

## Registration Form

Name:

IEEE Membership (if any):

Email Address:

Organization:

Mailing Address:

Mobile No:

Registration Details: DD/Bank Transfer/NEFT details

Signature of the Applicant

## Payment Details

Payments should be made to:  
A.K.C.E INCON PLACEMENT BUREAU  
A/C No: 335602011000120  
Union Bank of India  
IFSC code: UBIN0562734  
MICR code: 626026503  
payable at Rajapalayam.

## Patrons

- Patrons: Dr. Sridharan Kalasalingam, Chancellor, Kalasalingam University,  
Dr. Shashi Anand Sridharan  
Vice President, Kalasalingam University.

## Organizing Committee

- General Chair: Prof. B. Subathra  
Head of Department, Instrumentation and Control Engg., Kalasalingam University, b.subathra@klu.ac.in
- Organization Chair: Prof. Ramakalyan Ayyagari, NIT Trichy, rkalyan@nitt.edu
- Administrative Chair: Dr. V. Vasudevan, Registrar, Kalasalingam University vasudevan\_klu@yahoo.co.in.,  
Dr. T. Thyagarajan, Past Chair, IEEE CSS Madras Chapter, Dr. Ranganath Muthu, Vice-Chair, IEEE CSS Madras Chapter
- Programme chair: Dr. Seshadhri Srinivasan, seshadhri@ieee.org
- Publicity Chair: Prof. R. Hariprakash, Chair, IEEE CSS Madras Chapter, Chennai.
- Publication chair: Prof. P. Gurusamy Pandian, Asst. Registrar, Kalasalingam University, prof-pggp@gmail.com.
- Coordinators: Mr. D. Ganesha Perumal, Asst. Prof., Department of ICE, dganesh84@gmail.com, Mr. Ponnayiram Sundaravel, Dept. of ICE, Dr. R. Sundarajan, Mr. G. Prabukanna, Dr. S. Dhanasekaran, Dr. B. S. Murugan, Department of IT, and Senthilkumar, Dept. of ICE, r.sundarajan@klu.ac.in,  
Prof. Renu Kumawat, Manipal University of Jaipur, Rajasthan, renu.kumawat@jaipur.manipal.edu  
Shalini Jain, MIT, Aurangabad. Mr. R.C. Hemesh, Dept. of EEE, Kalasalingam University, Ms. V. Nivetha, Research Scholar, Dept. of ICE, Mr. R. Ramachandran, Research Scholar, Dept. of ICE.

# International Workshop on Cyber-Physical Systems

Kalasalingam University

September 22-23, 2017



*General Chair*

**Dr. B. Subathra**

Dept. of Instrumentation and Control Engineering,  
Kalasalingam University

*Organization Chair*

**Dr. Ramakalyan Ayyagari**

Dept. of Instrumentation and Control Engineering,  
NIT-Trichy and President ACDOS, India

*Administrative Chair*

**Dr. V. Vasudevan**

Registrar, Kalasalingam University, India

*Programme Chair*

**Dr. Seshadhri Srinivasan**

*Organized by*

Department of Instrumentation and Control Engineering  
Kalasalingam University  
Anand Nagar, Krishnankoil, Srivilliputtur  
Tamilnadu, India-626126

**Accredited by NAAC with "A" Grade**

Co-Sponsored by the  
IEEE CSS Madras Section  
In Association with  
ACDOS, India

## Overview

Cyber-Physical Systems (CPS) combine cyber capabilities (computation and/or communication) with physical capabilities (sensing, actuation, and actual environment). The inherent interconnection, heterogeneity, and combination of different behaviours makes their analysis and design overwhelming. Compounding this complexity is the translation of safety and reliability specifications imposed by applications into stringent robustness standards. Tools suitable for analysis and design of CPS should allow for modelling complex/hybrid behaviours considering the presence of cyber components, as well as the presence of disturbances and other external phenomenon such as time-delays.

This workshop is in line with our earlier winter school organized by IEEE CSS through the outreach fund and will bring together experts, researchers, academicians, industries, and others working or initiating their research in CPS.

The following will be the outline of the lectures,

1. Overview of the workshop.
2. The design of feedback systems for Intelligent CPS: Aerospace and automotive- Prof. Siddharth Mukopadyay.
3. Synthesis of control programs for railway networks using game-based methods and Towards a Realizable Interpretation of a Logic for Traffic Analysis- Prof. Michael Reichhardt Hansen.
4. Multi-Fragment Markov Model Guided Online Test Generation for MPSoC- Prof. Juri Vain.
5. Dr. H.R. Mohan, Applications of CPS in Smart Cities and Smart Grids.
6. Industry presentation on IoT Protocols and Communication models.

## Host Institution

Kalasalingam University is located at Anandnagar, Krishnankoil, near Srivilliputtur, Virudhunagar District, Tamilnadu. It fosters to the education of the backward area and strives for the betterment of the downtrodden, physically challenged, and underprivileged youth of the region. The

University runs a unique program for the speech and hearing impaired students in entire Asia on Engineering, and have successfully trained and placed them in leading industries in the past decade of its existence. It conducts various engineering, arts and science and management programs for the rural youth. It has been accredited with 'A' grade by NAAC and has many departments accredited by NBA. The research in the University has been acknowledged by funding agency. The TIFAC Core on Networking, nCARD math center for research in discrete mathematics funded by DST, International Research Center, and more than 16 research centers in the University stand testimony to its commitment towards fostering education, research, and training.

### IEEE CSS Madras Section

The IEEE CSS under the IEEE Madras section was inaugurated on 12th Oct, 2012. Since its inception the IEEE CSS organizes various technical seminars/lectures/workshop in the field of control systems. More information on the IEEE CSS Madras section can be had from (<http://sites.ieee.org/madras/control-systems-society-css/>).

### Presenters

Prof. Michael Reichhardt Hansen, Associate Professor, Embedded Systems Engineering, Denmark Technical University, Denmark. He is the author of books on Functional Programming, Duration Calculus and SML. A succinct description of Prof. Hansen is provided here. More information about Prof. Hansen can be had by visiting <http://www.imm.dtu.dk/mire/>.



Prof. Jüri Vain is with the Department of Computer Science at the Tallinn University of Technology, Estonia. He specializes in model checking and building secure systems. He will speak on building reliable CPS, timed-automata, and model checking.

Prof. Sidharth Mukopadyay, Department of Electrical Engineering and Steel Technology Center, Indian Institute of Technology, Kharagpur, India. Consult the following link to know about Prof. Mukopadyay, <http://www.facweb.iitkgp.ernet.in/s>. Also subscribe to his NPTEL courses for more on his teaching skills.



Dr. H.R. Mohan is the Vice Chair, IEEE Madras, Imm. Past Chair & Chair-Spl. Events, IEEE CS Madras Section, Past President, Computer Society of India, Vice Chair, Prof. Activities, IEEE IC, Chair, Student Activities, IEEE Madras Section and Former AVP(Systems), The Hindu. He has been the guiding force behind the technical activities associated with the region.



In addition, speakers from Industries, research institutions and academia from within India will deliver lectures on applications of CPS. There will also be a hands-on session on IoT during the last day of the workshop.

### Registration Details

- Industries and Research Institutions 1000 INR.
- Academic Institution Faculty 800 INR .
- Research Scholars 700 INR.
- Students and others 600 INR.

The registration includes access to lecture material, kit, and refreshments plus lunch. Accommodation will be provided on prior request at hostels for the participants on a subsidized payment basis. No TA/DA will be paid by the organizers. The admission is on first come first serve basis.