Sweden varsity announce breakthrough in organic electronics

Researchers from Chalmers University of Technology, Sweden, have discovered a simple new tweak that could double the efficiency of organic electronics. OLED-displays, plastic-based solar cells and bioelectronics are just some of the technologies that could benefit from their new discovery, which deals with "double-doped" polymers.

The majority of our everyday electronics are based on inorganic semiconductors, such as silicon. Crucial to their function is a process called doping, which involves weaving impurities into the semiconductor to enhance its electrical conductivity. It is this that allows various components in solar cells and LED screens to work.

For organic - that is, carbon-based - semiconductors, this doping process is similarly of extreme importance. Since the discovery of electrically conducting plastics and polymers, a field for which a Nobel Prize was awarded in 2000, research and development of organic electronics has accelerated quickly. OLED-displays are one example which are already on the market, for example in the latest generation of smartphones. Other applications have not yet been fully realised, due in part to the fact that organic semiconductors have so far not been efficient enough.

Doping in organic semiconductors operates through what is known as a redox reaction. This means that a dopant molecule receives an electron from the semiconductor, increasing the electrical conductivity of the semiconductor. The more dopant molecules that the semiconductor can react with, the higher the conductivity - at least up to a certain limit, after which the conductivity decreases. Currently, the efficiency limit of doped organic semiconductors has been determined by the fact that the dopant molecules have only been able to exchange one electron each.

But now, in a recent article, Professor Christian Müller and his group, together with colleagues from seven other universities demonstrate that it is possible to move two electrons to every dopant molecule. "Through this 'double doping' process, the semiconductor can therefore become twice as effective," says David Kiefer, PhD student in the group and first author of the article.
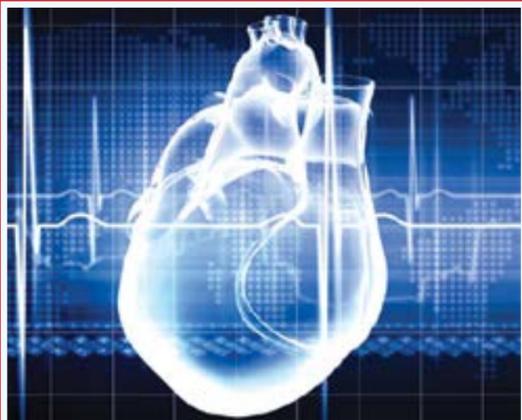
According to Christian Müller, this innovation is not built on some great technical achievement. Instead, it is simply a case of seeing what others have not seen.

"The whole research field has been totally focused on studying materials which only allow one redox reaction per molecule. We chose to look at a different type of polymer, with lower ionisation energy. We saw that this material allowed the transfer of two electrons to the dopant molecule. It is actually very simple," says Christian Müller, Professor of Polymer Science at Chalmers University of Technology.

The discovery could allow further improvements to technologies which today are not competitive enough to make it to market. One problem is that polymers simply do not conduct current well enough, and so making the doping techniques more effective has long been a focus for achieving better polymer-based electronics. Now, this doubling of the conductivity of polymers, while using only the same amount of dopant material, over the same surface area as before, could represent the tipping point needed to allow several emerging technologies to be commercialised.

"With OLED displays, the development has come far enough that they are already on the market. But for other technologies to succeed and make it to market something extra is needed. With organic solar cells, for example, or electronic circuits built of organic material, we need the ability to dope certain components to the same extent as silicon-based electronics. Our approach is a step in the right direction," says Christian Müller.

How secure your data when stored in cloud?

As cloud storage becomes more common, data security is an increasing concern. Companies and schools have been increasing their use of services like Google Drive for some time, and lots of individual users also store files on Dropbox, Box, Amazon Drive, Microsoft OneDrive and the like. They're no doubt concerned about keeping their information private – and millions more users might store data online if they were more certain of its security.

Data stored in the cloud is nearly always stored in an encrypted form that would need to be cracked before an intruder could read the information. But as a scholar of cloud computing and cloud security. In addition, there are relatively simple ways users can boost their own data's security beyond what's built into systems they use.

Who holds the keys?

Commercial cloud storage systems encode each user's data with a specific encryption key. Without it, the files look like gibberish – rather than meaningful data.

But who has the key? It can be stored either by the service itself, or by individual users. Most services keep the key themselves, letting their systems see and process user data, such as indexing data for future searches. These services also access the key when a user logs in with a password, unlocking the data so the person can use it. This is much more convenient than having users keep the keys themselves.

But it is also less secure: Just like regular keys, if someone else has them, they might be stolen or misused without the data owner knowing. And some services might have flaws in their security practices that leave users' data vulnerable.

Letting users keep control

A few less popular cloud services, including Mega and SpiderOak, require users to upload and download files through service-specific client applications that include encryption functions. That extra step lets users keep the encryption keys themselves. For that additional security, users forgo some functions, such as being able to search among their cloud-stored files.

These services aren't perfect – there's still a possibility that their own apps might be compromised or hacked, allowing an intruder to read your files either before they're encrypted for uploading or after being downloaded and decrypted. An encrypted cloud service provider could even embed functions in its specific app that could leave data vulnerable. And, of course, if a user loses the password, the data is irretrievable.

