



DEPARTMENT OF COMPUTER SCIENCE (UG) DBT STAR SPONSORED DEPARTMENT

NEWS CORNER

Date: 1.2.25

"HACK PROTECTION MEDICAL IMPLANTS"

Scientists recently unveiled a first-of-its-kind authentication protocol for wireless, battery-free, ultraminiaturized implants that ensures these devices remain protected while still allowing emergency access. A brain implant designed to help control seizures is hijacked. A pacemaker receives fake signals, disrupting its rhythm. A hacker infiltrates an insulin pump, delivering a fatal overdose. While these scenarios sound like scenes from a sci-fi thriller, such cyberhealth threats are of real concern as medical technology moves toward smart, wirelessly connected implants. Smart bioelectronic implants promise to revolutionize healthcare, giving doctors remote access to monitor and adjust treatments. But as these devices become more advanced, they also become more vulnerable. Just like smartphones and bank accounts, medical implants could be targeted by cybercriminals. And when that happens, the consequences could be life-threatening.









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NEWS CORNER

Date: 3 .2.25

"LIFT FUTURE WITH ORGANIC SEMICONDUCTORS"

Researchers have advanced a decades-old challenge in the field of organic semiconductors, opening new possibilities for the future of electronics. The researchers have created an organic semiconductor that forces electrons to move in a spiral pattern, which could improve the efficiency of OLED displays in television and smartphone screens, or power next-generation computing technologies such as spintronics and quantum computing. The researchers, led by the University of Cambridge and the Eindhoven University of Technology, have created an organic semiconductor that forces electrons to move in a spiral pattern, which could improve the efficiency of OLED displays in television and semiconductor that forces electrons to move in a spiral pattern, which could improve the efficiency of OLED displays in television and smartphone screens, or power next-generation computing technologies such as spintronics and quantum computing. The researchers, like silicon, is symmetrical, meaning electrons move through them without any preferred direction.

STAFF INCHARGE









DEPARTMENT OF COMPUTER SCIENCE (UG) DBT STAR SPONSORED DEPARTMENT

NEWS CORNER

Date: 4.2.25

"THE AI NUTRITIONIST"

An AI system can tell the calorie count, fat content, and nutritional value of a meal just from a photo. This futuristic scenario is now much closer to reality, thanks to an AI system developed by NYU Tandon School of Engineering researchers that promises a new tool for the millions of people who want to manage their weight, diabetes and other diet-related health conditions. The technology, detailed in a paper presented at the 6th IEEE International Conference on Mobile Computing and Sustainable Informatics, uses advanced deep-learning algorithms to recognize food items in images and calculate their nutritional content, including calories, protein, carbohydrates and fat. For over a decade, NYU's Fire Research Group, which includes the paper's lead author Prabodh Pan Indre and co-author Sunil Kumar, has studied critical firefighter health and operational challenges.

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DEPARTMENT OF COMPUTER SCIENCE (UG) DBT STAR SPONSORED DEPARTMENT

NEWS CORNER

Date: 5.2.25

"THE BEE- VETERINARIAN SYSTEM"

Researchers have created a system to help beekeepers monitor and analyze the health of their beehives and take corrective actions to prevent colony collapse -- when a majority of the worker bees abandon the colony and its queen. Beehives use thermoregulation to ensure the hive temperature stays between 33 and 36 degrees Celsius, about 91 to 97 degrees Fahrenheit. For example, bees might cluster to create insulation when it's cold or fan their wings when it's hot. But when beehives experience external stressors, such as pesticides or unexpected weather events, they lose the ability to regulate the hive temperature. The Electronic Bee-Veterinarian (EBV) uses low-cost heat sensors and predictive forecasting to assist beekeepers in managing hive temperature and overall honeybee health. Researchers used two sensors, one placed on the outside of the hive and one inside, to detect real-time temperatures in the bee colonies. This data was then fed into a model that calculates the hive health factor.

