of inter and intra communication in vehicles has increased a lot, there is a need to understand the networking between and inside vehicles. In many countries, a lot of research work with respect to Autonomous vehicles is in tremendous progress. These autonomous cars are well tested in many countries and now becoming the future of mobility. Many companies have done testing of these vehicles and yet to come up with many up gradation in the technology. As communication is forming the concrete base for the successful driving of these vehicles, a need was felt to develop a vehicle with all sophisticated systems and the only way to achieve this is by inter and intra communication. To achieve a thorough path way for understanding these technologies, ARAI invites you to join this program to give an in-sight of Connected & Autonomous Mobility.

INTENDED LEARNING OUTCOMES

On completion of the module, the delegates will be able to:

- Understand the SAE J 3016 autonomy levels, intelligence, V2V, V2R communication
- Acquaint with different sensors
- Define the scope of electronics for Connected & Autonomous vehicles
- Understand automotive telematics & its standards viz. AIS140
- Understand Wireless architecture & applications
- Illustrate the developments of cooperative vehicles and highways
- Justify the role of Mobile Operators in Connected Vehicles
- Understand Data Analytics, Artificial Intelligence & Validation of Autonomous vehicles in simulation platform
- Demonstrate independent learning ability necessary for conducting professional development.
- Become self -disciplined and self -motivated, demonstrating personal responsibility in the pursuit of studies and professional practice.

PROGRAMME

Day One

08.30 - Registration & Breakfast
09.00 - Autonomy Levels, Vehicle Connectivity, Intelligence and Automation
11.00 - Vehicle-to-Vehicle, Vehicle-to-Roadside communications
12.30 - Lunch Break
13.30 - Sensors for Connected & Autonomous Mobility
14.30 - Growing role of Electronics in Connected & Autonomous Vehicles
16.15 - Conclusion

Day Two

09.00 - HD Maps & Localization, Perception, Prediction, Planning, Top 5 problems in Autonomous driving, Infrastructure, India context
10.00 - AIS 140 for Telematics
11.00 - Telematics communication technologies and vehicular networks: wireless architectures and applications
12.30 - Lunch Break
13.30 - Augmented reality for driving assistance
14.30 - Engineering Simulation for Autonomous vehicles
16.15 - Conclusion

Day Three

09.00 - Advancements in developments of cooperative vehicles and highways
10.00 - Role of Mobile Operators in Connected Vehicles
11.00 - Data Analytics for Connected and Autonomous Vehicles
12.30 - Lunch Break
13.30 - Artificial Intelligence for Connected and Autonomous Vehicles
14.00 - Validation of Autonomous Vehicles in Simulation Platform
14.30 - Written Test
15.30 - Feedback and Certificate distribution
16.15 - Conclusion

Training Venue

The Automotive Research Association of India

ARAI-Forging Industry Division, Chakan

3 Day Proficiency Improvement Programme (PIP) on **Connected & Autonomous Mobility**

WHO SHOULD ATTEND ?

This training is useful for those, who need to have comprehensive understanding of Connected and Autonomous Vehicles and are:

- Working on Communications, Vehicle Integration, ADAS, Connected mobility, Autonomous vehicles, etc.
- Technicians / Engineers / Managers / Start-ups.
- Experts specialized in Autonomous vehicle validation.
- Teaching Professionals & Engineering Students.

REGISTRATION FEES

Category	Registration Fees (Rs.) (per participant)	Total Fees including Tax of 18% (Rs.) (per participant)
Engineers & Professionals	15,000.00	17,700.00
Teaching Faculty	9,000.00	10,620.00
Engineering College Students	6,000.00	7,080.00

Registration fees include:

- Breakfast
- Lunch
- Delegate Kit

MODE OF PAYMENT

At Par / Multicity cheque or demand draft in favour of

The Automotive Research Association of India

payable at Pune.

OR

Online Transaction: ARAI Account No: 04470200000280

IFS/ RTGS / NEFT Code : BARB0KARVER (0=ZERO)

ARAI, over five decades, has provided its design and development expertise to the Indian automotive industry, focusing on the testing and evaluation of components and systems to meet national and international standards. ARAI strives to achieve international recognition in these areas. In keeping with the globalization of economy and business, ARAI continues to enlarge its scope of services to meet the requirements of automotive industries around the world. In addition to utilizing state-of-the-art technology, laboratories and highly-trained personnel, ARAI recognizes the need to develop a new generation of engineers to meet the demands of the automotive industry, not just in India but across the globe.

ARAI ACADEMY is classified into three divisions:

LEARNING CENTRE has embarked upon a programme of building up human resources by commencing educational programme (Graduate, Post graduate & Doctoral) with specialization in Automotive Engineering. It has tied up with VIT University (Vellore), Veltech University (Chennai), College of Engineering (Pune), Christ University (Bangalore), University of Alabama (USA), Tennessee Tech University (USA), Loughborough University (UK) and University of Braunschweig (Germany).

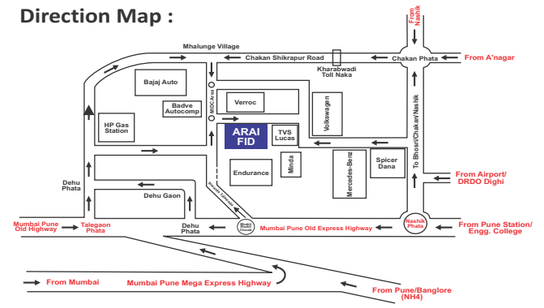
KNOWLEDGE CENTRE: It has collection of around 25,000 books, standards, project reports, seminar/conference proceedings and around 1,50,000 SAE technical papers. It also has 500 eBooks. It subscribes to 35 national and international journals. It regularly publishes a monthly magazine 'Automotive Abstracts'. It also conducts literature / patent search for customer's projects.

TRAINING CENTRE: In line with Graduate, Post Graduate and Doctoral Programs conducted by various universities abroad, ARAI Academy has devised various Proficiency Improvement Programmes (PIPs & ePIPs), to be taught by ARAI, Academia & Industry Experts. PIP gives engineers, faculty and student's knowledge and technical expertise in a wide range of automotive disciplines. It helps in understanding system's view point for automotive design and manufacture, with specific skills in formulating automotive engineering solutions in terms of their function and performance, through optional modules.

Based on the present system in universities, credits are proposed for each module, so that the graduate engineers can attend various modules and sum-up the credits required for Master's or Doctoral Programs. Participants also get chance to visit related laboratories of ARAI and get hands on experience. Certificates are issued on the basis of attendance & written test conducted at the end of the programme. We also conduct Training Programmes through WEBEX and Domain Training Programmes for Automotive Industry.

Please visit **www.araiindia.com** & **academy.araiindia.com** for more information.

Direction Map :



Training Program Venue Address :

ARAI-Forging Industry Division, Chakan

B-16/1, MIDC, Chakan, Taluka Khed, District PUNE - 410 501 (INDIA).

Contact No : (02135) 396695 / 690 / 691

Note : ARAI reserves the right to change the dates, schedule, contents, speakers, venue etc. for the programme without any notice.