



**Electronics &
Communication
Engineering**



A FIVE-DAY ONLINE INTERNATIONAL WORKSHOP ON
RESEARCH OPPORTUNITIES IN
**FLEXIBLE HYBRID ELECTRONICS -
MANUFACTURING PROCESSES
& APPLICATIONS**

(Printable-Bendable-Stretchable-Wearable-Textile - Edible Electronics)

4th - 8th October, 2021

Session 1: 18.00-19.30 Hrs

Session 2: 19.30-21.00 Hrs

For Online Registration:
<https://forms.gle/zmQxsu1j7adCjEt19>

Chairpersons

Dr. M. Suman

Professor and Head, ECE, KLVZA

Dr. M. Goutham

Professor and Head, ECE, KLH

Technical Chair

Dr. K. Srinivasa Rao

Professor, ECE

Head - MERG Research Group

Convenor

Dr. P. S. Srinivasa Babu

Professor, ECE

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Co-ordinators

Dr. G. R. K. Prasad

Assoc. Professor, ECE & Assoc. Dean - P & D

Dr. Aravindhana Alagarsamy

Associate Professor

Mr. Syed Shameem

Associate Professor

Dr. M. Vasuja Devi

Asst. Professor & Assoc. Dean-Student Affairs

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Introduction (about the Workshop) :

The global flexible electronics industry is in its infancy. Flexible Hybrid Electronics (FHE) refers to electronic devices that can be bent, folded, stretched, or conformed regardless of their material composition without losing its functionality. These FHE devices built on substrates like plastic or metallic foil—can be folded, wrapped, rolled, and twisted with negligible effect on its electronic function. These devices can be produced through additive manufacturing processes such as simple inkjet printing technology, utilizing roll-to-roll methods. The dramatic reduction in the production cost of these electronic devices is another benefit. Conventional electronics such as integrated circuits or solar cells are typically built on thick inflexible substrates and also the process is very costlier.

Flexible electronics are having variety of applications for equipment that is rugged, lightweight, waterproof, and versatile, including displays, batteries, communications, and physiological monitoring systems such as sensors. The energy savings and biodegradability likely to be associated with most flexible electronics technologies will make major contributions to sustainability in very near future.

About the University :

The Koneru Lakshmaiah Charities was established as a trust in the year 1980 with its official address at museum road, Vijayawada and started KL College of Engineering in the academic year 1980-81. The trust was converted into a society by the name Koneru Lakshmaiah Education Foundation in the year 1996. The KL College of Engineering has attained autonomous status in the year 2006 and in February 2009, the Koneru Lakshmaiah Education Foundation Society was recognized as Deemed to be University. In short Koneru Lakshmaiah Education Foundation is named as KL University.

KL University is situated in a spacious 50-acre campus on the banks of Buckingham Canal of river Krishna, eight kilometers from Vijayawada city. Built within a rural setting of lush green fields, the institute is a virtual paradise of pristine nature and idyllic beauty. The campus has been aptly named "Green Fields" and the splendid avenue of trees and gardens bear testimony to the importance of ecology and environment. The campus ambience is most befitting for scholastic pursuits.

KL University (KLU) is one of the premier institutes in the country offering graduate and post-graduate programs in engineering. Our university is backed by excellent R&D. All UG programs of the institution are accredited by National Board of Accreditation (NBA) of AICTE - 6 of them for 5 years-the only private engineering institution in Andhra Pradesh to get 6 branches accredited for 5 years.

