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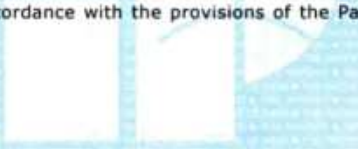


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Quote of Month

**Congratulations to Dr. Suresh Mali,
Principal, DYPCOEI and his Student
Dr. Chhaya Gosavi for their patent
granted:**

**"SYSTEM FOR PRIVACY DETECTION
AND METHOD THEREFORE"....**

 INTELLECTUAL PROPERTY INDIA <small>PATENTS DESIGNS TRADE MARKS GEOGRAPHICAL INDICATIONS</small>	 भारत सरकार GOVERNMENT OF INDIA पेटेंट कार्यालय THE PATENT OFFICE पेटेंट प्रमाणपत्र PATENT CERTIFICATE <small>(Rule 74 Of The Patents Rules)</small>	क्रमांक : 022117852 SL No : 
पेटेंट सं. / Patent No.	:	395309
आवेदन सं. / Application No.	:	331/MUM/2015
फाइल करने की तारीख / Date of Filing	:	02/02/2015
पेटेंटी / Patentee	:	1.CHHAYA SANTOSH GOSAVI 2.SURESH N. MALI
<p>प्रमाणित किया जाता है कि पेटेंटी को उपरोक्त आवेदन में व्यापकतः "SYSTEM FOR PIRACY DETECTION AND METHOD THEREFOR" नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख 2nd day of February 2015 से बीस वर्ष की अवधि के लिए पेटेंट अनुदान किया गया है।</p> <p>It is hereby certified that a patent has been granted to the patentee for an invention entitled "SYSTEM FOR PIRACY DETECTION AND METHOD THEREFOR" as disclosed in the above mentioned application for the term of 20 years from the 2nd day of February 2015 in accordance with the provisions of the Patents Act, 1970.</p>		
<div style="text-align: center;"> INTELLECTUAL PROPERTY INDIA <small>PATENTS DESIGNS TRADE MARKS GEOGRAPHICAL INDICATIONS</small></div>		
 अनुदान की तारीख : 25/04/2022 Date of Grant :	 Controller of Patent	
<p>टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाक है, 2nd day of February 2017 को और उसके पश्चात प्रत्येक वर्ष में उसी दिन देय होगी। Note - The fees for renewal of this patent, if it is to be maintained will fall / has fallen due on 2nd day of February 2017 and on the same day in every year thereafter.</p>		

ESPORTS IN INDIA

Akanksha Deshmukh
FE Div-A



2021 will be remembered as one of the most challenging years in the history of Indian Esports. Stealing the spotlight was the prolonged ban on its most popular esports title, PUBG Mobile. However, the esports scene in India not only survived through all odds — it entered one of the most transitional periods of its growth.

India ranked 16 on the Forbes list, making it a multi-billion dollar industry. A decade ago, India's online gaming sector is lame, with only 25 game developers. Today, there are over 250 game developers in the country. Some of the big names in the industry had already invested in India's gaming sector, such as Tencent, Nazara, Paytm, and Alibaba. The revenue generated in sports mostly came from companies like Oppo and Asus.

Esports sector during pandemic:

Online gaming is one of the reasons why India's economy is still surviving despite the global pandemic. The number of online gamers using their smartphone has grown by 60% if you compare the data during pre-covid and lockdown. The high youth population and the affordability and accessibility of smartphones are the primary reasons why India's online gaming sector is thriving .

It has also paved the way for an online casino portal for Indian players. Another factor that paved the way to the growth of the online gaming market is the penetration of high-speed 4G internet.

Golden Blood

Gauri Awate
FE Div:A

Golden blood is also known as the Rh-null. It is the world's rarest blood group type. In all over the world less than 50 peoples are found to have this type of blood type. It was first found in Aboriginal Australian Woman in 1961. This blood type is distinct from Rh negative it does not have Rh antigen on the red blood cells.

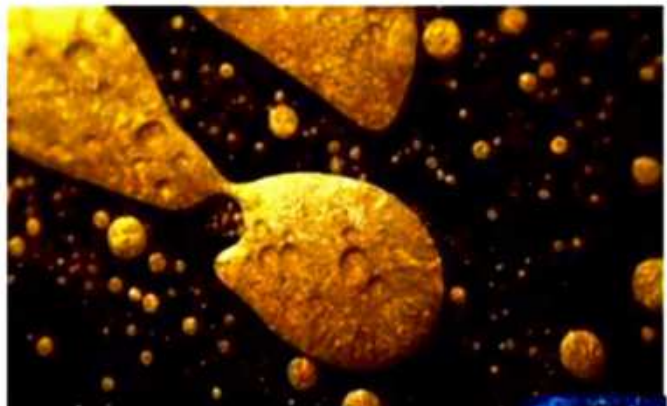
The worry with the golden blood group is that the donations of Rh null are incredibly scarce and difficult to obtain. An Rh null person has to rely on the cooperation of a small network of regular Rh null donors around the world if they need the blood. Across the globe, there only nine active donors for this blood group.

