

- USB 3.0 Speeds Up Performance on External Devices
- 32-Core CPUs From Intel and AMD
- Gesture-Based Remote Control
- Wireless Power Transmission

WORKSHOP

- Department has organized 3 days workshop on Web Development in collaboration with "AEDIFICO Pvt. Ltd. Delhi" for Second Year Students. The main motive while arranging such workshop is to bridge gap between Academics and Industry.

TRAINING ATTENDED

Faculty Names	Event
Mr. Kawale S.M. Mr. Shinde A.B. Ms. Mane V.D. Ms. Kasab B.S. Ms. Vyawahare A.K.	One week STTP on IOT at SVERI'S COE , Pandharpur
Mr. Bhise A.S.	Networking training at DLINK pvt. Ltd. , Thane
Mr. Shinde A.B.	Software development training at L & T pvt. Ltd., Mahape , Navi Mumbai

Eye Gaze – say it with your eyes!

For many people who have difficulty physically using a computer, eye gaze technology can offer a quick and easy to understand way of accessing your favorite software.

Eye gaze or eye tracking is a way of accessing your computer or communication aid using a mouse that you control with your eyes. The Tobii systems follow your eyes with amazing accuracy to see where you are looking on the screen. You can then select the item you are looking at by dwelling (staring at the screen for a length of time), blinking or clicking with a switch. Tobii eye gaze systems work by having lights and cameras that are constantly sending and receiving information.

The camera picks up light reflections from your pupils and translates the movement of your eyes into mouse cursor movements. It takes only seconds to complete a one time calibration. Anyone who may find accessing a computer or communication aid difficult using standard or other access methods. With one of the largest track boxes on the market, the Tobii systems can track over 95% of users, regardless of eye colour, glasses, contact lenses, lighting conditions or head movements. It is used by people with conditions such as Motor Neurone Disease (ALS), Cerebral Palsy, Muscular Dystrophy, spinal injuries, Rett Syndrome and people with profound or multiple disabilities. It is used by people with conditions such as Motor Neurone Disease (ALS), Cerebral Palsy, Muscular Dystrophy, spinal injuries, Rett Syndrome and people with profound or multiple disabilities.

Uplap Sakshi (SYIF)

Artificial Heart

An artificial heart is a device that replaces the heart. Artificial hearts are typically used to bridge the time to heart transplantation, or to permanently replace the heart in case heart transplantation is impossible. Although other similar inventions preceded it from the late 1940s, the first artificial heart to be successfully implanted in a human was the Jarvik-7 in 1982, designed by a team including Willem Johan Kolff and Robert Jarvik.

An artificial is distinct from a ventricular assist device (VAD) designed to support a failing heart. It is also distinct from a cardiopulmonary bypass machine, which is an external device used to provide the functions of both the heart and lungs and are used only for a few hours at a time, most commonly during cardiac surgery.

A synthetic replacement for the heart remains a long-sought "holy grail" of modern medicine. The obvious benefit of a functional artificial heart would be to lower the need for heart transplants, because the demand for organs always greatly exceeds supply (rather necessary for transplant are normally unfit for transfer).

Shaikh Sumera(SYIF)



26 January 2018

TANTRA

Technology Awareness & Knowledge to Rising Associ-

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Intel, Microsoft, Google Scrambles for Solutions as Patches Slow Systems

Major tech companies, including Intel, Microsoft and Google, scrambled to calm the mood this week after a large number of computer users reported performance problems linked to security updates for the Spectre and Meltdown vulnerabilities.

A firestorm of criticism has erupted over the response to the chip flaws, which researchers at Google's Project Zero discovered in 2016. Months passed before the problems were disclosed to the public. Further, the security patches released in recent days have been blamed for performance problems, including slowdowns in many systems. The fixes reportedly rendered a smaller number of systems unbootable.

Intel CEO Brian Krzanich on Thursday sent an open letter to the technology industry, pledging the company would make frequent updates and be more transparent about the process, and that it would report security issues to the public in a prompt manner.

"The Meltdown and Spectre vulnerabilities require adjustment to critical, low-level interfaces in affected operating systems," said Mark Nunnikhoven, vice president of cloud security at Trend Micro.

Message of HOD

It is our pleasure to present 2nd Issue of News Letter "TANTRA" of our department to all students. This News Letter is the one of the ways in which we can disseminate the information about department. It covers various technological articles, departmental activities, achievements of students and staff members.

Mr. Bhise A. S.

"Given the scale of the issue, the patches by Microsoft, Apple, Google and others have been very successful," he told Tech News World.

Still, there have been problems in some cases, Nunnikhoven said, noting that Microsoft and AMD have been pointing fingers at one another following reports of computers slowing down or in some cases not booting.

"Organizations need to test patches before installing them to make sure that systems that may already be pushed to their limits won't crash and cease functioning as a result of the patch," he told TechNews-World.

Nanavare Durga (TYIF)



CELEBRATING
69TH
REPUBLIC DAY

New Lens Tech Can Shrink Cameras, VR and AR Gear

Scientists at Harvard University on Monday unveiled a metalens that has the potential to shrink the size of any device that uses a camera while at the same time improving performance.

While traditional lenses are made from glass, metalenses use a flat surface peppered with nanostructures to focus light. One problem with metalenses has been their inability to focus the full spectrum of light.

That's not the case any more, however, as a team at Harvard's Paulson School of Engineering and Applied Science have developed a metalens that can focus the entire visible spectrum of light -- including white light -- at a focal point, with high resolution.