About the Department :


Department of ECE was established in 1983. The department has strong back-up of 234 faculty members, specialized in core areas of ECE. Among 87 faculty members are PhD holders and 121 faculty members are pursuing PhD. Department houses several rich industry experience faculties to cater the industry needs into academics. The Department has a total of 7 State of the Art laboratories, 2 Centers of Excellence and 8 Research Centers which are well equipped to the highest level of sophistication and cater to the needs of UG, PG and PhD students. These labs have specific emphasis on Research and Development activities. The Students have full and free access to software/tools like LabView, Xilinx, Mentor Graphics, Ansys HFSS, CST, Electric CCS, Octave, Logisim, Multisim, Code composer studio etc. There is an emphasis on PRACTICAL ORIENTATION of the students towards engineering field which has led to the concept of OPEN LABs and PROJECT BASED LABS in the Department. The students have OPEN access to all the laboratories from 7.00a.m to 7.00p.m which they can utilize to explore beyond the curriculum and experiment on innovative thoughts / ideas. The students are associated with laboratory with a view of transferring the knowledge gained in the laboratory into a full-fledged project at the end.

The Department has 12 Crores worth of Sponsored projects from DST, DLRL, ISRO, DEAL etc. 2000+ International Journal papers, 600+ International Conference papers and 150+ National Conference papers by the faculty. Certificate courses in advanced areas are conducted every semester. Faculties from Foreign universities are involved in regular teaching activity. Department's academic calendar is highlighted by regular seminars, group discussions, student paper contests, Industry Alliance and Student Personality Development Programs for all round development of students in National & International events. Student associations namely 'Pulse' to conduct technical events and 'Hope' to conduct social service activities. Placement in leading core communication companies like Amphenol Antennas, BSNL, MTNL, Reliance Communications, Tata Telecom, Hutch, Bharti Telecom, Nokia, CISCO, IBM, Intel, Agilent, Alcatel, AT & T Ericsson, Honeywell, Bosch, National Instruments, Texas Instruments, HCL and others.

Topics to be covered :

Flexible and Stretchable Electronics, Inkjet Printing technologies for Electronics manufacturing, Textile Electronics, Organic Electronics, Edible Electronics, Flexible Batteries for MEMS/NEMS & Smart wearable devices.

Benefits :

1. Possibility to form a new research group.
 2. Collaborative research with speakers
 3. Abroad internships/projects for students
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Distinguished Speakers :



Dr. Niko Munzenrieder

Head of the Flexible Electronics Laboratory
Honorary Senior Lecturer in Sensor Technology
 Sensor Technology Research Centre
 School of Engineering and Informatics
 University of Sussex, UK &
 Associate Professor,
 Free University of Bozen-Bolzano, Italy

Publications: More than 120 publications in Nature, Advanced Materials, ACS, AIP, IEEE etc.,

Reviewer for: Nature Materials (IF:43.84), Nature Electronics (IF:33.686), Nature Communications (IF:14.919), Nature NPG Flexible Electronics (IF:13.02), Advanced Materials (IF:30.85), ACS Applied Materials & Interfaces (9.22), Advanced Electronic Materials (IF:7.2), Small (IF:13.28), AIP Applied Physics Letters (IF:3.7), Optics Express (IF:3.669), Elsevier Thin Solid Films (IF:2.183), Physica Status Solidi (IF:2.821), IEEE Trans. Electron Devices (IF:2.913), IEEE Electron Device Letters (IF:4.5) and So on

Reviewer for Funding Bodies: European Commission, Dutch Research Council



Dr. Mario Caironi

Senior Researcher Tenured - Principal Investigator
 Printed and Molecular Electronics
 Center for Nano Science and Technology @ PoliMi
 Italian Institute of Technology, Milan, Italy

150+ Research Articles & Patents Published in:

Nature Communications (IF:14.919), Advanced Materials (30.85), Advanced Functional Materials (IF:18.81), Advanced Science (IF:15.8), Nano Scale (IF:7.79), Advanced Electronic Materials (IF:7.2), Advanced Materials Technologies (IF:7.8), Elsevier Nano Energy (IF:17.88), RSC Journal of Materials Chemistry A (IF:11.3), ACS Nano (IF:15.88), ACS Applied Polymer Materials (IF:4.0), Macromolecules (IF:5.914) so on.

