



SRMS
College of
Engineering,
Technology &
Research, Bareilly

September, 2018

E-NEWS LETTER

SRMSCET & R

Latest Updates World

EDITORIAL BOARD

EDITOR

Ms. Ratna Awasthi
Assistant Professor

STUDENT REPRESENTATIVES

Shubhra Dubey
EE-15

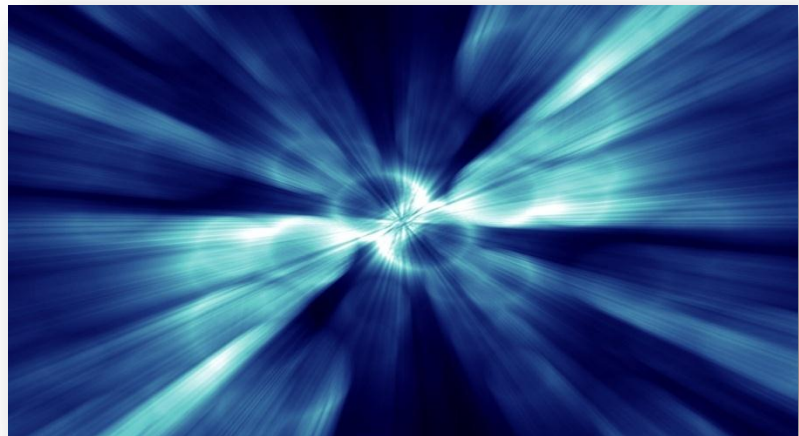
Gunjan Sharma
EC-15

Deeksha Narang
CS-15

Inside this Issue:

<i>Latest Updates World</i>	1-2
<i>Latest Updates SRMSCET&R</i>	2-6
<i>Student's Corner</i>	7-8
<i>Faculty Arena</i>	9

7 Quantum Particles Act like Billions in Weird Physics Experiment



Physicists have revealed that just seven quantum particles can behave as if they were in a crowd of billions.

At larger scales, matter goes through changes, called phase transitions, in which (for example) water turns into a solid (ice) or a vapor (steam). Scientists were used to seeing this behavior in large masses of molecules, but never in such a tiny cluster.

Because photons are packets of light, they're made of energy, not matter, which makes the idea of them going through a phase transition strange. But back in 2010, a team of German researchers showed that light particles could be induced to behave as a BEC would, just like their matter-particle cousins.

To trap the photons, those researchers built a small mirrored chamber and filled it with a colored dye. When the light particles banged into the dye particles, the dye particles would absorb them and re-emit them, so the photons took longer to move through the chamber — effectively slowing them down. When the photons struck the chamber's mirrored walls, the photons would bounce off without being absorbed or escaping. So the chamber was effectively a space where researchers could make

PUBLISHED BY

SHRI RAM MURTI SMARAK COLLEGE OF ENGINEERING, TECHNOLOGY & RESEARCH
Ram Murti Puram, 13 Km, Bareilly-Nainital Road, Bhojipura, BAREILLY-243202, UP, India
E-Mail : cetr@srms.ac.in Website: www.srms.ac.in/cetr (AKTU Code: 450)

photons sluggish and put them in close quarters. And in that situation, the physicists found, the photons would interact with one another like matter, and exhibit behaviors recognizable as those of a BEC.

In the more recent experiment, the researchers wanted to figure out the minimum number of photons necessary for that to happen. Using a fine-tuned laser, they pumped photons into a similar dye-filled mirror trap one at a time and observed the concoction to figure out when a BEC would emerge. They found that after an average of just seven photons, the photons formed a BEC — they began acting like one particle. That's a new low bar for particle counts necessary for a phase transition.

"Now that it's confirmed that 'phase transition' is still a useful concept in such small systems, we can explore properties in ways that would not be possible in larger systems," lead author Robert Nyman, a physicist at Imperial College London, said in a statement.