One new mobile app says it can keep phone photos encrypted from the moment they're taken, through transmission and storage in the cloud. Other new services may arise offering similar protection for other types of data, though users should still be on guard against the potential for information to be hijacked in the few moments after the picture is taken, before it's encrypted and stored.

Protecting yourself

To maximize cloud storage security, it's best to combine the features of these various approaches. Before uploading data to the cloud, first encrypt it using your own encryption software. Then upload the encoded file to the cloud. To get access to the file again, log in to the service, download it and decrypt it yourself.

This, of course, prevents users from taking advantage of many cloud services, like live editing of shared documents and searching cloud-stored files. And the company providing the cloud services could still modify the data, by altering the encrypted file before you download it.

The best way to protect against that is to use authenticated encryption. This method stores not only an encrypted file, but additional metadata that lets a user detect whether the file has been modified since it was created.

AI creates inexpensive heart disease detector

Washington:

Applying artificial intelligence (AI) to a widely available, inexpensive test - the electrocardiogram (EKG) - results in a simple, affordable early indicator of a precursor to heart failure, scientists say.

Asymptomatic left ventricular dysfunction is characterized by the presence of a weak heart pump with a risk of overt heart failure, said researchers from Mayo Clinic in the US.

It is associated with reduced quality of life and longevity. However, the disorder is treatable when identified.

There is no inexpensive, noninvasive, painless screening tool for asymptomatic left ventricular dysfunction available for diagnostic use, researchers said.

The study found that the best existing screening test for asymptomatic left ventricular dysfunction is to measure natriuretic peptide levels (BNP), but results of BNP have been disappointing. The test also requires blood draws.

Left ventricular dysfunction typically is diagnosed with expensive and less accessible imaging tests, such as echocardiograms, or CT or MRI scans.

"Congestive heart failure afflicts more than 5 million people and consumes more than USD 30 billion in health care expenditures in the US alone," said Paul Friedman from Mayo Clinic.

"The ability to acquire an ubiquitous, easily accessible, inexpensive recording in 10 seconds - the EKG - and to digitally process it with AI to extract new information about previously hidden heart disease holds great promise for saving lives and improving health," he said.

The researchers hypothesised that asymptomatic left ventricular dysfunction could be reliably detected in the EKG by a properly trained neural network.

Using stored digital data, 625,326 paired EKG and transthoracic echocardiograms were screened to identify the population to be studied for analysis.

To test their hypothesis, researchers created, trained, validated and then tested a neural network.

The study concluded that AI applied to a standard EKG reliably detects asymptomatic left ventricular dysfunction.

The accuracy of the AI/EKG test compares favourably with other common screening tests, such as prostate-specific antigen for prostate cancer, mammography for breast cancer and cervical cytology for cervical cancer.

In patients without ventricular dysfunction, those with a positive AI screen were at four times the risk of developing future ventricular dysfunction, compared with those with a negative screen.

"In other words, the test not only identified asymptomatic disease, but also predicted risk of future disease, presumably by identifying very early, subtle EKG changes that occur before heart muscle weakness," said Friedman.
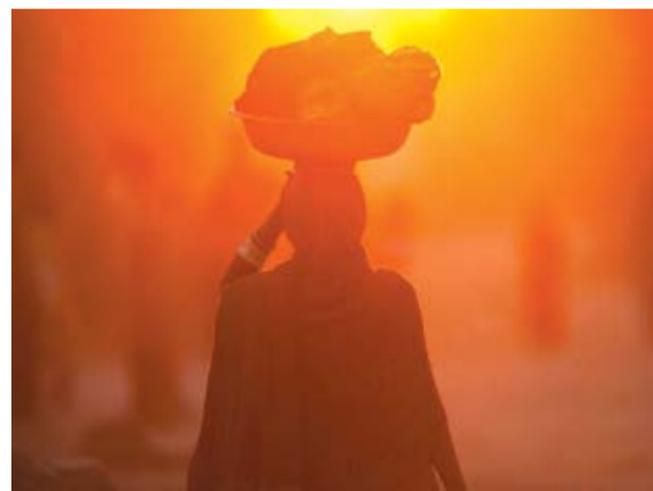

AI-enabled radiology to rural India

Providing quality health services and screening to rural populations in a nation as large as India is extremely challenging.

While educational health programmes have raised awareness of the importance of medical screening across India; this, in turn, has increased workloads for the few available radiologists, who are already over-burdened. As a result, radiologists have even less time to perform detailed diagnoses. The medical profession is in a race against time to improve the outlook for all Indians, and Artificial Intelligence (AI) may be the breakthrough it needs.

Enhancing screening with deep neural networks:

Project MIRIAD, led by assistant professor Debdoot Sheet, is exploring ways in which deep neural networks (DNNs) can enhance AI-enabled radiological screening techniques to save lives and improve healthcare across the whole of India.

The challenge, Debdoot says, is how to handle the large-scale diversity across the variety of medical images, including x-rays, Computed Tomography (CT), Magnetic Resonance Imaging (MRI) and Whole Slide Images of Histopathology (WSI). There are also domain specifics into the nature of the image data, as well as the modality and organ-specific appearance of lesions and disease. "The number of channels in these images are not always being restricted to 1 (greyscale) or 3 (RGB colour). These factors complicate the object detection problem," says Debdoot.

