

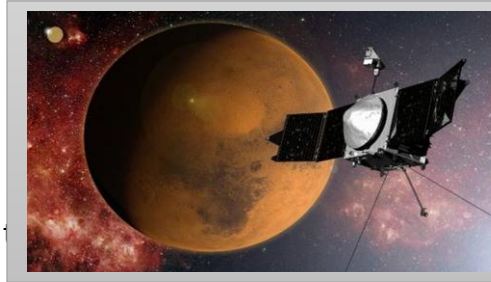
Research Corner

MAVEN beams first images from Martian atmosphere

NASA's Mars

Atmosphere and Volatile Evolution (MAVEN) spacecraft has provided scientists with the first images of Energetic Particles (SEPs) in the Red Planet. The

SEPs are streams of high-speed particles blasted from the sun during explosive solar activities like flares or coronal mass ejections (CMEs). Around Earth, SEP storms can damage the sensitive electronics on satellites. At Mars, they are thought to be one possible mechanism for driving atmospheric loss. The MAVEN spacecraft has clicked unprecedented ultraviolet images of the tenuous oxygen, hydrogen, and carbon coronas surrounding the Red Planet, and yielded a comprehensive map of highly-variable ozone in the atmosphere underlying the coronas, NASA reported.



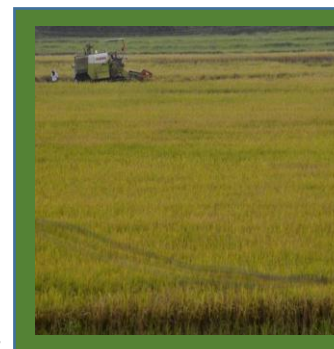
More crop yields adding more CO₂ to atmosphere

A sharp rise in food production to meet the

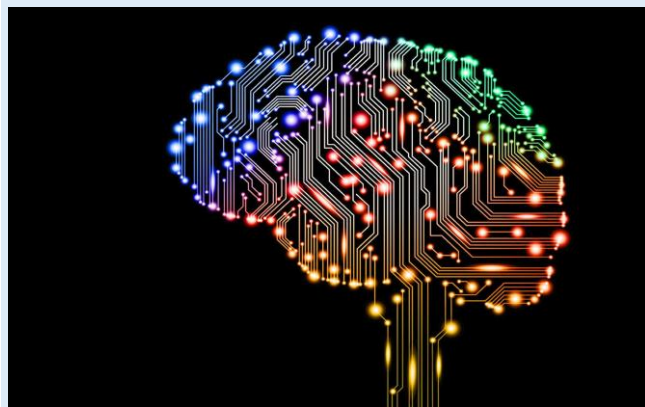
Demands for rising population accounts for as much as 25 per cent of the seasonal increase in carbon dioxide (CO₂), finds new research. The carbon dioxide absorbed by plants during spring and summer as they convert solar energy into food is released back to the atmosphere in autumn and winter.

It is not that crops are adding more CO₂ to the atmosphere; rather, if crops are like a sponge for CO₂, the sponge has simply gotten bigger and can hold and release more of the gas, the study noted.

"Global climate models do not represent the important details of agro-ecosystems and their management very well," Mr. Kucharik added.



An Artificial Engineering Approach



The evaluation of artificial intelligence research from 1990–2014 by using bibliometric analysis. We introduced spatial analysis and social network analysis as geographic information retrieval methods for spatially-explicit bibliometric analysis. This study is based on the analysis of data obtained from database of the Science Citation Index Expanded (SCI-Expanded) and Conference Proceedings Citation Index-Science (CPCI-S). Our results revealed scientific outputs, subject categories and main journals, author productivity and geographic distribution, international productivity and collaboration, and hot issues and research trends.

Bibliometric analysis results from our study will greatly facilitate the understanding of the progress and trends in artificial intelligence, in particular, for those researchers interested in domain-specific AI-driven problem-solving. This will be of great assistance for the applications of AI in alternative fields in general and geographic information science, in particular.

Observatory Inventory Projects



India-based Neutrino Observatory (INO) project – a study to understand the properties of atmospheric neutrinos through an underground lab - in Theni district is awaiting a final nod from the Prime Minister's Office (PMO). The India-based Neutrino Observatory (INO) Project is a multi-institutional effort aimed at building a world-class underground laboratory with a rock cover of approx. 1200 m for non-accelerator based high energy and nuclear physics research in India.

The project includes

- construction of an underground laboratory and associated surface facilities at Pottipuram in Bodi West hills of Theni District of Tamil Nadu,
- construction of a Iron Calorimeter (ICAL) detector for studying neutrinos, consisting of 50000 tons of magnetized iron plates arranged in stacks with gaps in between where Resistive Plate Chambers (RPCs) would be inserted as active detectors, the total number of 2m X 2m RPCs being around 29000, and
- setting up of National Centre for High Energy Physics at Madurai, for the operation and maintenance of the underground laboratory, human resource development and detector R&D along with its applications. The underground laboratory, consisting of a large cavern of size 132m X 26m X 20m and several smaller caverns, will be accessed by a 2100 m long and 7.5 m wide tunnel.