There were some differences between the micro-BEC and phase transitions involving larger groups of particles, the researchers noted. When ice heats up past its melting point, it seems to go from solid to liquid form instantly, without any in-between stage. The same is true for most phase transitions of most chemicals. But the seven-photon BEC seemed to form a bit more gradually, the researchers said in the statement, rather than all at once.

Still, they wrote in the paper, the photon phase transition showed that even at very small scales, phase transitions are remarkably like what's common at larger scales. Physics is physics, all the way down.

SOURCE: Originally published on Live Science

LATEST UPDATES SRMSCET&R

Atmosphere of Real Bhakti and Shraddha towards Lord Krishna Janmashthmi Celebration

Do everything you have to do, but not with greed, not with ego, not with lust, not with envy but with love, compassion, humility and devotion.

-Lord Krishna

The birth of Lord Krishna was rung in with religious fervour on Monday, September 3 and was followed by Bakhtimah Bhajans and songs by SRMS students. Like every year a big celebration was done on Krishna Janmashthmi in SRMS Radhegovind Temple where more than 2000 devotees pray and enjoy Lord Krishna's Birthday symbolizing the mark of true culture in India. Hon'ble Chairman Shri Dev Murti ji personally does parsad vitran after doing religious pooja archana and creates the atmosphere of share-n-care in society. Festival was filled with Joy, Enthusiasm, Bhajans, Dance, Drama and True Bhakti towards Lord Krishna



Salute to Teachers
Teacher's Day Celebration

Teacher, you are the reason I excel in what I do. I wouldn't be who I am today if weren't for you.



On September 5, special celebration is being conducted by Final Year Students of SRMSCET&R to honor Dr. Sarvepalli Radhakrishnan and to encourage the contribution of teachers to the society. The event began with the lighting of the lamp by Prof (Dr.) Prabhakar Gupta, Dean Academics, Dr. Rajesh Tyagi, Academic Co-ordinator & Er. Shailesh Saxena, Dean Student Welfare. This was followed by a cultural program which consisted of a vibrant array of performances. Sanjana Rastogi(CS), Neelam (EE) and Shweta Agarwal (EC), talented students of the college, enthralled the audience with their performances. All the faculty members were presented with a memento as a token of appreciation for their hard work and constructive support. Then all faculty members gave speeches and shared their views and experiences with the students.

The program ended with a vote of thanks by Dr. Rajesh Tyagi, Academic Co-ordinator. Thus overall the event was a great success.

Salute to Engineers
Engineers Day Celebration
Engineer: An Interface between Society & Knowledge

Engineering is not merely knowing and being knowledgeable; engineering is not merely analysis; engineering is not merely the possession of the capacity to get elegant solutions to non-existent engineering problems; engineering is practicing the art of the organized forcing of technological change.

SRMS celebrated 91st Engineers Day in the memory of Bharat Ratna awarded Sir Er. Mokshagundam Vishweshwaraya, popularly known as "Sir M.V." on his 158th birthday in SRMS CET at Centennial Auditorium. Hon'ble Chairman Dev Murti Sir, Trust Secretary Aditya Muri Sir, Dean Academics Prof. (Dr.) Prabhakar Gupta Sir, other faculty members and disciples of II and III year assembled there. At 10:11 am MOC Shambhavi Mishra welcomed respected guests Mr. Govind Reddy and Mr. Debendra Nayak to be the part of today's celebration. The program was followed by Lamp Lighting by dignitaries on the dais and the Saraswati Vandana was sung by

students. Following this, the momento were presented to Hon'ble Chairman and Respected Guests. Afterwards Prashant Singh Tomar addressed the house about life sketching of Sir M.V and told about various achievements such as building of Krishna Sagar Dam, Indian Irrigation System which he made in his life. Dean Academics, Prof. (Dr.) Prabhakar Gupta greeted all the students with his speech to encourage the upcoming engineers from SRMS and then after him Hon'ble Guest Mr. Debendra Nayak presented his valuable words. He told all to build up positive attitude, better skills and performance.

