

## TOPICS TO BE COVERED

- Review of recent research in smart health care system
- Smart health care devices – A case study
- Embedding Machine Learning Techniques in Health Care Devices
- Deep learning in IoT health care devices
- Objective Pain measurement : Scopes and Challenges
- Smart instrumentation in Laparoscopic surgery
- Retinal Imaging and Diagnostic tools
- Connecting physiological signal to real time world

## REGISTRATION PROCEDURE

- ✓ For registration, fill the details in the link: <https://goo.gl/forms/Y3FBACuBpdNqV28F2>
- ✓ Payment shall be done through Demand Draft (DD) in favour of “The Principal, National Engineering College, Kovilpatti” payable at Kovilpatti.
- ✓ DD shall be sent to the following postal address:  
Prof. Jackson Daniel  
Asso. Professor & Head  
Dept. of Electronics and Instrumentation Engg.,  
National Engineering College,  
K.R.Nagar, Kovilpatti – 628 503, Thoothukudi

## Organizing Committee

### Chief Patron

Thiru.K.Ramasamy  
Chairman

### Patron

Thiru.K.R.Arunachalam  
Managing Committee member

### Co-Patron

Dr.Kn.K.S.K.Chockalingam  
Director

### Chairperson

Dr.S.Shanmugavel  
Principal

### Convenor

Prof.Jackson Daniel,  
Asso.Prof.& Head

### Coordinator

Ms.J.Babitha Thangamalar, AP(SG)

### Co-coordinator

Ms.A.Geetha, AP(SG)  
Ms.S.Muthu Meera, AP

### Executive Members

Faculty Members, Dept. of EIE



CSIR Sponsored  
Three Days  
National Seminar on



“Research Issues and Challenges in  
smart Health care devices-(RICH’19)”

31<sup>st</sup> January to 02<sup>nd</sup> February 2019



### Organized by

Department of  
Electronics and Instrumentation Engineering  
NATIONAL ENGINEERING COLLEGE  
(An Autonomous Institution)  
K.R.Nagar, Kovilpatti - 628503  
Thoothukudi District, Tamilnadu  
Phone: 04632 – 222502 (Extn.:1400)  
Website: [www.nec.edu.in](http://www.nec.edu.in)

## ABOUT THE INSTITUTION

National Engineering College was established in the year 1984. It offers 7 UG, 6 PG and several research programmes leading to Ph.D. degrees in all departments. NEC has several centers of excellence and laboratories. The college has signed MoU with research organizations and industries in order to promote closer interaction with other institutions in the areas of technology development, students training, curriculum updation and development of state-of-the-art centers. The College has well-equipped laboratories for all branches of engineering and also has close interactions with the leading Industries and IT firms for students training and project works. Due to the excellent academic climate in the campus, UG and PG students of our college enjoy good campus placement prospects.

## ABOUT THE DEPARTMENT

- Accredited by NBA Tier - I, New Delhi and Institute of Engineers (India), Kolkata.
- Supported by 16 qualified faculty members, among them 6 holds doctoral degree and 5 are pursuing Ph.D.
- Two funded research projects worth Rs.36 Lakhs from BRNS-IGCAR & ICMR were completed.
- MSME, NewGen IEDC has sanctioned Rs.10 Lakhs for two students projects.
- Memorandum of Understanding (MoU) has been signed with M/s.IELEC Systems, Tirunelveli for training.
- Measurements and Instrumentation Laboratory was upgraded through AICTE-MODROBS scheme for Rs.6 Lakhs.
- Our department alumni have proven records in the following companies IGCAR, KKNPP, Emerson, Yokogawa, Sterlite, Saipem India, Wipro etc.

## SCOPE OF THE PROGRAMME

This seminar with the focal theme “Research Issues and Challenges in smart Health care devices – RICH’19” is proposed to clearly articulate the challenges and issues in devising smart instruments for health care applications. Now, health care industry uses many instruments which are to be looked after by instrumentation engineers. The research activities in biomedical domain are focused on user friendly expert systems and also early diagnosis of ailment of humans.

The field of Biomedical engineering is continually evolving and leads to the development of novel techniques for analyzing and modeling biomedical signals. The outcome of this seminar will enable the researchers to combine the problem solving capability of Engineers and medical expertise of the physician’s to design a device for early diagnosis of diseases. Since majority of the seminar topics are the subset of the ongoing state-of-the-art of health care systems, it is hoped that this national seminar would certainly provide an ample opportunity to share the recent developments, current practices and future trends in the fields of design of smart health care devices.

## OBJECTIVES OF THE SEMINAR

- To illustrate the broad variety and scope of research on health care devices
- To identify key issues and challenges on smart devices
- To explore how these challenges or gaps might be addressed, by drawing on methodological approaches (or measures) used in other sectors such as instrumentation, IoT and Embedded Programming or by looking at innovative community-based approaches.

## RESOURCE PERSONS

Eminent Keynote speakers from R&D sectors, Academic Institutions, Industries and hospitals will be invited to deliver special lectures.

## WHO SHOULD ATTEND

Faculty members from AICTE approved Engineering Colleges / Universities, UG/PG Students, Research Scholars.

## IMPORTANT DATES

Last date for Registration : 23.01.2019  
Intimation for Selection : 28.01.2019  
Confirmation by Participant : 29.01.2019

## REGISTRATION

- ✓ Research Scholars, UG/PG Students : Rs.400/-
- ✓ Faculty members : Rs.400/-
- ✓ Industry Delegates : Rs.500/-

## BOARDING AND LODGING

Accommodation will be provided for the participants on the payment basis.

## ADDRESS FOR COMMUNICATION

Prof. JACKSON DANIEL  
Asso.Professor & Head  
Dept. of Electronics and Instrumentation Engg.,  
National Engineering College,  
K.R.Nagar, Kovilpatti – 628 503  
Thoothukudi District,  
Tamilnadu.  
Phone : 9486903518  
Website: www.nec.edu.in  
E-mail: necricheie19@gmail.com