An advantage a metalens has over conventional lens systems is that multiple elements aren't needed to correct for aberrations. Those multiple elements make lenses thick, and thick lenses mean thicker devices.

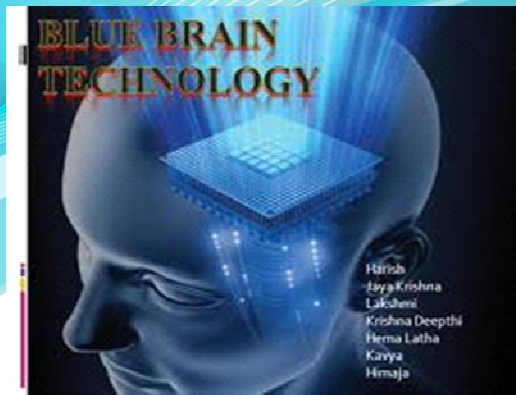
"Our lens is a flat lens, so it's thinner than a conventional lens," explained Federico Capasso, a professor of applied physics at Harvard and author of the research paper on the new metalens published Monday in *Nature Nanotechnology*. "With a metalens, we can have the same foundry that makes the sensor chip make the metalenses for the camera module," Capasso said. "That's why so many companies are excited about this. There is a chance to disrupt the business model anywhere cameras are used." The use of cameras with metalenses is still some time away, Capasso acknowledged.

"I'm not going to tell you that you're going to see a cellphone with metalenses two years from now," he said. "That would be ludicrous. This is in the research stages, but it's still a big step forward."



Taur Sayali (TYIF)

Blue Brain Technology



The blue brain project (BPP) makes use of the Blue Gene supercomputer developed by IBM to carry out simulations. Hence the project is named the "Blue Brain". The project was founded by Henry Markram at the École Polytechnique Fédérale de Lausanne (EPFL) in Lausanne, Switzerland way back in May 2005. EPFL is a research institute that specializes in natural sciences and engineering.

The human brain is a complex system consisting of recursive connectors. It is more complex than any circuitry in the world. The world of technology has expanded in areas like humanoid robots, computing, virtual reality, wearable devices, Artificial Intelligence, Digital jewelry, Blue Eyes Technology, Brain Gate Technology and so much more at a rapid rate. A full human brain simulation (100 billion neurons) is planned to be completed by 2023 if everything goes well. If so, this would be the first virtual brain of the world.

Akshara Londhe(SYIF)

iTwin



A USB flash drive is a data storage device that consists of flash memory with an integrated Universal Serial Bus (USB) interface. A Cloud Storage is also a similar case where in the data is stored remotely and is accessed whenever needed. But a drawback of this USB flash drives is it's small size cause of which it can easily be misplaced or lost. This is a particular problem if the data it contains is sensitive and confidential. In Cloud Stages the data can be stolen or misused if the username and password of an account to access the storage is hacked by someone.

There are many more drawbacks like limited storage, no security, back up, temp files, no remote disable etc.

iTwin is a 'limitless' secure USB device that enables users to access, edit & share all their files & media between any two online computers anywhere in the world. The only limit is the size of your computer's hard drive. iTwin is an innovative solution that allows remote file access without the security and privacy risks of the cloud and USB flash drives. It's very easy to access as a USB device and no special installation is required. iTwin uses thoroughly analyzed crypto protocols and algorithms (AES 256 bit encryption). It has features like bi-directional file access, no temp files, remote disable, smart key generation, password support and twintrust authentication

Dhanisha Pandhare(SYIF)

DEPARTMENTAL RESULT FOR A.Y. 2017-18

SR. No.	NAME OF STUDENT	MARKS %	CLASS
1	MS. SAYYAD GAUSIYA AYUB	94.29 %	1st Year
2	MR. BHOSALE OMKAR RAJENDRA	90.29 %	1st Year
3	MR. BAHIRAT AJINKYA ATUL	87.48%	1st Year
1	MS. LONDHE AKSHARA SHASHIKANT	89.41 %	2nd Year
2	MS. PATIL UJWALA UTTAM	88.71 %	2nd Year
3	MS. SHELKE NAMRATA ARJUN	86.00%	2nd Year
1	MS. TAUR SAYALI SHUKRACHARYA	92.78 %	3rd Year
2	MS. DESHMUKH SAMRUDHI SANJAYRAO	89.67 %	3rd Year
3	MR. BIDKAR DNYANESHWAR B	87.33%	3rd Year
3	MR. GAIKWAD SURAJ MAHADEV	87.33%	3rd Year

FACULTY
ME Completed:

Mr. A. S. Bhise

STUDENT

Mr. Bidkar Dnyaneshwar and Mr. Gaikwad Suraj participated in MSBTE sponsored Quiz Competition held at Mumbai.

SPORT ACHIEVEMENTS FOR A.Y. 2017-18

SR. No.	NAME OF STUDENT	EVENT	RANK	CLASS
1	Patil Nayan	Kho-Kho	Runner up	2nd Year
2	Tambolkar Durga	Kabbadi	Runner up	2nd Year
3	Ukarande Vaishnavi	Basketball	Runner up	2nd Year
4	Tambolkar Durga	Basketball	Runner up	2nd Year
5	Pandhare Dhanisha	Table Tennis	Runner up	2nd Year

WEB DEVELOPMENT WORKSHOP