Esteemed Guest, Mr. Govind Reddy told us that an engineer has an ability to create solutions to make thousands of thousands take benefit of it, if he has a positive attitude towards his work. Trust Secretary, Aditya Murti Sir encouraged the development of new skills and entrepreneurship and Chairman Sir remarked his greetings and gave us the mission to do something great to make SRMS shine all over the world. After that Hon'ble Chairman Sir and guests awarded Best Engineer to Ms. Anshita Agarwal of CS 2015 Batch and appreciated her performance. The day ended with new aspirations in budding engineers to excel more as well as come up with new innovations.



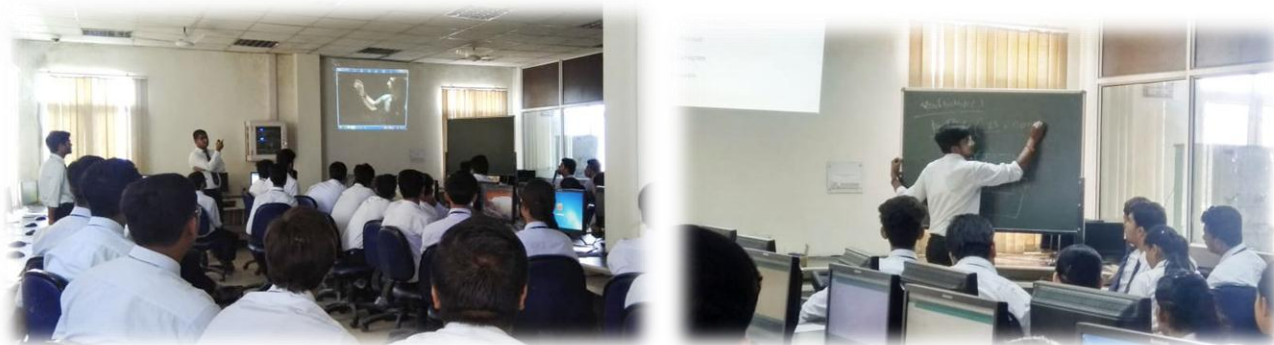
Inculcating Culture
Vishwakarma Jayanti Celebration



The Great Engineer of the universe Lord Vishwakarma was worshipped with rites and rituals on September 17, 2018 in Sri Ram Murti College of Engineering, Technology & Research. Er. Subhash Mehra, Trust Administrator of SRMS Trust offered prayer with great fervour and asked for the blessings of Great Lord Vishvakarma. Following the great tradition the machines were worshipped. The Pooja was organized in Mechanical Lab and all the Heads & Faculties of various departments & Students participated in the poojan with great reverence.

Workshop on Basics of Arduino and LED Blinking at SRMS CET&R, Bareilly

On September 20, 2018 a workshop was organized for the students of B.Tech 2018 Batch Students of Shri Ram Murti Smarak College of Engineering, Technology & Research, Bareilly by the Technominds Club of VERVE. The topic of the workshop was 'Basics of Arduino and LED Blinking'. The workshop was conducted under the supervision of Faculty Co-ordinators, Mrs. Shiva Jaiswal, Mrs. Preeti Verma and Lab Instructor, Ms. Kshama.



A total of 46 students participated in the workshop with full enthusiasm. The presenters of the workshop Mr Aman Verma, EC-16 and Mr. Sahil Singh, EC-17 introduced the basics of micro-processors, microcontrollers and their differences to the participants. Later they discussed about the Introduction to Arduino, its types and LEDs. They talked about the detailed description of the Arduino Uno. In the workshop participants worked on the practical application of the Arduinos Kit given to them. Overall, the workshop was an interactive and knowledgeable session where the participants got to acquire a lot of additional knowledge apart from their academics.

