Welcome AJIT, a ‘Made in India’ Microprocessor

Researchers at Indian Institute of Technology Bombay (IIT Bombay) develop the country’s first indigenously designed and fabricated microprocessor.

India’s electronics market is in its biggest boom ever. Fuelled by the demand for electronic devices, it is expected to reach a whopping $400 billion by 2020.

A microprocessor is used in almost every electronic device—from the microwave and washing machine in homes to advanced supercomputers of a space station. However, developing and manufacturing a microprocessor is not easy—it is expensive, risky and needs much skill. Hence, only a handful of companies across the world have been able to manufacture and sell microprocessors successfully.

In an attempt to make a mark in the highly competitive segment of microprocessor manufacturing, engineers from the IIT Bombay have developed a new microprocessor called AJIT—the first ever microprocessor to be conceptualised, designed, developed and manufactured in India. This innovation could not only reduce the country’s imports but also make India self-reliant in electronics.

AJIT marks the first time in the country’s history where the industry, academia and the government have come together. The project was funded by the Ministry of Electronics & Information Technology (MeitY) and IIT Bombay. Powai Labs, a Mumbai-based company, has also invested in the venture and will own, market and support product.

For more details visit the link http://www.iitb.ac.in/en/research-highlight/welcome-ajit-%E2%80%98made-india%E2%80%99-microprocessor

Benefits of Chandrayaan-2, India’s 2nd lunar mission

Chandrayaan-2, which is schedule to be launch in July 2019 has 6 stated benefits viz.
1. Push the boundaries of scientific knowledge to unravel the mysteries of this universe.
2. Unleash innovation by throwing challenges at the youth of the country, and spurring future research and development.
3. Explore economic possibilities by strengthening ISRO’s alliance with the industry.
4. Engaging with the general public by motivating the youth to undertake real life applications of science and technology.
5. Expanding India’s footprint in space as Moon is the perfect test-bed for proving technologies required for future space explorations.
6. Making India a key contributor of exploring and uncovering secrets of the universe, thus fostering shared aspirations of the international community.

IISc Bengaluru Develops India’s first e-mode Gallium-Nitride Power Transistor

A group of faculty members at Indian Institute of Science (IISc) have developed India’s first-ever e-mode gallium nitride power transistor, whose performance is comparable to some of the best reports till date.

Power electronic systems that operate at high power and frequencies are projected to use specific transistors called High Electron Mobility Transistors or HEMTs. These transistors are made with gallium nitride, and they can operate at very high voltages, switch ON and OFF faster, and occupy less space when compared to silicon-based transistors. They find applications in majority of electronics that we see around such as electric vehicles, chargers for laptops and even military RADARs and cell phone base stations.

The projected market for power devices is set to reach USD 25 billion by 2022 with an exponentially growing GaN HEMT market touching USD 423 million in 2023. With a growing market for electric vehicles in India, such an indigenous development for manufacturing these transistors in India will save import costs and make us self-reliant for transistor technology.

This project has been funded by the Advanced Manufacturing Technology (AMT) initiative of Department of Science and Technology (DST), Govt. of India. The principal objective of this initiative, as far as this project is concerned, is to enable indigenous development of technologies, which are vital to the nation’s economic and strategic growth.

For more details read at link https://researchmatters.in/news/iisc-develops-india%E2%80%99s-first-e-mode-gallium-nitride-power-transistor

Launch of Fourth Scorpene Class Submarine – VELA

Source: PIB Delhi 06 May 2019

Vela, the fourth Scorpene class submarine being constructed by Mazagon Dock Shipbuilders Limited (MDL) for the Indian Navy, was launched on 06 May 2019. The launch reaffirms the steps taken by MDL in the ongoing ‘Make In India’ programme, which is being actively implemented by the Department of Defence Production (MoD). The contract for the construction and Transfer-of-Technology for six Scorpene class submarines in series, has M/s Naval Group (formerly DCNS) of France as ‘Collaborator’ and are being built by MDL. Presently Eight Warships and five submarines are under construction at MDL. MDL is one of the India’s leading shipyards with a capacity to meet requirements of the Indian Navy.