Can golden blood can be donated?

Golden blood can be donated, because of the absence of antigens on RBCs, a person with Rh null blood is considered as the universal donor, this blood can be donated to anyone with rare blood types with Rh systems.

Problems of the golden blood type:

1. Mild to moderate hemolytic anemia since birth.
2. Blood transfusion
3. Hemolytic crisis



HANSA-NG

Gauri Awate
FE Div:A



New-Gen two-seater flying trainer aircraft

Where was the aircraft tested?

The test was conducted at the aeronautical test range (ATR) facility of the Defence Research Development Organization (DRDO) at Challakere, Chitradurga district (Karnataka), and all the parameters of the aircraft were found to be normal. The test was carried out at an altitude of 7,000-8,000 feet with a speed range of 60 to 70 knots.

This in-flight engine relight test is crucial to getting certification by the Directorate General of Civil Aviation (DGCA). Earlier this year, the aircraft completed the sea level trials in Puducherry.

What is 'HANSA-NG'?

HANSA-NG is an aircraft developed by Council for Scientific and Industrial Research (CSIR)-National Aerospace Laboratories (NAL). It is an upgraded version of HANSA aircraft. HANSA was also developed by NAL and was certified in 2000. HANSA-NG is equipped with Instrument Flight Rules (IFR)-compliant avionics. Its manufacturing was started in September 2020. MESCO Aerospace Ltd is one of the production partners for the HANSA-NG.

'HANSA-NG' is a suitable aircraft for commercial pilot licensing due to its low cost and less consumption of fuel. Till now NAL received more than 80 letters of intent (LoI) from various flying clubs to purchase HANSA-NG.

Abhilasha Barak

(1st woman combat aviator)

Anushka Suresh Alhat
FE Div-A

Captain Abhilasha Barak (26) from Rohtak, Haryana, on Wednesday became the first woman combat aviator of the Indian Army. An engineering graduate from Delhi Technological University, Barak was among 37 Army officers who successfully completed rigorous flying training at the Nashik-based Combat Army Aviation Training School and were presented their wings at the valedictory ceremony of the Combat Aviators Course presided over by Lt Gen Ajay Kumar Suri, director-general and colonel commandant, Army Aviation. Lt Gen Suri termed Wednesday valedictory ceremony at CATS as "a momentous occasion and historic day with the first woman helicopter pilot joining the Army avrigorous aviation training by matching step to step with her male counterparts during the course (sic)". In January last year, the Indian Army had an-men as combat aviators. Capt Barak, who had joined the Indian Army through the Officers Training Academy (OTA) in Chennai in 2018, volunteered to train as a combat aviator. She was also awarded the Fledgling Trophy for finishing first in the Pre-Army Pilot Course. The Captain PK Gour trophy for best in gunnery was awarded to Capt R K Kashyap, while Capt Ashish Kataria got the Silver Cheetah Trophy for coming first in Overall Order of Merit and Captain S K Sharma Trophy for best in flying. Captain Shravan Manilathaya PM got Air Observation Post 35 Trophy for finishing first in ground subjects category. Gen Suri said, "The Combat Army Aviation Training School has been leading from the front, both in terms of transforming training to meet challenging operational situation



Captain Abhilasha Barak becomes Indian Army's first woman combat aviator

Blue dwarf

Ekta Khushwaha
FE Div-A

Blue dwarf (red-dwarf stage)

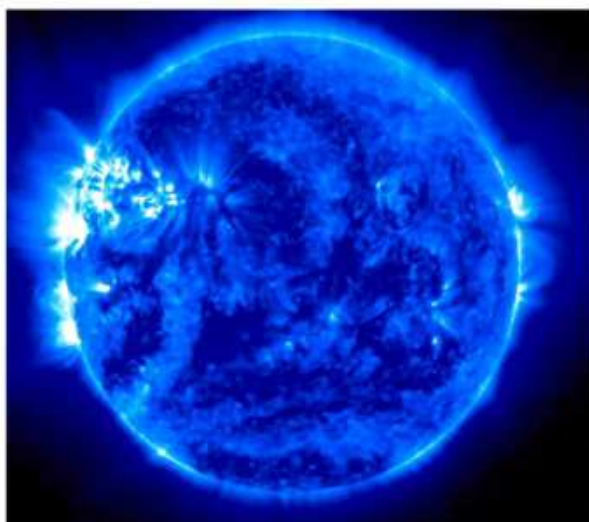
A blue dwarf is a predicted class of star that develops from a red dwarf after it has exhausted much of its hydrogen fuel supply. Because red dwarfs fuse their hydrogen slowly and are fully convective (allowing their entire hydrogen supply to be fused, instead of merely that in the core), they are predicted to have lifespans of trillions of years; the Universe is currently not old enough for any blue dwarfs to have formed yet, but their future existence is predicted based on theoretical models.

