# **REGISTRATION FEES**

payment.

Name of Bank

A/c Number

IBAN

Address of Bank

BIC (SWIFT Code)

Pay Online : You can choose online payment gateway method

http://www.indoeurosync.com/summer-school-registration.html

course fees through the inter bank fund transfer mode.

Name of Beneficiary : Indo Euro Synchronization UG

Pay Offline : You can also choose to pay your application fees and

\*The bank receipt counterpart will serve as a proof of payment and you have to send us a scanned copy of the same after your

(haftugsbeschrankt)

: DE52 3905 0000 1072 2358 05

: Munsterplatz, 7-9, 52062, Aachen, Germany

: Sparkasse Aachen

: 1072235805

: AACSDE33XXX

while filling the application form online :

Program Cost	Total Fees in INR Including Tax	
Until 1 <sup>st</sup> May 2017	1,10,000/-	
Until 15 <sup>th</sup> May 2017	1,25,000/-	
Until 1 <sup>st</sup> June 2017	1,50,000/-	

#### **Registration Fees Include**:

Course fees, course materials, delegate kit, teaching room & lab facilities, excursions/visits, bed & breakfast in India as well as Germany, lunch, Entrance Tickets for Technical Museums, internal traveling in Germany

Registration Fees does not Include:

VISA, Insurance, Airfare in India & Germany and Dinner

#### Process for Registration :

- All participants to arrange for Visa, Insurances & Travel to Pune & Germany on their own. ARAI and IES assume no responsibility of organizing Visa & Travel arrangements, except for providing the invitation letter for visa purpose. All decisions of ARAI & IES shall be final and binding
- Last date to register is 1st June 2017.
- Delegates should register by sending email to ARAI on traning.pga@araiindia.com or IES on consult@indoeurosync.com.
- After receiving conformation delegates needs to pay application fees of Rs. 15,000/- to IES.
- Admission will be confirmed within 5 working days. You will receive VISA Invitation letter, Accommodation confirmation letter.
- Apply for your Schengen VISA from the Consulate of the Federal Republic of Germany from your region. To know more about VISA Application process, visit our website www.indoeurosync.com.
- Make your balance payment of the course fee within 15 working days of receiving the VISA Invitation letter.
- Send us the VISA approval (if granted), copy of your health insurance, No Objection Certificate from your local employer/ Institution/University/Collage
- Cultural exchange tour to Paris is optional for which delegates will have to pay additional Rs. 10,000/-

Email: training.pga@araiindia.com; morgaonkar.pga@araiindia.com; patil.pga@araiindia.com

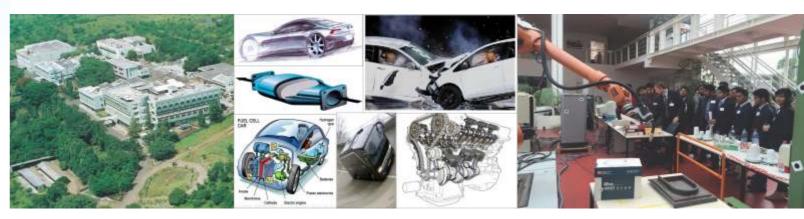
Cancellation Policy : If the student is unable attend the program due to any valid reason, like VISA Rejections, his / her fees shall be refunded after deducting any bank transfer charges and any other booking cancellation charges.

#### **REGISTRATION FORM**

Full Name, Designation, Department, Contact Number, Email ID & Passport Number:		
Participant-1		
Participant-2		
Organization Name & Address		
Co-ordinator's Name, Designation, Contact No. & Email ID		
Please fax/email/post duly filled-in registration form on or before 1st June 2017 to: Dr. K. C. Vora, Sr. Dy. Director & Head, ARAI Academy ARAI Post Box 832, Pune 411004 / S. No. 102, Vetal Hill, Off Paud Road, Kothrud, Pune 411 038. Tel : 020-3023 1248/ 1245 /1111. Fax : 020-3023 1104		



# Two Weeks Summer Course on



# **Basic + Advanced Automotive Engineering**

# from 19<sup>th</sup> June to 30<sup>th</sup> June 2017



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19<sup>th</sup> to 21<sup>st</sup> June 2017

Jointly Organized by



at Technical University, Chemnitz, Germany

22<sup>nd</sup> to 30<sup>th</sup> June 2017





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### BACKGROUND & OBJECTIVES

Due to the shrinking life-cycle of new vehicles and models, the vehicle manufacturers have to keep an eye on the future to sustain in the competitive global markets. The amazing advancements in automotive technology have been driven by market preferences of the ever demanding customer and the opportunity presented by the new technology. At the same time, the new regulations regarding vehicle, performance, safety, emission, clean air and fuel consumption have changed

### WHO SHOULD ATTEND?

- Organisations involved in Automotive Research, Design, Development, Testing, Certification & manufacturing
- Automotive component manufacturers and suppliers
- Engineering / consulting professionals
- Professors / engineering college students
- Engineers interested in pursuing further studies on part time or full time basis

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-theart 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).