Open Mic Event

SRMS CETR, Bareilly endeavors to create future professionals with well-rounded personalities. Different clubs under the wing of VERVE, organize various events that boost technical, soft and general awareness skills of students. So, for bringing out the best in students, SRMS CET&R organized an event on September 20, 2018 in zero hour.

An Open Mic event was planned by the Elixir Club (Literary club) in collaboration with Your Quote. Your Quote is a super addictive self-expression platform that inspires to perform, record & share audios & videos online, write on photos & create a stunning portfolio of quotes, make videos & quotes Google searchable, claim your copyright, get credit & gather followers etc.



Students participated actively & showcase their articulate skills. They expressed their writings through their turn of expressions & tone of voice in various languages. Every performance was greeted with applause and whole of the scenario was filled with melancholic aura when participants touched the chords by performing their self-composed poetries. All the poetries are recorded and the best one will be uploaded on YouTube soon.

Verve Oath Ceremony

On September 22, 2018, Shri Ram Murti Smarak College of Engineering, Technology & Research organized grand oath ceremony of VERVE Club. The Ceremony began with the lighting of the lamp by Hon'ble Chairman Shri Dev Murti Ji, Trust Secretary Shri Aditya Murti Ji, Madam Richa Murti ji, Trust Administrator Er. Subhash Mehra, Dean Academics Prof. (Dr.) Prabhakar Gupta. Ex-president Ms. Sanjal Gupta of VERVE 2017 welcomed all the guests & dignitaries and shared her experiences. Newly elected president Mr. Rajat Gupta took oath and completed the ceremony with other club members. Chairman Shri Dev Murti Ji congratulated the president and all the new members of VERVE Club. He also motivated to all the new members for their respective task.



फूल

रंगों की पहचान हैं फूल, हम सब की मुस्कान हैं फूल।
ऋतु बसन्त की शान हैं फूल, ईश्वर के वरदान हैं फूल ॥
कॉटों में भी यह उग जाते, हर मुश्किल को धता बताते।
कीचड़ में भी यह खिल जाते, फिर भी सब के मन को भाते ॥
खुशबू की पहचान हैं फूल, माँ धरती की शान हैं फूल।
सुन्दरता का मान हैं फूल, उपवन की तो जान हैं फूल ॥
मिलकर रहना यह सिखलाते, भेदभाव न यह दिखलाते।
कोमलता का पाठ पढ़ाते, मुस्काना हमको सिखलाते ॥
रंग बिरंगे प्यारे फूल, सब से सुन्दर न्यारे फूल।
जात-पात से परे हैं फूल, लाल गुलाबी हरे हैं फूल ॥
रंगों की पहचान हैं फूल, हम सब की मुस्कान हैं फूल।

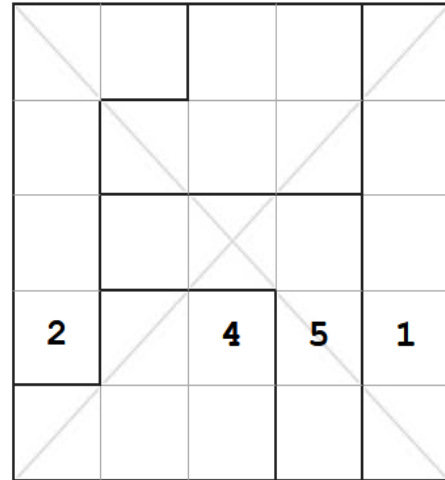
Rahul Prakash (CS-17)

Thought of the MONTH



New month.
New beginning.
New mindset.
New focus.
New start.
New intentions.
New results.

Shivangi Bajaj (EC-18)



Rati Maheshwari (CS-15)



Echo chamber (n.)

Meaning: An environment in which a person encounters only beliefs or opinions that coincide with their own.

Youthquake (n.)

Meaning: A significant cultural, political, or social change arising from the actions or influence of young people.