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NEWS CORNER

Date: 06/2/25

"30X FASTER AI? - MIT'S HAS THE ANSWER"

Researchers developed an automated system to help programmers increase the efficiency of their deep learning algorithms by simultaneously leveraging two types of redundancy in complex data structures. The neural network artificial intelligence models used in applications like medical image processing and speech recognition perform operations on hugely complex data structures that require an enormous amount of computation to process. To improve the efficiency of AI models, MIT researchers created an automated system that enables developers of deep learning algorithms to simultaneously take advantage of two types of data redundancy. This reduces the amount of computation, bandwidth, and memory storage needed for machine learning operations. By enabling a developer to build an algorithm from scratch that takes advantage of both redundancies at once, the MIT researchers' approach boosted the speed of computations by nearly 30 times in some experiments

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NEWS CORNER

Date:01.02.25

"THE NEXT GEN NETWORK - NO LIMITS"

Researchers have developed an innovative method to improve next-generation wireless networks. Their approach ensures faster, more reliable connections by simplifying how large amounts of signal data are managed and using artificial intelligence to predict and correct errors. The findings promise significant benefits for high-speed travel, satellite communication, and disaster response applications. As 5G and 6G networks expand, they promise a future of incredibly fast and reliable wireless connections. A key technology behind this is "millimetre-wave" (mmWave), which uses very high-frequency radio waves to transmit huge amounts of data. However, managing these complex antenna systems is challenging. The problem is that these signal conditions change rapidly, especially when moving in a car, train, or even a drone. This rapid change, the "channel aging effect," can cause errors and disrupt your connection.

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NEWS CORNER

Date: 18 . 2.25

"FROM FABRIC TO SMART FABRIC"

Researchers have created washable and durable magnetic field sensing electronic textiles thought to be the first of their kind which they say paves the way to transform use in clothing. This technology will allow users to interact with everyday textiles or specialized clothing by simply pointing their finger above a sensor. A team of researchers from Nottingham Trent University (UK), Helmholtz-Zentrum Dresden-Rossen Dorf (HZDR) and Free University of Bozen-Bolzano (Italy) has created washable and durable magnetic field sensing electronic textiles thought to be the first of their kind which they say paves the way to transform use in clothing, as they report in the journal Communications Engineering. This technology will allow users to interact with everyday textiles or specialized clothing by simply pointing their finger above a sensor. The researchers show how they placed tiny flexible and highly responsive magneto resistive sensors within braided textile yarns compatible with conventional textile manufacturing.

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NEWS CORNER

Date: 19-2-25

"NANO GAMING THE NEW REVOLUTION"

A research team demonstrated the world's smallest shooting game, a unique nanoscale game inspired by classic arcade games. This achievement was made possible by realtime control of the force fields between nanoparticles using focused electron beams. A research team led by Professor Takayuki Hoshino of Nagoya University's Graduate School of Engineering in Japan has demonstrated the world's smallest shooting game by manipulating nanoparticles in real time, resulting in a game that is played with particles approximately 1 billionth of a meter in size. This research is a significant step toward developing a computer interface system that seamlessly integrates virtual objects with real nanomaterials. They published their study in the Japanese Journal of Applied Physics. The game demonstrates what the researchers call nano-mixed reality (MR), which integrates digital technology with the physical nanoworld in real time using high-speed electron beams.

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NEWS CORNER

Date: 20 - 2 . 25

"Transforming User Experiences"

Augmented Reality (AR) and Virtual Reality (VR) are making waves in the IT industry by enhancing user experiences and transforming how we interact with digital environments. These technologies are being used in everything from remote collaboration and training simulations to gaming and healthcare applications. AR overlays digital information onto the real world, offering new ways to visualize data and interact with the environment. VR, on the other hand, immerses users in a fully digital world, making it ideal for simulations and experiential learning. In IT, both AR and VR are being leveraged for improving system diagnostics, network management, and customer support. As the technologies mature, their potential to revolutionize industries such as education, retail, and entertainment is limitless.

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DEPARTMENT OF COMPUTER SCIENCE (UG) DBT STAR SPONSORED DEPARTMENT

NEWS CORNER

Date 79.2.25

"THE FUSION OF GEN AI IN 6G"

Virginia Tech researchers say a true revolution in wireless technologies is only possible through endowing the system with the next generation of artificial intelligence (AI) that can think, imagine, and plan akin to humans. Doing so will allow networks to break free from traditional enablers, deliver unprecedented quality, and usher in a new phase of the AI evolution. There's a major difference between humans and current artificial intelligence (AI) capabilities: common sense. According to a new visionary paper by Walid Saad, professor in the College of Engineering and the Next-G Wireless Lead at the Virginia Tech Innovation Campus, a true revolution in wireless technologies is only possible through endowing the system with the next generation of AI that can think, imagine, and plan akin to humans. Published in the Proceedings of the IEEE Journal's Special Issue on the Road to 6G with Ph.D. student Omar Hashash and postdoctoral associate Christo Thomas, the paper's findings suggest the missing link in the wireless revolution is next-generation AI.