Despite these challenges, Project MIRIAD's first major achievement has been the development of a deep neural compression engine for mammograms. And the team is also in the advanced stages with benchmarking existing DNNs for extensions to mammography and chest x-ray screening.

Deep learning-based compression:

Inspired by deep learning-based compression for natural images, Debdoot's team designed and trained a fully convolutional autoencoder-like model for diagnostically relevant feature-preserving lossy compression of mammograms.

Using arithmetic coding for encapsulating a high amount of spatial redundancy in features for further high-density code packing, leading to variable bit length; the team demonstrated compression factors of >300× (0.04 bpp) on two different publicly-available digital mammography datasets showing peak signal-to-noise ratio (pSNR), structural similarity (SSIM) index and domain adaptability tests between datasets.

The figure below shows the details of the architecture of the DNN the team utilized for the high-density compression of mammograms.

Game theory brings robots closer to humans

Researchers at the University of Sussex, Imperial College London and Nanyang Technological University in Singapore have for the first time used game theory to enable robots to assist humans in a safe and versatile manner.

The research team used adaptive control and Nash equilibrium game theory to programme a robot that can understand its human user's behaviour in order to better anticipate their movements and respond to them.

The researchers believe the breakthrough could help robots complementing humans for sport training, physical rehabilitation or shared driving.

Lead author Dr Yanan Li, Lecturer in Control Engineering at the University of Sussex, said: "It is still very early days in the development of robots and at present, those that are used in a working capacity are not intuitive enough to work closely and safely with human users. By enabling the robot to identify human users' behaviour and exploiting game theory to let the robot optimally react to them, we have developed a system where robots can work along humans as humans do."

In a paper published in Nature Machine Intelligence, the researchers outline how they adapted game theory for the physical interaction of a robot with a human, and how this can be used to help an impaired stroke survivor retrain their motor control.

Game theory is commonly used to understand how economic agents decide and interact with each other in order to maximise their own gain. To successfully apply game theory to the interaction of a robot and its human user, the researchers had to overcome the issue that the robot cannot know the human's intentions. The researchers thus had to develop a method enabling the robot to identify the human partner while safely and efficiently interacting with their motion.

The reactive robotic programming system enables a robot to continuously learn the human user's control and adapt its own control correspondingly. The robot is able to understand the human user's action and then respond to and assist them to perform tasks successfully and with minimal effort.

AI estimates vehicle repair costs

The system's artificial intelligence (AI) will estimate vehicle repair costs by analyzing pictures of car wrecks caused by traffic accidents.

The institute is planning to invest approximately 4 billion won (US$3.56 million) in the project and 'AOS-□' is expected to launch as early as the second half of this year.

The key function of the system will be to estimate repair costs by analyzing pictures of accident scenes. The system's AI will further recognize which parts of the car were damaged and the degree of damage.

When the institute did a test run last September, the AI was 99 percent accurate at recognizing different car parts, and 81 percent accurate at recognizing the degree of damage.

In order to raise accuracy and to enable practical use, the institute will continue to run tests so that the AI system can self-learn.

While AOS-□ will speed up the insurance claim process by automatically identifying a vehicle's license plate and then retrieving insurance contract information, the service will be run as a pilot project starting from the second half of the year.

Although the system's AI repair cost estimation is an industry first, once the first phase of the project is stabilized, the system will expand to analyzing big data and video.

With the AI-based estimation system replacing simple repetitive tasks, workers will be able to focus more on high-level tasks.

Paper sensors to monitor blood sugar

Dubai

Scientists have developed disposable paper-based sensors that can measure glucose concentrations in saliva, paving the way for a pain-free alternative to diabetics for monitoring their blood sugar levels daily.

Strips of pH-sensitive paper are commonly used to test whether a liquid is acidic or alkaline. Researchers are now working to apply similar principles to create paper sensors that quickly indicate disease biomarkers.

Key to this approach is replacing traditional electronic circuitry in the sensors with low-cost plastics that can be manufactured quickly and in large quantities.

A team from the King Abdullah University of Science and Technology (KAUST) in Saudi Arabia used inkjet technology to produce sensors sensitive to small sugar concentrations in biofluids.

Utilising a commercial ink made from conducting polymers, the team printed microscale electrode patterns onto glossy paper sheets. They printed a sensing layer containing an enzyme, glucose oxidase, on top of the tiny electrodes.

The biochemical reaction between available glucose and the enzyme creates electrical signals easily correlated to blood sugar levels. While fluids, such as sweat or saliva, contain enough sugar for monitoring purposes, they also contain molecules, such as ascorbic acid, that interfere electrically with conducting polymers.

Coating the sensor with a nafion polymer membrane that repels the negative charges present in most interfering species enabled measurement of only the relevant glucose levels in saliva samples from volunteers.

Experiments showed the top coating gave the sensor an unprecedented shelf life - the enzyme could be kept alive and active for a month if stored in a sealed bag.

These results are encouraging the team to expand the capabilities of this approach by incorporating different enzymes into the sensing layer.

Robots assists patients regain hand movement

New Delhi:

Scientists have developed a system that can read brain signals to help users control an artificial hand just by thinking - an advance that could help stroke patients regain the ability to move their fingers.

Spinal injuries or stroke often leaves a person partially paralysed. Such disabilities leave them disconnected from their families and community.