The Scorpene class of submarines can undertake multifarious tasks typically undertaken by any modern submarine which include anti-surface as well as anti-submarine warfare. The transfer of technology involves appropriate technical support by Naval Group to MDL in the field of construction, integration and tests of the submarines in India which is achieved through transfer of technical data package to MDL through information system as well as on job training to MDL’s personnel on critical technologies.

Leveraging the experience and the transfer-of-technology of the Scorpene project, with enhanced and upgraded infrastructure, MDL, is ready for undertaking construction of the future submarines.

NABARD announces Rs 700-cr venture capital fund for agri, rural startups

PTI New Delhi May 13, 2019

The National Bank for Agriculture and Rural Development (NABARD), a fully government owned development financial institution, on 13 May 2019 announced a Rs 700-crore venture capital fund for equity investments in agriculture and rural-focused startups.

The fund has been launched by Nabventures, a subsidiary of NABARD, and has a proposed corpus of Rs 500 crore with an option to retain over-subscriptions of Rs 200 crore, called as the greenshoe option. NABARD has given an anchor commitment for the fund, which will be investing across startups engaged in agriculture, food and rural development space. The fund will have a high impact as it will provide a boost to investment ecosystem in the core areas of agriculture, food and improvement of rural livelihoods.
India is on course to become one of the leading hubs for innovation, research and development. The intellectual property industry is also assessed to have a huge growth potential in the current Indian and Global context. With regards to this, the National Association of Software and Services Companies (NASSCOM) today, unveiled its report titled ‘Emerging Technologies: Leading the next wave of IP Creation for India’. The report showcases how companies in India are creating IP assets in the US, which is one of the most favored destination for filing patents.

Key findings:
- Over 4600 patents filed in the US over the period 2015 - 2018 from Indian domiciled companies (this is as per published patents and the numbers will increase as there is an 18 month lag). 40% of the tech patents filed have been granted
- Indian companies and startups filed 60% of the patents, while international companies represented a 25% share.
- Artificial Intelligence, Cyber Security, IoT and Cloud Computing accounted for over 50% of the tech patents filed in 2017/18
- AI is the front runner in the emerging technology space with over 300 patents and Machine Learning was the leading sub-domain with over 70% share
- Authentication, Sensors and Cloud Management were the leading sub-domains in Cyber Security, IOT and Cloud Computing respectively.
- During 2015-2018, Indian Start-ups have filed nearly 200 patents in the US, majority of which focused on emerging technology areas like Image Processing, AI, Cyber Security, Vehicle Technology and IoT
- Apart from the established application areas of healthcare, hardware and software, newer application areas including digital payments, e-commerce, security and navigation, are leading the patent growth story

The report highlights the fact that India domiciled companies filed over 4,600 patents in the US between 2015 and 2017-18, of which majority were from the technology domain, with Artificial Intelligence being the fastest growing area followed by IoT. The share of technology patents has consistently increased to 64.8% in 2017-18 from 51.1% in 2015, while computer and communication technology patents witnessed a decline. In technology patents, the share of emerging technologies has increased consistently to 56.3% in 2017-18 from 38.3% in 2015. Artificial Intelligence leads the emerging technologies patent race both in terms of total number of patents with 330 patents being filed in as well as growth rate of CAGR 63.1% over the period 2015-18. Apart from AI, there has been a consistent growth on building IP in other emerging tech domains with patents filed in Cyber Security (193), IoT (107) and cloud computing (88) accounting for over 50% of the tech patents filed in 2017/18.

Over the past few years, start-ups have contributed to the IT-BPM industry by building new innovative products and services. As per the report, in the period from 2015-18, Indian start-ups have filed nearly 200 patents in the US, majority of which focused on emerging technology areas including Image Processing, AI, Cyber Security, Vehicle Technology and IoT.

Beyond technology, areas like chemistry and chemical compositions, and pharmaceuticals patents lead the non-tech arena with 31.6% and 29% share in the total non-tech patents respectively. The study also highlights the patent growth story in newer application areas including cyber security (43), digital payments (16), e-commerce (35) and navigation (34).