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NEWS CORNER

Date: 24.2.25

"MAGNETIC MAGIC-NEW GAME CHANGER"

A quantum miracle material could support magnetic switching, a team of researchers at the University of Regensburg and University of Michigan has shown. This recently discovered capability could help enable applications in quantum computing, sensing and more. While earlier studies identified that quantum entities called excitons are sometimes effectively confined to a single line within the material chromium sulphide bromide, the new research provides thorough theoretical and experimental demonstration explaining how this is connected to the magnetic order in the material. Chromium sulphide bromide is exciting to quantum researchers because it can support nearly any way information is physically encoded: in electric charge, photons (light), magnetism (electron spins) and phonons (vibrations, such as sound). The magnetic order is a new tuning knob for shaping excitons and their interactions. This could be a game changer for future electronics and information technology, said Rupert Huber, professor of physics at the University of Regensburg in Germany.











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NEWS CORNER

Date: 25-2.2 r

"APPLE X ALIBABA-NEW COLLAB"

Apple now seems ready to offer much-awaited artificial intelligence features to its customers in China. For this, Apple is reportedly partnering with Chinese conglomerate Alibaba. Under this collaboration, both companies will work together to provide AI features for iPhone users in China, according to a report by The Information, citing persons familiar with the development. Apple and Alibaba have developed AI features specifically for the Chinese market and submitted them for approval to China's cyberspace regulator, the Cyberspace Administration of China, which oversees digital and cybersecurity policies in the country. Last year, in a bid to provide AI features on the iPhone, Apple selected Baidu as its primary AI partner, but as per several reports, Baidu's AI models did not meet Apple's quality standards for Apple Intelligence. As a result, Apple explored other options, including AI models from Tencent, ByteDance (TikTok's parent company), Alibaba, and Deepseek.

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Date: 26 . 2.25

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NEWS CORNER

"NOKIA's MARKET SHAKE UP"

Nokia is set to secure unconditional EU antitrust clearance for its \$2.3 billion of U.S. optical semiconductors and networking equipment maker Infinera, people with direct knowledge of the matter said on Friday. Nokia announced the deal in June last year, a move that would make it the second largest vendor in the optical networking market with a 20% share, behind Huawei, which is benefiting from the minimal presence of Western companies in China. The acquisition will allow Nokia to sell more equipment to big tech companies such as Amazon, Alphabet and Microsoft which are investing billions of dollars in building new data centres to service the artificial intelligence boom. The European Commission, which is scheduled to finish its preliminary review of the deal by February 26, declined to comment. Infinera has a leading position in intra data centres. It gets about 60% of its business from the United States.

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DEPARTMENT OF COMPUTER SCIENCE (UG) DBT STAR SPONSORED DEPARTMENT

NEWS CORNER

Date: 27-2.25

"The Integration of Internet of Things (IoT) with IT Systems"

The Internet of Things (IoT) is transforming the IT landscape by connecting everyday devices to the internet and enabling real-time data exchange. With billions of IoT devices expected to be in use in the coming years, businesses are increasingly relying on IT systems to manage and analyze the vast amounts of data generated. IoT has applications across various industries, from smart homes and healthcare to manufacturing and agriculture. In IT, the integration of IoT requires robust infrastructure, such as high-speed networks, cloud platforms, and advanced analytics tools. Security remains a significant concern as IoT devices can introduce vulnerabilities into IT ecosystems. However, with the right protocols and technologies in place, IoT offers immense potential for improving efficiency, productivity, and innovation.

Ms.S.DEEPIKA









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NEWS CORNER

Date: 28 2 25

"AI and Automation at the Core"

IT helpdesks have undergone a significant transformation in recent years, thanks to advancements in AI and automation. Traditional support systems, relying on human technicians to troubleshoot and resolve issues, are being replaced with AI-powered solutions that can handle a wide range of problems. Virtual assistants and chatbots are now capable of diagnosing and fixing common IT issues without human intervention. Additionally, AI is being used to route more complex problems to the appropriate human expert, improving the efficiency of support systems. Automation tools can also proactively detect and resolve technical issues before they affect endusers. With these advancements, IT helpdesks are becoming more efficient, offering faster resolutions and reducing the strain on human resources.

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