"We want to give them a life where, using the technology, they can fulfill their basic needs, such as getting a glass of water or typing on the screen," said Dr Haider Raza, from University of Essex in the UK, one of the scientists who worked on the system.

The team, which includes researchers from Indian Institute of Technology (IIT) Kanpur, developed a brain-computer interface (BCI) that can 'read' a person's brain waves and convert them to computer signals.

"BCI is technology by which we control the computer using the mind. My focus is on rehabilitation to treat those whose brain is injured," Raza.

Currently, physiotherapists try to restore movement in patients physically moving the paralysed body parts, while asking the patients to 'imagine' making those movements.

"For example, if somebody just imagines moving their hands, a part of their brain gets activated. If we do this imagination exercise on a regular basis, there is a possibility of reactivating those regions," Raza said.

"However, just imagining is not enough - active practice is also needed, which is what physiotherapists do," he said.

For this purpose the researchers designed an exoskeleton for the hand, which is connected with the computer.

"A stroke patient, who has lost his ability to move his hand, will imagine moving his hand. The BCI algorithm - which reads the brain signals - will detect that the patient is trying to move their hand," said Raza.

The command from the computer will move the robotic exoskeleton.

"This will give the patient both mental practice and physical practice," Raza said."We have tested the system on 21 patients. Out of which, 14 patients have shown improvement," he said.

The team is now trying to improve the technology to build a complete exoskeleton.

People mirror emotions of YouTubers

Watching experiences of YouTube vloggers can make you feel the same emotions they express on their online channels, a study has found.

The research, published in the journal Social Psychological and Personality Science, found that we mirror the emotions of those we see online and we seek out people who share our emotions.

"Our research is a reminder that the people we encounter online influence our everyday emotions - being exposed to happy (or angry) people can make us more happy (or angry) ourselves," said Hannes Rosenbusch from Tilburg University in Netherlands.

Being affected by others' emotions is known as "contagion." People also seek out others like themselves, or in this case, people with similar outlooks and moods. In psychology, this is known as "homophily." With almost 5 billion videos watched on YouTube daily, the researchers focused on vlogs and vloggers. Vloggers share emotions and experiences in their videos, providing a reliable source of data.

The researchers focused on studying more popular vlogs, with a minimum of 10,000 subscribers. Some of their sample vlogs had millions of subscribers.

To measure if people watching vlogs experienced emotional contagion or homophily, the team studied words and emotions expressed by the vloggers and analysed the emotional language of online comments.

They modelled the effect of both immediate (contagion) and sustained (homophily) emotional reactions.

The team found evidence that there is both a sustained and an immediate effect that leads to YouTuber emotion correlating with audience emotion.

When a YouTuber posts a video with a generally positive tone, the audience reacts with heightened positive emotions. The same is true for other emotional states.

They also note that this research looks at a complicated system: humans. The effects of video emotions on audience emotions probably comprises of a collection of mechanisms like contagion, empathy, and sympathy.

"Our social life might move more and more to the online sphere, but our emotions and the way we behave towards one another will always be steered by basic psychological processes," said Rosenbusch.
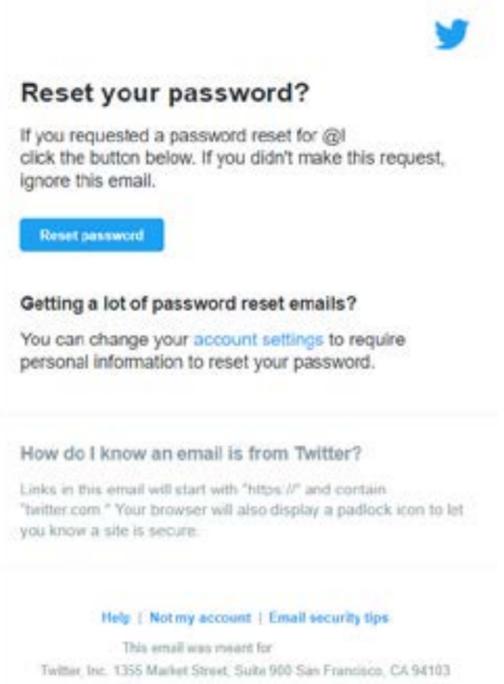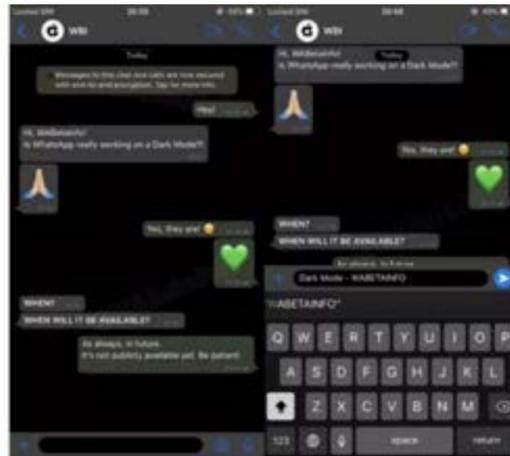

Hyundai Motor Co. announced that it has developed the world's first fingerprint recognition feature for automobiles.

The company will first launch the system on the new Santa Fe, which will be introduced in China in the first quarter of next year, after which the feature will be expanded to the global market.