Post-truth (adj.)

Meaning: Relating to circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief.

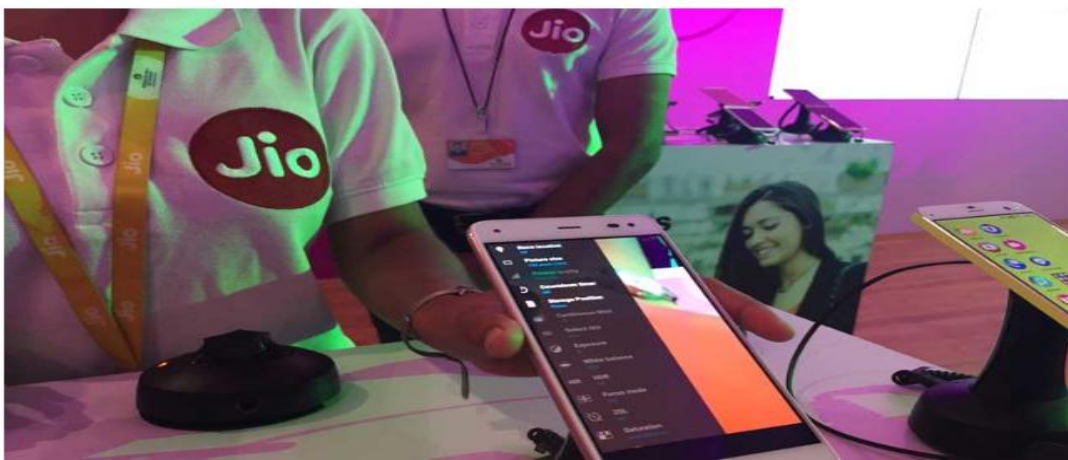
Gig economy (n.)

Meaning: A labour market characterized by the prevalence of short-term contracts or freelance work as opposed to permanent jobs.

Anchita Agarwal (CS-15)

Faculty Arena

Reliance Jio 4G VoLTE Technology



With Reliance Jio shaking up the market with the announcement of their 4G service, there seems to be a growing confusion among buyers regarding the technology the network will deploy. We have a small guide to help you work through the various terms such as VoLTE, LTE, 4G and the likes so that you know exactly what you're getting into with the Reliance Jio service.

What is VoLTE?

VoLTE stands for Voice over LTE and is a new protocol for transmitting voice data over the LTE network. While 2G and 3G networks are circuit-switch based, 4G or LTE networks utilize Packet Switching. When a call is made over a 2G or a 3G network, a certain amount of network bandwidth is assigned to that call as a pipeline, which does not terminate till the call ends. On a VoLTE network, voice calls are broken up into packets of information, sent over the full data pipeline and then reconstructed at the receiver's end. The result is that voice information can be carried over a higher bandwidth pipe, resulting in better call quality.

LTE and VoLTE is NOT the same.

It is essential to understand that LTE (also referred to as 4G-LTE) is a wholly IP-based communications protocol. Existing carriers have all 2G, 3G and 4G setups on their network, allowing data to go through the 4G band while pushing calls through the 2G/3G band. While LTE is the next generation data transmission protocol with higher two-way bandwidth, it is capable of only transmitting data. VoLTE is the way in which a voice call can be converted to digital packets and transmitted over the LTE network. In effect, VoLTE is a subset of the LTE technology.

Phone Compatibility

Reliance Jio's network is purely LTE, and does not have any 2G and 3G bands and as such, calls made on this network will only be VoLTE based. Therefore, in order to use the feature, you must have a handset which is VoLTE enabled. While VoLTE is baked into most of the modern Qualcomm and several Mediatek SoCs, the feature may not be enabled on the handset and can be done so by means of a software update to be pushed out by the handset manufacturer.

References:

1. www.quora.com
2. www.livemint.com

*Bishwajeet Kumar
Assistant Professor
Department of Computer Science*