TRAINING CENTRE, In line with Post Graduate and Doctoral Programs conducted by various universities abroad, ARAI Academy has devised various Proficiency Improvement Programmes (PIPs), 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.

#### Intended Learning Outcome

- On completion of the module, the delegates should be able to acquire an understanding of basic & advanced automotive systems & regulatory aspects with respect to the actual and future car developments in the global markets
- Understand I. C. Engine Design & Development
- Understand Automotive Safety & Evaluation, NVH
- Understand Emission Control and After Treatment Devices & On Board Diagnosis (OBD)
- Understand Automotive Fuel Technology
- Understand Electric, Hybrid Vehicle & Fuel Cell Technology
- Understand Advance Automotive Test Drive System, Advanced Powertrain Technology & Advance Fuel Cell Technology
- The participants will understand testing & research activities at ARAI, Pune and modern education & demonstration in laboratories at one of the best Universities like Chemnitz, Germany
- Participants will get a flavor of culture & technology in India & Germany, which will enhance their knowledge base as a true professional

We also conduct training programmes through eLearning, WEBEX and Domain Training Programmes for automotive industry at their preferred sites. ARAI has started developing web based eLearning Courses popularly known as 'ePIPs' (eLearning Proficiency Improvement Programmes) on various Automotive Engineering domain. ePIPs are highly engaging and effective eLearning modules, in which the licenced users can learn the subject matter online and gain practical as well as theoretical knowledge at their own pace. using a wide range of digital devices, anytime and anywhere.

KNOWLEDGE CENTRE It has collection of around 23,000 books, standards, project reports, seminar/conference proceedings and around 75,000 SAE technical papers. It also has 237 eBooks. It subscribes to 40 national and international journals. It regularly publishes a monthly magazine 'Automotive Abstracts'. It also conducts literature / patent search for customer's projects.

Please visit www.araiindia.com for more information.

AutoSol is a signature program conducted by Indo Euro Synchronization along with Indo-European partners, which are providing cutting edge internship opportunity for students along with industrial and cultural exposure.

Indo-Euro Synchronization is an initiative created by a group of experienced technical and business professionals to connect India and Europe closer together.

With our diverse and wide set of knowledge about both the Indian and European academic and business environment, our aim is to form a technological transfer bridge between all participants. Through our activities, we strive to create a better technological future by enabling closer collaboration and knowledge exchange between universities, companies, supporting organizations and students from India and Europe.

We believe that three elements are required for a closer common development: Educational programs, research partnerships and cluster collaborations.

Our educational programs are executed in partnership with leading universities, allowing Indian students and professionals to travel to Europe. Participants gain a comprehensive insight into the local industrial situation while at the same time enhancing their professional skills and career prospects through additional education. www.indoeurosync.com

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## AT ARAL INDIA

Day 1: Monday,	19 <sup>th</sup> June 2017
08.30 - 09.00	- Registration
09.00 - 09.30	<ul> <li>Inauguration &amp; Welcome Address</li> </ul>
09.30 - 11.00	- Introduction to Automotive Engineering
	(Dr. S.A. Patil, Dy. General Manager, Academy, ARAI, Pune)
11.00 - 11.15	- Tea Break
11.15 - 13.00	- Engine Design & Development
	(Dr. Sushil S. Ramdasi, General Manager,
	Powertrain Engineering, ARAI, Pune)
13.00 - 14.00	- Lunch
14.00 - 15.30	- Engine Combustion
	(Dr. Brijesh Patel, Dy. Manager, Academy, ARAI, Pune)
15.30 - 17.00	- Alternate Fuel Technology
	(Dr. S. S. Thipse, Dy. Director, Powertrain
	Engineering, ARAI, Pune)
17.00	- Conclusion
Day 2: Tuesday, 2	20 <sup>th</sup> June 2017
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09.00 -	-	11.00	-	Electric & Hybrid Vehicles
				(Dr. S.A. Patil, Dy. General Manager, Academy, ARAI, Pune)
11.00 -	-	11.15	-	Tea Break
11.15 -	-	13.00	-	Fuel Cell Vehicle Technology
				(Bhavesh Javale, Research Engineer, Academy, ARAI, Pune)
13.00 -	-	14.00	-	Lunch
14.00 -	-	15.30	-	Automotive NVH
				(Kiran Wani, Manager, Academy, ARAI, Pune)
15.30 -	-	17.00	-	Automotive Safety & Future Trends
				(Sumukh Deshpande, Manager, Passive Safety
				Laboratory, ARAI, Pune)
17.00			-	Conclusion