Drivers will no longer need a key to open or start their cars as long as they have their fingerprints pre-registered to the vehicle.

Placing a hand on the door handle will activate a sensor that will transmit the fingerprint to a recognition device, which will automatically open the door.

The start button also has fingerprint recognition, allowing the driver to start the vehicle only after the fingerprint has been recognized.

The system also automatically applies customized settings for each fingerprint, such as the location of the driver's seat, or the angle of side mirrors.

While fingerprint recognition technology has been used to start cars for some time, using fingerprints to open a car has been difficult to implement due to security and durability reasons.

Hyundai resolved the security issue by having the system recognize the capacitance of the human body.

There is only a 1 in 50,000 chance that a driver will be mis-identified, which is five times more secure than standard smart keys.

Hyundai Motor, in collaboration with a fingerprint sensor manufacturer, acquired AEC-Q100 qualification for the system.

World's first fingerprint car

Most awaited whatsapp updates in 2019

Consecutive Voice Messages:

WhatsApp is reportedly working on a new feature which will enable users to hear continuous voice messages in a chat without the need of tapping the play button again and again. This feature will allow WhatsApp users on Android smartphones to continuously play consecutive voice messages. It will be functional when two or more voice messages are detected by WhatsApp. This new feature was spotted by WABetainfo after WhatsApp submitted a new update through the Google Play Beta Program which comes with the version up to 2.18.36

Sticker Search:

WhatsApp could soon roll out a new stickers search feature for Android. As per a tweet by WABetaInfo, a fan site known for accurate information of upcoming features of WhatsApp, sticker search is currently under development. It also shared screenshots of how the feature will look like.

WhatsApp search sticker feature could prove to be really useful for users as it will let them search for the desired sticker easily. The search feature for the sticker is said to arrive soon as it is there for emojis and gifs as well.

Vacation or Silent mode:

Vacation Mode pops up as an option in the Settings menu under Notifications. As per a leaked description, if a person enables the option, muted chats will stay archived even if a new message arrivesVacation Mode is under works in the iOS app.

It is said to be based on the 'Silent mode' that has already started rolling out to a few customers. This feature archives the muted chats for as long as the user wants.

WhatsApp Linked accounts:

Lets you recover account passwords easily. This unannounced feature lets you link your account with external services. t is aimed for the WhatsApp Business app however some references have been discovered in the regular app as well, according to WABetaInfo

Dark Mode:

The Dark Mode feature will turn the background of the WhatsApp chat dark. Been under works since a while now, the feature will be similar to what we have on popular apps like YouTube, Twitter, Google Maps and even Google Messages among others. This upcoming feature was spotted on both Android and iOS platforms.

Share contact info via QR:

Instead of sharing your WhatsApp number digit-by-digit, you will soon be able to share your contact details via a QR code.

The 'Share contact info via QR' feature has been designed to share contact information easily.

It will help you to generate a QR code that will include your contact information. Once this QR code is shared, WhatsApp will automatically fill all fields and the contact will be added in users' address book.

It will work similar to the Nametag feature, which was rolled out on Instagram recently.

Multi-share Files:

With the help of this feature, WhatsApp users will be able to share a file (PDF, audio, etc) with two or more contacts from another application. This feature will also give users a preview of the message before it is sent out.
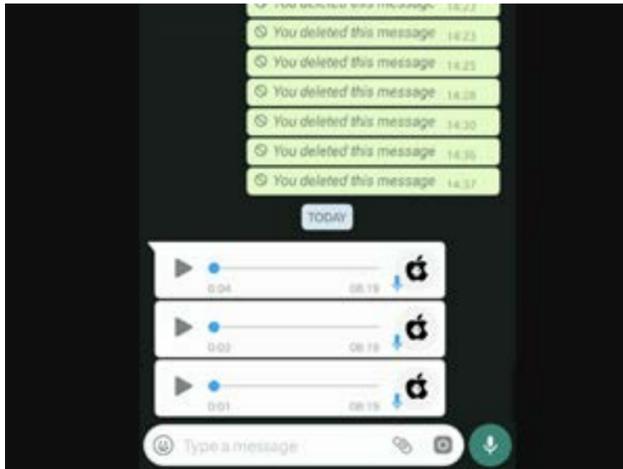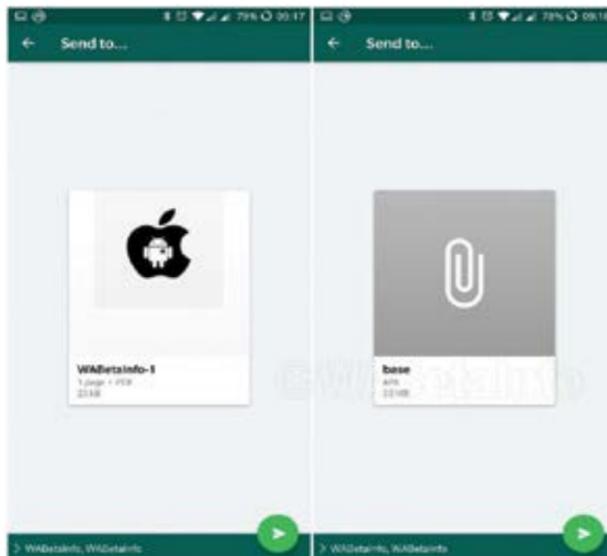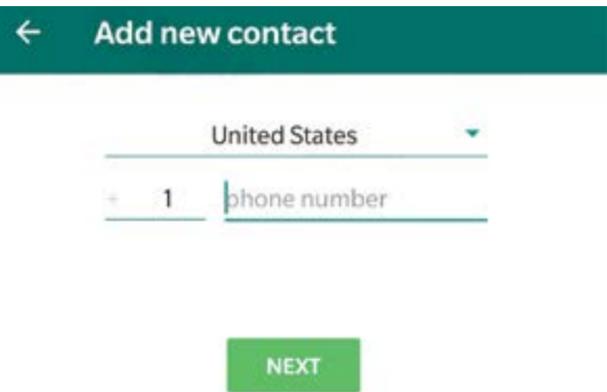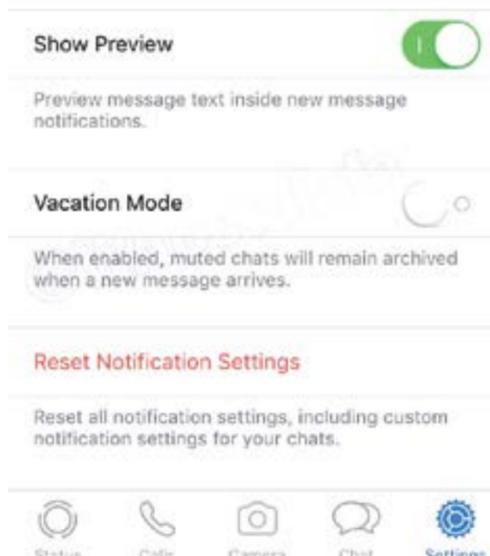
View videos directly in the push notification:

No doubt, this new feature will save time otherwise required to open the app and watch the video content. Spotted in iOS, this feature will allow WhatsApp users to play videos they receive in the push notification itself and eliminate the need to open the chat.The new WhatsApp feature allows users to get a video preview in push notifications, which makes them able to viewing video messages even from lock screens of their smartphones. The video preview option is only available for users on WhatsApp beta version 2.18.102.5.

On the other hand, users wishing to avoid video previews in their notifications bar on lock screens will be able to customise their notification settings from the app.

Ranking of contacts:

WhatsApp is trying to get smarter and the newest feature they are adding in this pursuit is a ranking feature. This will automatically rank all your contacts, in order to detect which contacts you interact with more than others.

As the name suggests, this feature will allow users to rank their contacts on basis of their interaction with them. As spotted by WABetaInfo, good ranking would mean if there is an exchange of media, simple text messages will be ranked as average ranking and ignoring the message would be counted as bad ranking.

Add contact within WhatsApp:

WhatsApp is finally making it less painful to add new people to talk to, allowing users to add new contacts just by scanning their phones. It will detect whether that person is on WhatsApp as soon as you do – and, if they are, pull through their information so that it can be easily added to your address book.

This feature will allow users to add contacts within WhatsApp itself. Once this feature is rolled out, WhatsApp will allow you to choose the country where the contact number you want to add and WhatsApp will automatically insert the country code, following which you can insert the phone number.

An Overview of Numeracy Skills

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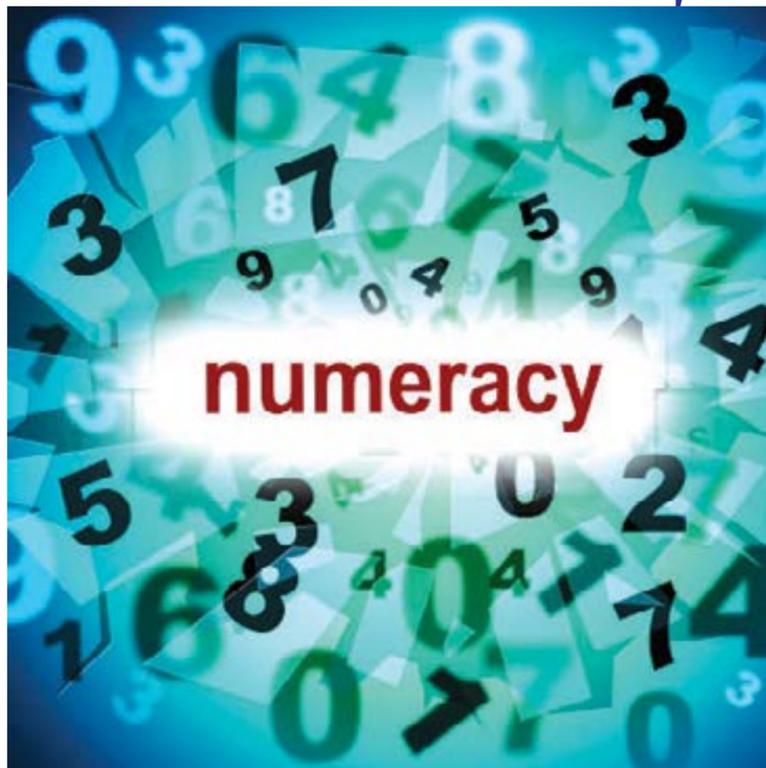
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Numeracy is the capacity to reason and to apply clear-cut numerical ideas. Essential numeracy aptitudes comprise of grasping crucial mathematics like addition, subtraction, and division. On the other hand, Mathematics and Numeracy are regularly observed as compatible; nonetheless, they each have a wide range of attributes that characterize them, the absence of numeracy can have a negative effect. Numeracy is imperative for people to create coherent reasoning and thinking procedures in their ordinary exercises. In the Working environment numeracy, education and employability abilities are regularly utilized related to each other. These required aptitudes frequently cover and are essential for any requisite.

