



## FOURTH INTERNATIONAL CONFERENCE ON MICROELECTRONICS, SIGNALS & SYSTEMS

TKM COLLEGE OF ENGINEERING,  
KOLLAM, KERALA, INDIA

### INVITATION

It gives us immense pleasure to share with you that the Department of Electronics and Communication Engineering (ECE) at TKM College of Engineering (TKMCE), Kollam, India, is organizing the Fourth International Conference on Microelectronics, Signals & Systems (ICMSS) from 18-19 November 2021. ICMSS is the flagship event of the Department of ECE, TKMCE, and is the continuation of its highly successful former versions that started in 2014.

ICMSS'21 is sponsored by TEQIP II and technically co-sponsored by IEEE Kerala Section. ICMSS'21 features both invited and contributed papers from Science and Engineering Professionals, Industries, R&D Organizations, Academic Institutions, Government Departments, and Research Scholars worldwide. It also provides a premier interdisciplinary arena for researchers, practitioners, and educators, to present and discuss the most recent innovations, trends, concerns, and challenges encountered as well as solutions adopted in the fields of Electronics and Communication Engineering.

For the conference paper submission call, we received an overwhelming response from researchers, and personnels from academia and industry. We received 244 manuscripts which were peer reviewed by more than 250 reviewers / subject experts and out of which 65 papers were selected for presentation in the conference and publication in IEEE Xplore digital library. The acceptance rate of papers in ICMSS'21 is 26.64%.

With warming cordiality, we invite you to the inaugural session of the International Conference on Microelectronics, Signals & Systems (ICMSS'21) at 09.30 am on 18<sup>th</sup> November 2021 which will be held online and the valedictory session at 03.15 pm on 19<sup>th</sup> November 2021. Your presence is a notable and a distinguished honour to our department and institution. Please grace the sessions with your presence.

Organizing Committee  
ICMSS'21

ICMSS'21 will be conducted in virtual mode

### KEYNOTE SPEAKERS



**Dr. Sreejith Vidhyadharan Nair** is working as Research Assistant Professor at the Aviation Group in the University of North Dakota, USA. He has over 15 years of research and academic experience, including working with government agencies and industries on funded projects. In addition, he mentored many undergraduate and postgraduate students in Cyber-Physical Systems (CPS) and Computer Networks.

Dr. Sreejith's research focus includes Unmanned Aerial Systems (UAS), Internet of Things, and Wireless Networks. He joined the University of North Dakota as a Post-Doctoral Researcher at the Research Institute for Autonomous Systems (RIAS). His work involves developing communication protocol and improving sensing for air, and ground-based sensors, autonomous navigation, UAS assisted target detection and tracking using machine learning, designing and developing intelligent systems using edge analytics, GPS denied navigation for ground vehicles, etc.



**Mr. Haris Osman** is the Vice President and Head of Departments at Interuniversity Microelectronics Centre (IMEC), Leuven, Belgium. He has over 25 years of experience in various aspects of the semiconductor industry, including specialty technology development, platform building, innovative prototyping of novel chips, system build, testing and qualification, volume and yield ramp up and technology transfer to large volume manufacturing foundries. He is skilled in building strategic road maps and business plans, fostering innovation and leading teams to execute complex R&D projects. Mr. Haris has a proven track record in building efficient and dynamic R&D teams across Asia and Europe. His current responsibilities include developing technologies and prototypes for CMOS based photon and electron imaging, Hyperspectral imaging, Advanced pixel device and technology development for visible and IR imaging, MEMS and MUT based sensor technologies, Gallium Nitride & Arsenide based technologies for high power and RF applications, and Photonic components for beamforming applications.



**Dr. Ranga Rao Venkatesha Prasad**, IEEE Distinguished Lecturer and Fellow IETE, is an Associate Professor at the Embedded Software group, Faculty of Engineering, Mathematics and Computer Science, Delft University of Technology (TU Delft), Netherlands. His research interests are in the area of Tactile Internet, Internet of Things (IoT), Cyber-Physical Systems (CPS), Energy Harvesting and 60 GHz millimeter-wave networks. He has participated in several European and Dutch national projects in IoTs, 60 GHz communications, Smart-energy systems, Personal networks and Cognitive Radios. Dr. Ranga Rao has (co)authored more than 200 publications in peer-reviewed international transactions/journals and conferences. He has served on the editorial board of many international journals and magazines including IEEE Transactions on Green Communication Networks, IEEE JSAC, IEEE Communication Magazine, IEEE Surveys and Tutorials, and Elsevier-Communication Networks. He is a regular reviewer for many prestigious journals and conferences and serves as the TPC member for various conferences. He is a senior member of IEEE and ACM.



