# LBS INSTITUTE OF TECHNOLOGY FOR WOMEN

# ELECTRENEITY

Innovation at your fingertips

## ELECTRONICS & COMMUNICATIONS DEPARTMENT

2020 - 2021

NOVEMBER - APRIL EDITION

# CONTEXT



Dear Readers,

It's my pleasure to welcome you to the latest edition of our semester wise newsletter, which aims to keep you informed about the latest trends, advancements, and breakthroughs in the world of electronics and communications.

This year has been marked by unprecedented challenges that have tested our resilience and adaptability in new and unexpected ways. Despite these difficulties, the field of electronics and communications has continued to push forward, driven by the passion and dedication of researchers, engineers, and innovators around the world.

In this edition of our newsletter, you'll find a wealth of information on some of the most exciting developments in the field, from breakthroughs in wireless technology and smart devices to the latest developments in artificial intelligence and machine learning.

We're also pleased to share news and updates on the latest events, conferences, and opportunities for networking and collaboration.

We hope that this newsletter will inspire you to continue exploring the frontiers of electronics and communications, and to contribute your own ideas and innovations to this dynamic and ever-evolving field.

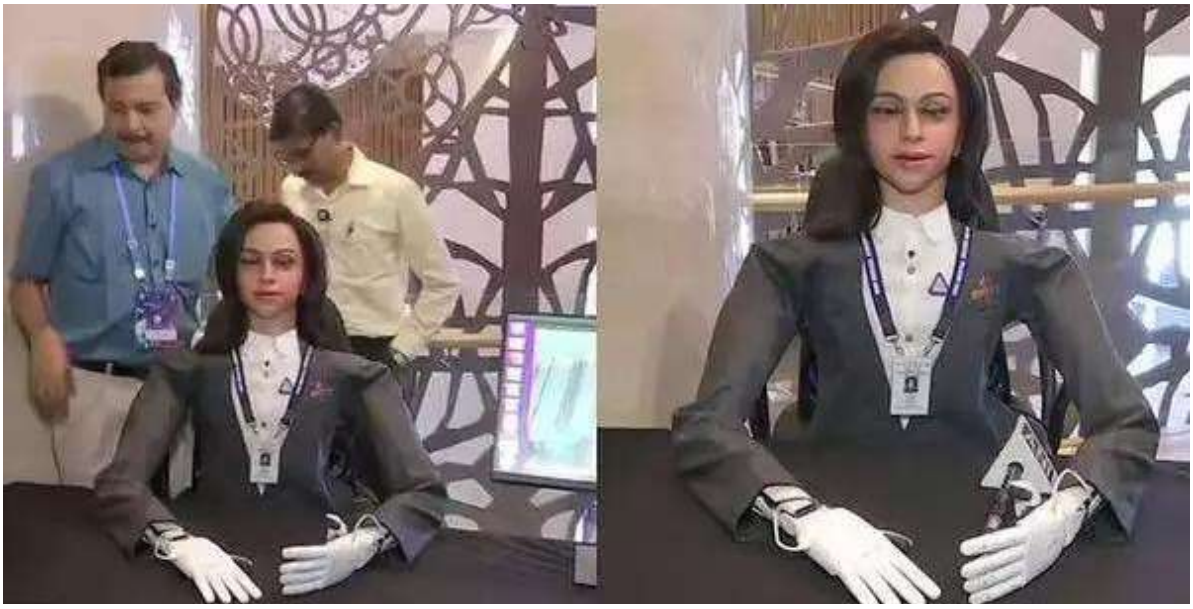
Sincerely,

GOWRI PRIYA P , S1 ECE (2020-2024 BATCH)

NOVEMBER- APRIL (2020 - 2021)

# ELECTRENEITY

*Newsletter by ECE (2020-2024),LBSITW*



## "Humanoid Vyommitra"

Isro's  Vyomitra will ride to space in the first test flight of the human space mission, Gaganyaan. She is being called a half-humanoid since she will only have a head, two hands and a torso, and will not have a lower limbs .
She will simulate human functions before real astronauts take off . She can detect and warn if environmental changes within the cabin get uncomfortable to astronauts and change the air condition.