Stars increase in luminosity as they age, and a more luminous star needs to radiate energy more quickly to maintain equilibrium. Stars larger than red dwarfs do this by increasing their size and becoming red giants with larger surface areas. Rather than expanding, however, red dwarfs with less than 0.25 solar masses are predicted to increase their radiative rate by increasing their surface temperatures and becoming "bluer". This is because the surface layers of red dwarfs do not become significantly more opaque with increasing temperature.

Despite their name, blue dwarfs do not necessarily increase in temperature enough to become blue stars. Simulations have been conducted on the future evolution of red dwarfs with stellar mass between $0.06 M_{\odot}$ and $0.25 M_{\odot}$. Of the masses simulated, the bluest of the blue dwarf stars at the end of the simulation had begun as a $0.14 M_{\odot}$ red dwarf, and ended with surface temperature approximately 8600 K, making it a type A blue-white star.

Blue dwarfs eventually completely exhaust their store of hydrogen fuel, and their interior pressures are insufficient to fuse any other fuel. Once fusion ends, they are no longer main-sequence "dwarf" stars and become so-called white dwarfs – which, despite the name, are not main-sequence "dwarfs" and are not stars, but rather stellar remnants.[1]

Once the former "blue"-dwarf stars have become degenerate, non-stellar white dwarfs, they cool, losing the remnant heat left-over from their final hydrogen-fusing stage. The cooling process also requires enormous periods of time – much longer than the age of the universe at present – similar to the immense time previously required for them to change from their original red dwarf stage to their final blue dwarf stage. The stellar remnant white dwarf will eventually cool to become a black dwarf. (The universe is not old enough for any stellar remnants to have cooled to "black", so black dwarfs are also a well-founded, but still hypothetical object.)



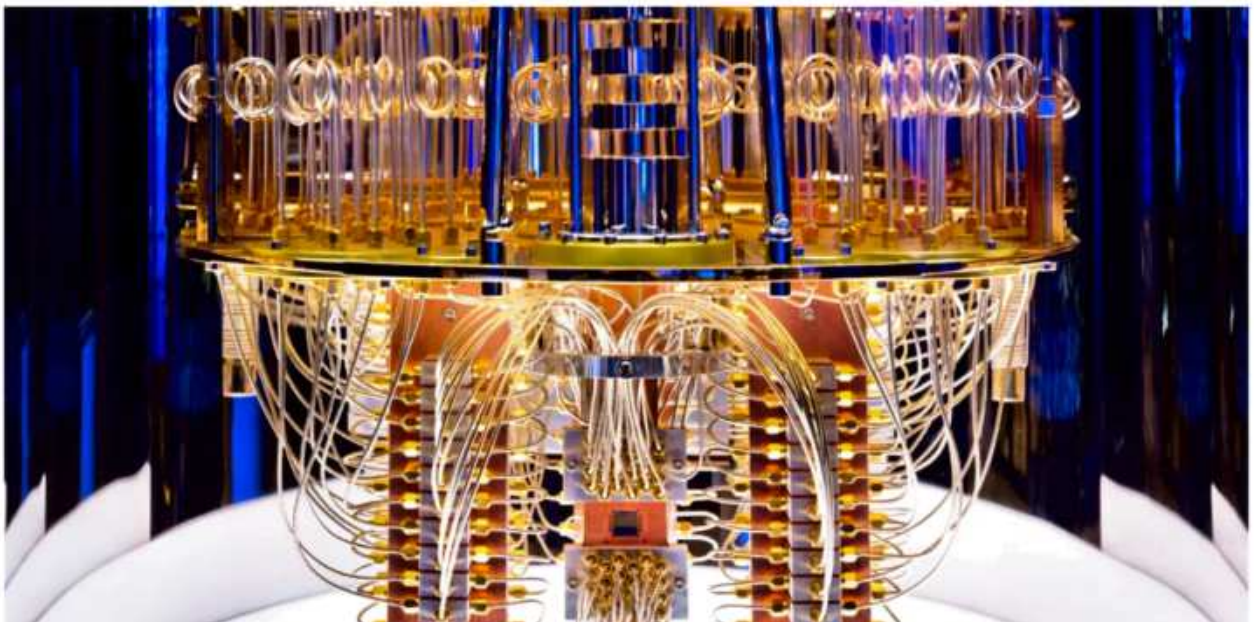
Quantum Computer

Atish Balu Sanap
FE Div-C

Quantum computing is a type of computation that harnesses the collective properties of quantum states, such as superposition, interference, and entanglement, to perform calculations. The devices that perform quantum computations are known as quantum computers.[1]:1-5 Though current quantum computers are too small to outperform usual (classical) computers for practical applications, they are believed to be capable of solving certain computational problems, such as integer factorization (which underlies RSA encryption), substantially faster than classical computers.[2] The study of quantum computing is a subfield of quantum information science.