Market share of android



When it comes to the worldwide smartphone operating system (OS) market, Android and iOS are together, but not the same. Google and Apple's mobile operating systems are, to no one's surprise, completely dominating the world, shipping on a combined 96.3 percent of smartphone units in 2014, according to a new report from International Data Corporation (IDC). Android powered 1.1 billion shipped smartphone units in the calendar year 2014, up 32.0 percent from the 802.2 million units shipping with Google's mobile OS in 2013. This gave Android 81.5 percent of the global market, up from 78.7 percent last year. IDC notes that Samsung remained the top original equipment manufacturer (OEM) of Android-powered phones, shipping more units than the next five vendors combined. Electronics, Xiaomi, and ZTE fueled the most growth for Google's platform," [according to the report](#)

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SNAPDRAGON S4

Automotive Processors Debut



Today, there are more than 20 million vehicles with Qualcomm Snapdragon modems deployed globally. Going beyond simply connecting us to the Internet from our vehicles, Qualcomm Technologies is now offering new automotive-grade Snapdragon system-on-chips (SoCs)—the Qualcomm Snapdragon S4 Automotive processor family, including the Snapdragon S4A infotainment processor and a version with an integrated X12 LTE modem capable of Category 12 speeds.

Both versions combine computer vision with object recognition in real time, to help support a safer driving experience. Both flavors are also designed to be "future-proof," mainly due to a modular design concept that enables the head unit to adapt to technology evolutions seamlessly. Meet the Qualcomm Snapdragon S4 Automotive processor—making cars connected, smart, and aware. Here's how.

The Snapdragon S4 Automotive processor is powered by the custom-architected 64-bit capable Qualcomm Kryo CPU. When compared to generic 64-bit solutions, the new Kryo CPU is engineered to provide 30 to 85 percent better performance, but uses up to 60 percent less power, supporting sustained high performance and throughput at lowered system power.

Through advanced camera and sensor processing, continuous warning and emergency services are always on alert. On-chip image signal processors support four to eight automotive camera sensors that are connected simultaneously and the intelligent rear view camera uses advanced computer vision to detect objects while backing up. Vehicle-to-mobile device (included in the V2X category) and vehicle-to-vehicle (V2V) warnings are also employed to avoid collisions through alerts sent to the vehicles, smartphone applications, or connected wearable devices.

Wireless connectivity has always been Qualcomm Technologies' specialty, and with the debut of the Snapdragon S4 Automotive processor, we've created a new automotive landscape for communication, energy efficiency, infotainment, and safety. See you on the open road!

LOGIX

4 fathers, 2 grand-fathers and 4 sons went to watch the movie. What is the minimum number of the tickets they need to buy?

Answer will be published in the next issue
 Previous puzzles answer: 1.3.9.27.81.243.729 and 7 weights



TECHNO



TECHNO-DRISHTEE

AN IT-CHRONICLE

Winter Edition 2015

DEPARTMENT OF INFORMATION TECHNOLOGY

IT focuses on information systems and information management. Information Technology is particularly important in the "service" industries such as banking, insurance, and communications. The majority of new jobs in recent years have been in these service industries. The purpose of this B.Tech is to provide the skills of applying advanced design, development, implementation and / or maintenance strategies and techniques in the development of Information Technology solutions; and to effectively manage and administer Information Technology. Presently this department is nurturing the talents of approx. 300 students of different semesters and is dedicated to impart quality education to the students in the field of Information Technology and transforming them from students to technocrats and entrepreneurs.

DEPARTMENT VISION AND MISSION

VISION

To develop competent IT professionals catering to the needs of Industry and society in a global perspective.

MISSION

To attain academic & professional excellence with collective efforts of all stake holders through:

- M1: Dissemination of basic concepts and analytical skills.
- M2: Exposure to new tools in the area of Information Technology.
- M3: Effective interaction with industry for better employability.
- M4: Inculcating values and professional ethics with social responsibility.

Facebook becomes a global power

Its power to transform how we consume information enabled the spread of propaganda at a pivotal moment in United States history, creating political echo chambers where misinformation thrived. Its solar-powered Aquila drone flew for the first time



— demonstrating a technology that will bring Facebook-controlled internet to remote parts of the world.

Messenger, Facebook's standalone messaging app, expanded beyond 1 billion users. The company threw its weight behind live video, allowing Facebook's mobile app users to broadcast their lives through their smartphone cameras, and showed its vision for virtual reality. And it debuted artificial intelligence technology that can describe photographs to the blind.

IN THIS ISSUE

Techno-Corner

An initiative to be up-to-date with the latest news and information related to new technological updates and devices. More on Page 3.

Gone are the days of Retro

New strategies to be implemented in near future by the indian government for the welfare of rural . More on Page 3

IT Innovations

Featured column on IT innovations by brilliant Indian young minds . More on Page 2

LOGIX

Logic and reasoning based questions on page 4.

From the Editor's Pen



Here is an inspiration from winter "I prefer winter and Fall, when you feel the bone structure of the landscape--the loneliness of it, the dead feeling of winter. Something waits beneath it, the whole story doesn't show. "

--Andrew Wyethl

we are covering research as a major portion in our this winter edition . Apart from this, futuristic molecular machines, augmented reality, deep learning etc. there is artificial intelligence as a burning topic in research and development which have been included to give a wider perspective of where IT is leading the world in the Tech Corner. We are thankful to the students and faculty members of Department of IT, GLBITM for their valuable inputs, and we welcome suggestions and feedback that will help us improve further. We can be reached at tdristee@glbitm.org.