## X-ray signature of boundary around black holes

A team led by Indian scientists has found a distinctive signature of cosmic X-rays to identify the boundary around black holes, which "unmistakably separate them" from other objects in the cosmos such as neutron stars that are comparable in mass and size

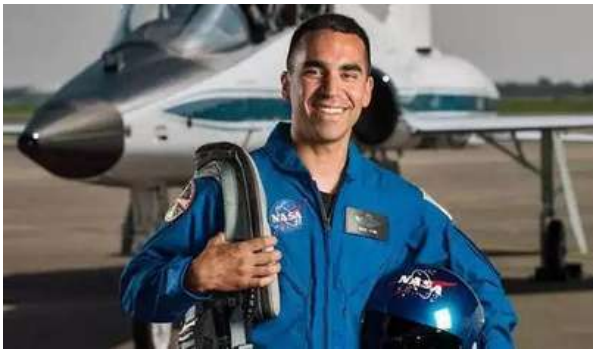
## Camera that doesn't need to  focus

A team led by an Indian-born scientist , Rajesh Menon, has developed a camera that require no focus, using a single lens about a thousandth of an inch thick.
the new lens eliminates the need for focusing and allows any camera to keep all the objects in focus simultaneously.
The advance could enable thinner smartphone cameras,improved and smallesr cameras for biomedical imaging such as endoscopy, and more compact cameras for automobiles

## India's first hydrogen fuel cell car


India's first hydrogen fuel cell powered car completed the trials this year. The technology uses chemical reactions between hydrogen and oxygen(from air) to generate electrical energy, eliminating the use of fossil fuels. Further, the fuel cell technology emits only water, thus cutting down the emission of harmful greenhouse gases along with other air pollutants.

## Raja Chari to go to space

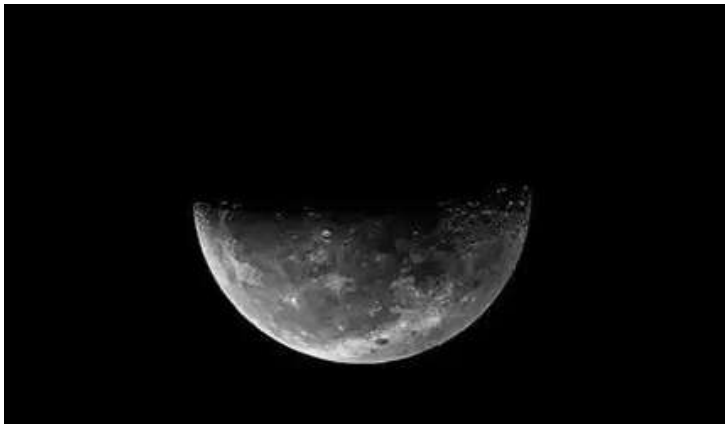


Raja Jon Vurputoor Chari, is the American of Indian descent after Kalpana Chawla who has been selected by Nasa for a space mission. 43-year-old Chari is a colonel in the US Air Force and he become a Nasa astronaut in 2017.
Chari is the only Indian-American among 18 chosen for Nasa's mission to the moon and beyond. this will be his first spaceflight.

## Earth observation satellite

Indian Space Research Organisation (Isro) restarted its satellite launch operations on November 7 by putting into the Earth Observation Satellite and nine other foreign satellites in a text book style, using the Polar Satellite Launch Vehicle. With this launch, isro put into orbit a total of 328 foreign satellites, all for  fee.

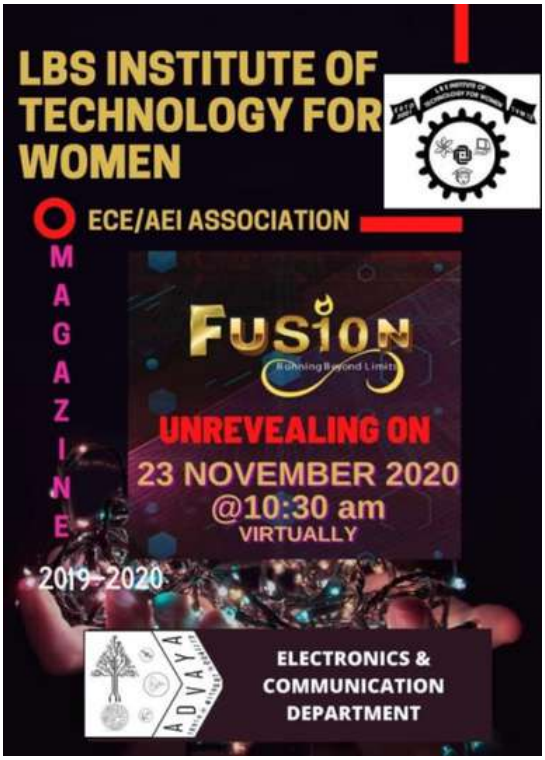
## Building bricks on moon



A team of researches from the Indian Institute of Science and Indian Space Research Organisation has developed a sustainable process for making brick like structures on the moon.
The process involves extracting lunar soil and using bacteria and guar beans to harden the soil into brick like structure for habitation on the moon in the future.
The cost of sending one pound of material to outer space is about Rs.7.5 lakh, wheareas this new process, which can be sourced from human urine and lunar soil as raw materials, can considerably decrease the overall expenditure.