Editor: Nature, Advanced Electronic Materials, IEEE Transactions on Electron Devices; IOP Flexible & Printed Electronics, IOP Semiconductor Science and Technology, Journal of Nanoscience & Technology so on.

Author: Organic Flexible Electronics, Large Area & Flexible Electronics



Dr. Eugenio Cantatore

Head, Emerging Technologies,
 Integrated Circuits Group,
 Eindhoven University of Technology (TU/e),
 The Netherlands.

300+ Research Articles & Patents Published in:

Nature (IF:42.78), Nature communications (14.92), Nature materials (43.84), Advanced Materials (IF:30.85), Blood (IF:16.67), Nano letters (IF:11.19), Applied Physics Letters, IEEE Journal of Solid-State Circuits (IF:5.173), IEEE Transactions on Circuits and Systems I (IF:3.318), IEEE Transactions on Electron Devices (IF:2.913), IEEE transactions on biomedical circuits and systems, IEEE Transactions on Nuclear Science, Microelectronics Journal and so on.



Dr. Abhinav Gaikwad

Manager (R&D), Moses Lake Industries, Portland, USA
 &
 Researcher, Electrical Engineering & Computer Science,
 University of California, Berkeley, USA

100+ Research Articles & Patents Published in:

Nature Scientific Reports (IF:4.37), Advanced Energy Materials (29.37), ACS Applied Materials and Interfaces (IF:9.22), Advanced Functional Materials (IF:18.81), Advanced Electronic Materials (IF:7.2), Elsevier Organic Electronics (IF:3.3), Energy Technology (IF:3.33), Journal of the Electrochemical Society (IF:3.71) and so on.



Dr. Luisa Petti

Associate Professor,
 Sensing Technologies Lab,
 Free University of Bozen-Bolzano, Italy

100+ Research Articles & Patents Published in:

Nature Communications (IF:14.919), Advanced Materials (30.85), Advanced Functional Materials (IF:18.81), ACS Nano (IF:15.88), Advanced Electronic Materials (IF:7.2), Biosensors (IF:10.26), AIP Applied Physics Letters (IF:3.7), Optics Express (IF:3.669), IEEE electron device letters (4.50), IEEE transactions on electron devices (IF:2.91)



Distinguished Speakers :



Dr. Dipti Gupta

Professor,
Plastic Electronics & Energy Laboratory,
Indian Institute of Technology Bombay, India

100+ Research Articles & Patents Published in:

Advanced Electronic Materials, Journal of Material Chemistry A, ACS Applied Electronic Materials, RSC Advances, Advanced Materials Interfaces, Nanotechnology, Appl. Phys. Lett., ACS Applied Materials and Interfaces, IEEE Transactions on Nanotechnology, IEEE Sensor Letters and so on.



Dr. Bhaskar Dudem

Researcher
Advanced Technology Institute (ATI)
University of Surrey, UK.

60+ Research Articles & Patents Published in:

Energy, ACS Energy Letters, Nano Energy, Advanced Functional Materials, ACS Sustainable Chemistry & Engineering, Journal of Materials Chemistry A, Applied Energy, RSC Advances, Optical Materials Express, Applied Physics B: Lasers & Optics and so on.



Dr. Nagaraju Goli

Research Associate
Department of Materials
Faculty of Engineering,
Imperial College London, UK

100+ Research Articles & Patents Published in:

Advanced Energy Materials (IF:29.37), Advanced Functional Materials (IF:18.81), Nano Energy (IF:17.881), Energy Storage Materials (IF:17.789), ACS nano (IF:15.88), Small (IF:13.28), Chemical Engineering Journal (IF:13.274), Nano-Micro Letters (IF:12.264), ACS applied materials & interfaces (IF:9.229), Journal of Power Sources (IF:8.247), Nano Research (IF:8.183), Journal of Power Sources (IF:8.247), ACS Sustainable Chemistry & Engineering (IF:8.198), Journal of colloid and interface science (IF:8.128), Advanced Materials Technologies (IF:7.848), Nanoscale (IF:7.79), Applied Surface Science (IF:6.707), Electrochimica Acta (IF:6.216), Chemical Communications (IF:5.996), Scientific reports (IF:4.379), Journal of The Electrochemical Society (IF:4.316), Journal of Alloys and Compounds (IF:4.175), RSC Advances (IF:3.36), Journal of Solid State Electrochemistry (IF:2.646) and so on.