IBM Q System One (2019), the first circuit-based commercial quantum computer

There are several types of quantum computers (also known as quantum computing systems), including the quantum circuit model, quantum Turing machine, adiabatic quantum computer, one-way quantum computer, and various quantum cellular automata. The most widely used model is the quantum circuit, based on the quantum bit, or "qubit", which is somewhat analogous to the bit in classical computation. A qubit can be in a 1 or 0 quantum state, or in a superposition of the 1 and 0 states. When it is measured, however, it is always 0 or 1; the probability of either outcome depends on the qubit's quantum state immediately prior to measurement.



Is Computer run on less power...



Om Vishnu Patil
FE Div - C

MAJOR BREAKTHROUGH IN ENGINEERED CRYSTALS COULD HELP COMPUTERS RUN ON LESS POWER...

TOPICS:Materials Science Semiconductors UC Berkeley

By UNIVERSITY OF CALIFORNIA - BERKELEY APRIL 10, 2022....(Researcher: Sayeef Salahuddin)

"In the last 10 years, the energy used for computing has increased exponentially, already accounting for single digit percentages of the world's energy production, which grows only linearly, without an end in sight," Salahuddin said. "Usually, when we are using our computers and our cell phones, we don't think about how much energy we are using. But it is a huge amount, and it is only going to go up. Our goal is to reduce the energy needs of this basic building block of computing, because that brings down the energy needs for the entire system."

University of California, Berkeley, researchers have created engineered crystal structures that display an unusual physical phenomenon known as negative capacitance. Incorporating this material into advanced silicon transistors could make computers more energy efficient. Credit: Ella Maru Studio

A new material created by University of California, Berkeley, researchers could reduce the energy required to control advanced silicon transistors.

Computers may be growing smaller and more powerful, but they require a great deal of energy to operate. The total amount of energy the U.S. dedicates to computing has risen dramatically over the last decade and is quickly approaching that of other major sectors, like transportation.

In a study published online in the journal Nature on April 6, 2022, University of California, Berkeley, engineers describe a major breakthrough in the design of a component of transistors — the tiny electrical switches that form the building blocks of computers that could significantly reduce their energy consumption without sacrificing speed, size or performance. The component, called the gate oxide, plays a key role in switching the transistor on and off.

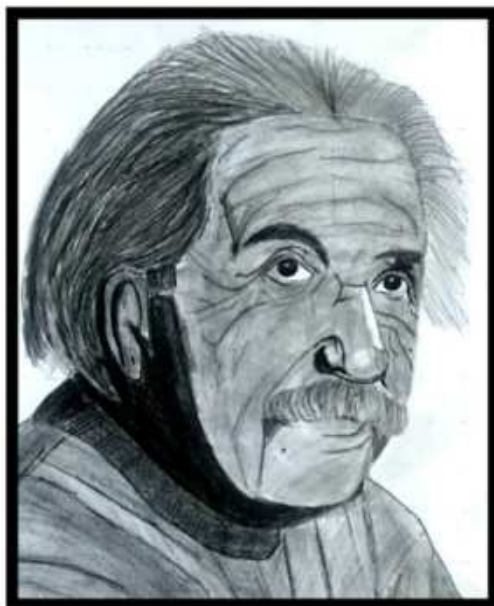
This boost in efficiency is made possible by an effect called negative capacitance, which helps reduce the amount of voltage that is needed to store charge in a material. Salahuddin theoretically predicted the existence of negative capacitance in 2008 and first demonstrated the effect in a ferroelectric crystal in 2011.

The new study shows how negative capacitance can be achieved in an engineered crystal composed of a layered stack of hafnium oxide and zirconium oxide, which is readily compatible with advanced silicon transistors. By incorporating the material into model transistors, the study demonstrates how the negative capacitance effect can significantly lower the amount of voltage required to control transistors, and as a result, the amount of energy consumed by a computer.

ART CORNER



Shrutika Ghodake
FE Div-A



Shrutika Ghodake
FE Div-A



Adinath Musale
FE Div-A



Shrutika Ghodake
FE Div-A

Achievements

Dhananjay Gadhe Student of FE Computer Engineering he has been awarded as 2nd Runner Up It in Biggest Beauty Pageant Show of the Year Mr Miss Kids and Mrs "India Earth 2022 "By- US Square Media and Publicity...



Quote of the Month

***"We must accept finite
disappointment, but we
must never lose infinite
hope."***

-Martin Luther King



★★★