#### Day 3: Wednesday, 21<sup>st</sup> June 2017

09.00 - 11.00	-	On Board Diagnostics (OBD)
		(Manish Ingale, Dy. Manager, Academy, ARAI, Pune)
11.00 - 11.15	-	Tea Break
11.15 - 13.00	-	Automotive Testing & Certification
		(Mohd. Rafiq Agrewale, Dy. Manager, Academy, ARAI, Pune)
13.00 - 14.00	-	Lunch
14.00 - 15.00	-	Overview of Emission Control & After Treatment Devices
		(Dr. K. C. Vora, Sr. Dy. Director, Academy, ARAI, Pune)
15.00 - 15.30	-	Test
15.30 - 16.30	-	Summary, Discussions & Feedback
16.30 - 17.00	-	Valedictory Function & Certificate Distribution
17.00	-	Conclusion

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

Two Weeks Summer Course on Basic + Advanced Automotive Engineering

### MME

## AT CHEMNITZ, GERMANY

Thursday, 22 <sup>nd</sup> June, 2017 - Traveling to Germany Information about Germany an Autosol programme by IES.		
Day 1 : Friday, 23 <sup>rd</sup> June 2017 Manufacturing Plants visit to Mercedes Benz & Porsche		
Day 2 : Saturday, 24 <sup>th</sup> June 2017 Technical Museum Tours		
Day 3 : Sunday, 25 <sup>th</sup> Traveling to Chemr		
Day 4 : Monday, 26		
09.30 - 13.00 -	Advanced Automotive Test Drive Systems (Prof. DrIng. Thomas von Unwerth, Head of the Department of Advanced Powertrains, Chemnitz University of Technology, Germany)	
13.00 - 14.00 - 17.00 -	Lunch Advanced Powertrain Systems (Prof. DrIng. Thomas von Unwerth)	
Day 5 : Tuesday, 27	<sup>h</sup> June 2017	
09.30 - 13.00 -	Hydrogen Fuel Cell Technology in	
	Automobiles (Prof. DrIng. Thomas von Unwerth, Head of the Department of Advanced Powertrains, Chemnitz University of Technology, Germany)	
13.00 -	Lunch	
14.00 - 17.00 -	Demo of Hydrogen Fuel Cell (Prof. DrIng. Thomas von Unwerth)	
Day 6 : Wednesday	, 28 <sup>th</sup> June 2017	
09.30 - 13.00 -	<ul> <li>Human Body Centric Application in Automotive Engineering</li> <li>Automotive Seating Systems</li> <li>Dynamic Implication of Automotive Application on Human Body</li> <li>(Prof. DrIng. Stephan Odenwald, Chemnitz University of Technology, Germany)</li> </ul>	
13.00 -	Lunch	
14.00 - 17.00 -	Laboratory Assignment of Human Centric Lab Operation & Hands on Experience on Automotive Interior Design (Prof. DrIng. Stephan Odenwald)	
Day 7 : Thursday, 2		
09.30 - 13.00 -	Automotive Structure Design & Testing (Prof. DrIng. Stephan Odenwald)	
13.00 - 14.00 -17.00	Lunch Demo in Automotive Structural Laboratory (Prof. DrIng. Stephan Odenwald)	
19.00 -07.00	Aathen - Paris by Bus	
Day 8 : Friday, 30 <sup>th</sup> J 06.00 - 09.30 -	une 2017 Refresh	
09.30 - 17.00 -	Cultural Exchange Paris Tour (Optional)	
19.00 - 06.00 -	Paris - Frankfurt	
Day 9 : Saturday, 1 <sup>st</sup>		
Departure from Fra		