Dr. Vivekananthan Venkateswaran

Researcher
University of Surrey, UK.

100+ Research Articles & Patents in:

Nature communications (IF:14.92), ACS Sustainable Chemistry & Engineering (IF:8.1), Nano Energy (IF:17.881), ACS applied materials & interfaces (IF:9.229), Nanoscale (IF:7.79), Small (IF:13.28), Applied Energy (IF:9.746), Journal of Materials Chemistry C (IF:7.059), ACS Sensors (IF:7.01), ACS Applied Electronic Materials (IF:3.313) and so on.



Dr. Abdellatif Ait Lahcen

Researcher, Sensors Lab,
King Abdullah University of Science and Technology
(KAUST), Saudi Arabia.

50+ Research Articles & Patents Published in:

Biosensors and Bioelectronics, RSC Advances, Electrochimica Acta, Sensors and Actuators B: Chemical, Electroanalysis, Analytical Letters, Journal of Materials Chemistry B and so on.



Dr. Yogeenth Kumaresan

Research Assistant
Electronic & Nanoscale Engineering,
University of Glasgow, UK

50+ Research Articles & Patents Published in:

Advanced Materials (IF:30), Small (IF:13.28), ACS applied materials & interfaces (IF:9.229), Nano Convergence (IF:8.526), Nanoscale (IF:7.79), Advanced Electronic Materials (IF:7.29), Advanced Materials Interfaces (IF:6.1), Nanoscale research letters (IF:4.7), Scientific reports (IF:4.379), RSC advances (IF:3.36), Sensors and Actuators B, ACS Applied Electronic Materials (IF: 3.314), ChemNanoMat, (IF:3.3), IEEE Sensors (IF:3) and so on.

**Dr. Srither Ravisekaran**

Researcher,
Southern University of
Science and Technology, China

**Akash Kota**

Research Assistant
University of Dayton, USA

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Er. K. L. Havish, Vice-President, KLEF

Er. K. Raja Harin, Vice-President, KLEF

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Dr. N. Venkatram, Pro-Vice Chancellor, KL

Dr. Y. V. S. S. V. Prasada Rao, Registrar, KL

Dr. K. Subbarao, Principal, K L College of Engineering, KL

Chair Person

Dr. M. Suman

Head, Dept of ECE, KLU Vijayawada Campus

Dr. M. Goutham

Head, Dept of ECE, KLU Hyderabad Campus

Technical Chair

Dr. K. Srinivasa Rao

Head, Micro Electronics Research Group

Convener

Dr. P. S. Srinivasa Babu

Professor, ECE

Coordinators

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Associate Dean-Planning & Development

Dr. Aravindhan Alagarsamy, Associate Professor

Mr. Syed Shameem, Associate Professor

Dr. M. Vasuja Devi, Assistant Professor

Associate Dean-Student Affairs

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Nikhitha2903@gmail.com

Mr. K. Praveen

Komatinenipraveen123@gmail.com

Registration

For Student of KLU:

INR 200

Student with any professional membership:

INR 150

For Faculty of KLU:

INR 250

Faculty with any professional membership:

INR 200

For Student/Faculty outside KLU:

INR 300

For Online Registration

<https://forms.gle/zmQxsulj7adCjEt19>

Bank Details**WIRE INFORMATION**

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For more Details Contact:**Convener**

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