Literacy and numeracy are a basic skill for all youngsters to create. Without them, the present-day life turns out to be relatively incomprehensible. From this viewpoint, it can now and again be hard for teachers to perceive how literacy and numeracy are important for our work in the early long tenure of a youngster's life.

We are required to be adequately skilled with numeracy to augment our potential and to make a positive commitment to society. In our exceedingly specialized world, numeracy skill, specifically, the competence to decipher information, are winding up progressively increasingly huge and are tremendously looked for by bosses. Nonattendance of scientific certainty and poor numeracy aptitudes are deterrents to work as numeracy tests are progressively turning into a standard piece of the enlistment procedure. Quickly developing mechanical advances are making the requirement for numeracy talent increasingly basic inside the working environment. With more representatives taking part in increasingly advanced errands, numeracy is perceived as basic employability ability.

Numeracy is also characterized as the capacity to access, use and decode and put across numerical data and thoughts, so as to take part in and deal with the scientific requests of different circumstances in the years to come. To be numerate is to unhesitatingly and successfully use arithmetic to meet the normal needs of life. Numeracy is imperative for people to create coherent reasoning and thinking procedures in their daily chores. We require numeracy to take care of issues and comprehend numbers, time, examples and shapes for exercises like cooking, reading bills and receipts, perusing guidelines and also playing or following a game.

Numeracy is difficult to break down, as it is increasingly about the determination and utilization of maths in reality rather than utilizing it in an imitation domain. Numeracy or being numerate is tied in with having the certainty, limit and attitude to utilize maths in regular. Mathematics is increasingly about theoretical thoughts, an assortment of information we learn. Mathematics does not have to consider this present reality as it can concentrate simply on conceptual develops and thoughts paying to their potential submission, numeracy, then again, is the use of mathematics in real settings.

Numeracy, in reality, comprises of comprehension and having the capacity to apply numerical aptitudes, for example, perusing a formula and having the capacity to apply the maths of splitting or multiplying fixings. Making associations with the numerical ideas of portions and expansion and after that having the capacity to apply those abilities in a genuine circumstance are being numerate.

Mathematics has to a greater degree emphasis on the formal learning of estimations instead of its application in reality. One may contend mathematics is realizing how to count, add, subtract and divide, which are all numerical ideas that have a mathematical concept, four add four equals eight, this announcement is valid, while numeracy, then again, is having the capacity to recognize the need to utilize such scientific ideas. For instance, hosting a dinner get-together and knowing what number of spoons and forks are required for eight individuals, is the capacity to utilize numerical aptitudes in a real circumstance.

The most effective method to help early numeracy improvement

Mathematics and Numeracy is a key in the advancement and improvement of a kid's learning. Furnishing youngsters with a variety of value scientific and numeric encounters will aid their voyage of getting to be sure; proficient and long-lasting learning. Given that early numeracy abilities foresee accomplishment in maths as youngsters advance through school, intrigue has created in recognizing indicators of variety in numeracy development, especially before the 5th standard as of now demonstrate wide variety in numeracy aptitudes. This suggests teachers will experience youngsters with a wide scope of early numeracy abilities.

As of now in preliminary learning conditions, teachers can differ altogether in the measure of numerical data they pass on while communicating with youngsters. Such variety is identified with the development in numeracy aptitudes over a year, with more noteworthy development in numeracy abilities identified with the more prominent maths-explicit talk by a teacher.

Encouraging comprehension of early numeracy advancement among school teachers is a significant advance in helping kids in their early years to build up their scientific reasoning. Early instructors could be prepared in the articulate utilization of maths talk in their everyday connections with kids to improve open doors for kids to build up their initial numeracy abilities.

Research firmly recommends that early numeracy improvement can be upheld by connections between youthful kids, and relatives and school teachers. Parents emphatically impact their youngster's maths accomplishment when they jointly work out with their kid at home in direct numeracy rehearses like showing their kids the number words and checking, and roundabout numeracy rehearses like coordinating numeracy into regular assignments.

What is the Number Framework?

The Number Framework is planned to encourage teachers, parents, and students to comprehend the phases of learning of number information and comprehension.

There are two areas to the Number Framework. The Strategy area portrays the procedures where students use to tackle issues including numbers - how they work things out. The Knowledge segment portrays the key things about the number that kids know and can review rapidly. The two segments are connected, with youngsters expecting learning to enhance their systems, and utilizing methodologies to grow new information.

The Strategy Section

The Strategy segment of the Number Framework portrays a progression of stages that kids advance through as they build up their comprehension of the scope of methodologies for taking care of number issues. There are eight phases by and large, with the initial three frequently assembled together:

Counting from One - kids can tackle issues by checking from one, either utilizing materials or in their mind.

Advanced Counting - kids can tackle issues by checking in ones, or by skip tallying, beginning from numbers other than one.