# Fusion-Run beyond limits

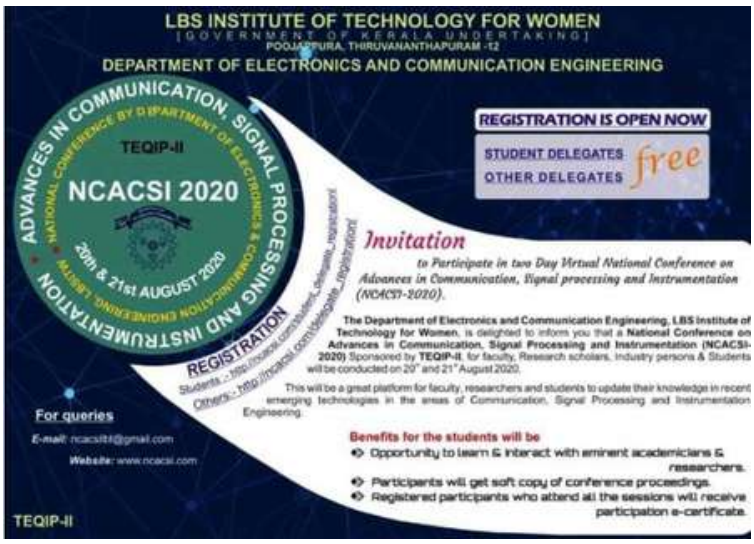
The Technical Magazine powered by department of Electronics & communication Engineering

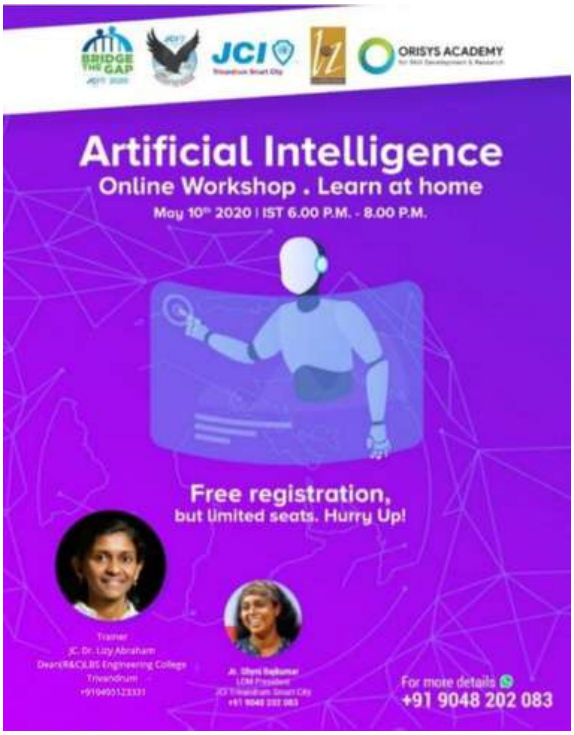



# NCACSI-2020

## Get the goal that never gives up

The objective of NCACSI-2020 is to bring together academic, leading engineers, industry researchers and scholar students to exchange and share their experiences and research results about of all aspects of Advances in Communication Signal Processing and Instrumentation, and discuss the practical challenges encountered and the solutions




## A Workshop on Artificial Intelligence

An online workshop – learn at Home about Artificial Intelligence.

# Reboot Kerala Hackathon 2020


Inauguration of REBOOT Kerala HACKATHONE Series at LBS Institute of Technology for Women, Trivandrum

Reboot Kerala Hackathon 2020, an initiative of the Department of Higher Education – Government of Kerala organized by Additional Skill Acquisition Program, was conducted at LBS Institute of Technology for Women on 14th,15th and 16th of February 2020 inaugurated by former Higher Educational Minister Dr. K. T. Jaleel.

# Vision & Mission of Institute

## VISION

To be Centre of Academic Excellence empowering women in technical domain

## MISSION

Imparting value based technical education for transforming young women to professionals excelling globally in academics ,research and development and industry meeting societal challenges

# Vision & Mission of Department

## VISION

To become centre of excellence in Electronics ,Communication and Instrumentation to facilitate professional education and research keeping higher level of value systems.

## MISSION

To transform young women to high quality engineers and entrepreneurs with ethical values for providing creative engineering solutions and intellectual services for the society and industry application of Electronics, Communication and Instrumentation Engineering.