ICMSS'21  
INTERNATIONAL CONFERENCE ON MICROELECTRONICS, SIGNALS & SYSTEMS 2021

IEEE Kerala Section



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TKM COLLEGE OF ENGINEERING, KOLLAM, KERALA, INDIA

18-19 NOVEMBER 2021

Organized by

Department of Electronics and Communication Engineering  
TKM College of Engineering, Kollam, Kerala, India - 691 005



### CONVENER

**Dr. Dhoulath Beegum J.**

Professor, Department of ECE, TKMCE

### ORGANIZING SECRETARIES

**Prof. Nishanth N.**

Associate Professor, Department of ECE, TKMCE

**Dr. Anzar S. M.**

Assistant Professor, Department of ECE, TKMCE

<https://icmss2021.in/>

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# FOURTH INTERNATIONAL CONFERENCE ON MICROELECTRONICS, SIGNALS & SYSTEMS

TKM COLLEGE OF ENGINEERING, KOLLAM, KERALA, INDIA

18-19 NOVEMBER 2021

## INAUGURAL SESSION

18-11-2021 (Thursday) @ 09.30 am

Silent Prayer

Welcome Address : **Prof. Nishanth N.**  
(Organizing Secretary ICMSS'21,  
Assoc. Prof., Dept. of ECE, TKMCE, Kollam)

Rationale of Conference : **Dr. B. S. Manoj**  
(Technical Program Committee Chair, ICMSS'21,  
Prof., Dept. of Avionics, IIST, Thiruvananthapuram)

Presidential Address : **Janab T. K. Shahal Hassan Musaliar**  
(Chief Patron, ICMSS'21,  
President, TKM Trust)

Inaugural Address : **Sri. K. N. Balagopal**  
(Honourable Finance Minister, Govt. of Kerala)

Release of Book of Abstracts : **Janab T. K. Jalaluddin Musaliar**  
(Patron, ICMSS'21,  
Treasurer, TKM Trust)

Felicitations : **Dr. T. A. Shahul Hameed**  
(General Chair, ICMSS'21,  
Principal, TKMCE, Kollam)

: **Prof. Abid Hussain M.**  
(Chair, ICMSS'21,  
Head, Dept. of ECE, TKMCE, Kollam)

: **Dr. Dhoulath Beegum J.**  
(Convener, ICMSS'21,  
Prof., Dept. of ECE, TKMCE, Kollam)

: **Er. Sarada Jayakrishnan**  
(Chairperson, IEEE, Kerala Section)

: **Dr. Lillykutty Jacob**  
(Chair, Conference Activities Board,  
IEEE, Kerala Section)

: **Dr. Sajeeb R.**  
(TEQIP Coordinator, TKMCE, Kollam)

Vote of Thanks : **Dr. Anzar S. M.**  
(Organizing Secretary, ICMSS'21,  
Asst. Prof., Dept. of ECE, TKMCE, Kollam)

## DAY - 1

Thursday, November 18, 2021

09.00 am - 09.30 am : Registration

09.30 am - 10.55 am : Inaugural Session

10.55 am - 11.00 am : Break

11.00 am - 12.00 pm : Keynote Speech

**Dr. Sreejith Vidhyadharan Nair**  
Research Assistant Professor,  
Department of Aviation, John D. Odegard  
School of Aerospace Sciences  
University of North Dakota, USA.

Topic : **A Hierarchical Decision Making Architecture with Unmanned Aerial Vehicles for Remote Sensing Applications**

12.00 pm - 01.30 pm : Lunch Break

01.30 pm - 02.15 pm : Keynote Speech

**Mr. Haris Osman**  
Vice President & Head of Departments at  
Interuniversity Microelectronics Centre  
(IMEC), Leuven, Belgium.

Topic : **Semiconductors: Shaping Our Day to Day Life**

02.15 pm - 02.30 pm : Break

02.30 pm - 05.30 pm : Paper Presentation

## DAY - 2

Friday, November 19, 2021

09.30 am - 10.30 am : Keynote Speech

**Dr. Ranga Rao Venkatesha Prasad**  
Associate Professor, Embedded Software group,  
Faculty of Engineering, Mathematics and Computer  
Science, Delft University of Technology, Netherlands.  
IEEE Distinguished Lecturer and Fellow IETE.

Topic : **Murphy Loves Constructive Interference**

10.35 am - 12.15 pm : Paper Presentation

12.15 pm - 01.30 pm : Lunch Break

01.30 pm - 03.00 pm : Paper Presentation

03.00 pm - 03.15 pm : Break

03.15 pm - 04.00 pm : Valedictory Session

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## VALEDICTORY SESSION

19-11-2021 (Friday) @ 03.15 pm

Silent Prayer

Welcome Address : **Prof. Nishanth N.**  
(Organizing Secretary, ICMSS'21,  
Assoc. Prof., Dept. of ECE, TKMCE, Kollam)

Presidential Address : **Dr. T. A. Shahul Hameed**  
(General Chair, ICMSS'21,  
Principal, TKMCE, Kollam)

About the Conference : **Prof. Abid Hussain M.**  
(Chair, ICMSS'21,  
Head, Dept. of ECE, TKMCE, Kollam)

Felicitations : **Dr. Gopakumar K.**  
(Publication Chair, ICMSS'21 & IQAC  
Coordinator, APJ Abdul Kalam Kerala  
Technological University, Thiruvananthapuram)

: **Prof. Muhammed Kasim**  
(Vice Chair, IEEE Kerala Section,  
Professor, (Retd.) TKMCE, Kollam)

: **Dr. S. M. Sameer**  
(Member, Technical Program Committee,  
ICMSS'21, Prof., Dept. of ECE, NIT, Calicut)

: **Dr. Dhoulath Beegum J.**  
(Convener, ICMSS'21,  
Prof., Dept. of ECE, TKMCE, Kollam)

Vote of Thanks : **Dr. Anzar S. M.**  
(Organizing Secretary, ICMSS'21,  
Asst. Prof., Dept. of ECE, TKMCE, Kollam)

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