Early Additive - kids can take care of basic issues by part up and including the numbers in their mind.

Advanced Additive - kids utilize a scope of various strategies to tackle all the more difficult issues in their mind.

Advanced Multiplicative - kids utilize a scope of various techniques to tackle duplication and division issues in their mind.

Advanced Proportional - youngsters can tackle entangled issues including parts, decimals and rates utilizing a blend of strategies.

There are three zones, inside the Strategy segment, which depict a kid's capacity to take care of various sorts of issues, a kid is probably going to take in a wide scope of methodologies in their classroom mathematics program. One of the manners in which that you can most effortlessly bolster them is to enable them to build up the information that they should have the capacity to utilize these systems.

The Knowledge Section

The Knowledge section is normally separated into five regions: Numeral Identification, Number Sequence and Order, Grouping/Place Value, Basic Facts, and Written Recording. The accumulation of proposed exercises that parents can utilize gathered under three areas:

Number Identification and Order - exercises to enable youngsters to figure out how to peruse numbers and know the request of numbers.

Place Value - exercises to enable kids to figure out how 10s, 100s, 1000s, tenths, hundredths, thousandths and so on are utilized.

Number Facts - exercises that will enable youngsters to take in their expansion, subtraction, augmentation and division actualities.

The exercises in every area are gathered by the phase of advancement they are most appropriate for. To pick the fitting stage, utilize the concise portrayals under the Strategy Section above, ask your youngster's educator, or pick a scope of exercises to see which are reasonable.

Pre-counting

The key concentration in pre-counting is a comprehension of the ideas progressively, less and the equivalent and energy about how these are connected. Kids at this stage build up these ideas by correlation and pre-counting are included. This is vital on the grounds that these ideas establish the framework for kids to later build up comprehension of the numerous ways that numbers are identified with one another.

The MBA Tour's global recruiting efforts

Chennai:

The Graduate Management Admission Council (GMAC), a global association of leading graduate business schools, has acquired The MBA Tour, a well-recognized brand within the graduate management education industry.

The MBA Tour supports business schools' global recruiting efforts by organizing business education-focused events each year around the world. GMAC will look to grow The MBA Tour's core offering, expand into additional markets and explore ways to deepen the interaction between business schools and prospective students in a personalized, data rich manner.

The acquisition is consistent with GMAC's mission: to build the tools that help business schools and talented individuals discover and evaluate each other. GMAC will add value by integrating its market intelligence and digital assets to create a richer event experience and attract prospective students through comprehensive recruiting solutions that align its data, reach and presence along multiple candidate touchpoints. In addition, GMAC will expand The MBA Tour events into currently underserved markets, bringing easier recruiting access to a new pool of prospective students. By doing so, GMAC will provide schools with more opportunities to build stronger, more informed, and meaningful connections. And with more information to guide them, prospective students can make better decisions from the moment they consider a graduate business degree to the time they enter the application phase.

"The acquisition of The MBA Tour is part of an ongoing effort to develop smarter, more innovative ways to help business schools grow their candidate pipeline while providing programs with more intuitive, data-driven solutions to meet their recruiting needs," said Sangeet Chowfla, president and CEO of GMAC. "Building a robust and diverse pipeline is a critical issue facing business schools around the world, and GMAC recognizes the important role it plays in connecting schools and candidates."

The MBA Tour, now wholly owned by GMAC, began operation in 1993. It hosts over 60 business education events each year across 6 continents and connects candidates with business schools from North America, Europe, Asia, Australia and South America.

"The MBA Tour has always been committed to providing the best opportunities for schools to meet qualified candidates", said Peter von Loesecke, CEO and Managing Director of The MBA Tour. "GMAC is well-positioned to make these events more compelling for schools and candidates by using their data and scale to better prepare candidates and schools for more meaningful discourse."

The acquisition was completed on January 10, 2019.

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45 score centum in JEE (Main) exam

New Delhi: The National Testing Agency (NTA) has declared the results of Joint Entrance Examination (JEE Main) on January 19 nearly two weeks in advance. Out of the total 8, 74, 469 who had appeared for the Paper I BE/ B tech exam, 45 candidates received 100 NTA score in the exam.

This is the fastest ever declaration of result of this test held for admissions in engineering colleges. Over 8 lakh candidates had taken the test.

The next JEE Main April Exam 2019 will be conducted between April 6 and 20 in Computer Based Test (CBT) mode. The application for April session will begin from February 8 and conclude on March 7, 2019.

CBSE new plan for leak proof exams

New Delhi:The Central Board of Secondary Education (CBSE) will be issuing an 'instruction module' to all schools to deter students from cheating, a senior Board official said on Friday.

The module was being worked on for quite some time and it has reached its final form , the official said.

"Cheating is an individual malpractice. This year we are doing something special to bring down the instances of cheating. We will be issuing a module to the schools by next week. It talks about why cheating is unethical and immoral. It will have case studies to that effect," the official said requesting anonymity. The official also assured of leak-proof exams this year.

CBSE's reputation of being a formidable examiner was delivered a blow in 2018 when question papers of Mathematics and Economics for Class 10 and 12 respectively were leaked to the students before the exams. The fiasco resulted in re-conducting of the Economics paper for Class 12 students.