For more details visit the link https://www.nasscom.in/knowledge-center/publications/emerging-technologies-leading-next-wave-ip-creation-india
For more details read the report https://www.nasscom.in/knowledge-center/publications/emerging-technologies-leading-next-wave-ip-creation-india

India CEO forum organized to share best practices & facilitate cross-learning on climate change issues

Source: PIB Delhi 08 May 2019

India CEO Forum on Climate Change organized by Ministry of Environment, Forest and Climate Change (MoEFCC), as the pioneering initiative of the government, inviting industry representatives, exchanged views on climate change issues and discussed opportunities to collaborate in regard to fulfilling India’s national as well as international climate change commitments.

Businesses are recognised as crucial to meeting global climate change goals and forum on Climate Change focused on driving transition to a low-carbon economy. It delivered powerful messages as leaders from the private and public sector gathered to showcase their commitment to tackle climate change.
IN Ships Kolkata & Shakti undertake Group Sail with Naval Ships of Japan, Philippines and the USA

Source: PIB Delhi 09 May 2019

IN Ships Kolkata and Shakti carried out Group Sail with naval ships of Japan, Philippines and the United States of America in the South China Sea from 03-09 May 19. The six-day long Group Sail had participation of six combatants from the four participating countries and included the Guided Missile Destroyer INS Kolkata and Fleet Support Ship INS Shakti of India, Helicopter Carrier JMSDF Izumo and Guided Missile Destroyer JMSDF Murasame of Japan; Frigate BRP Andres Bonifacio of Philippines and Arleigh Burke Class Destroyer USS Williams P Lawrence of USA. The Group Sail was aimed to deepen the existing partnership and foster mutual understanding among participating navies.

Ships undertook various exercises en route which included formation maneuvering, underway replenishment runs, cross-deck flying and exchange of Sea Riders. The Group Sail exercise with naval ships of Japan, Philippines, USA showcased India’s commitment to operating with like-minded nations to ensure safe maritime environment through enhanced interoperability.

IN Ships are on return passage from their successful deployment to South and East China Seas as part of the annual Eastern Fleet Over Seas Deployment during which they visited Cam Ranh Bay, Vietnam, Qingdao, China and Busan, South Korea. Whilst at Qingdao, both the ships had participated in the International Fleet Review (IFR) as part of the 70th Anniversary Celebration of PLA (Navy). During the ships’ stay in Busan, IN Ships took part in the Opening Ceremony of Maritime Security (MS) Field Training Exercise (FTX) under the aegis of ADMM-PLUS.

On departing Busan, both the ships participated in ADMM-PLUS MS FTX Phase I exercises from 01-03 May 19 off South Korea with Navies of Brunei, China, Malaysia, Philippines, Singapore, South Korea and the USA. Group Sail progressed from 03-09 May. The Phase II of ADMM-PLUS MS FTX is scheduled from 09-12 May 19 in the South China Sea. On completion of Phase II, all participating ships including IN Ships Kolkata and Shakti are scheduled to attend the closing ceremony of ADMM-PLUS MS and participate in International Maritime Defence Expo (IMDEX) 2019 in Singapore.

Government of India and IIT-Delhi to set up a Centre of Excellence for Waste to Wealth Technologies

Source: PIB Delhi 02 May 2019

To commemorate the 150th birth anniversary of Mahatma Gandhi, the Government of India and Indian Institute of Technology Delhi (IIT Delhi) have come together to bring the best of science and technology to implement waste management in India by signing a MoU on 2nd May in New Delhi for setting up a Centre of Excellence for Waste to Wealth Technologies for implementation of sustainable, scientific and technological solutions for waste management, through validation and deployment of available technologies for transformation of waste to wealth.

For more details read at the link http://pib.nic.in/PressReleaseDetail.aspx?PRID=1571509

India’s Coffee Day forms joint venture with Japan’s Impact HD

Source: Live Mint, 08 Apr 2019

Coffee Day Enterprises Ltd, along with its subsidiary Coffee Day Global Ltd, on 8th April 2019 announced that Japanese company Impact HD will acquire a 49% stake Coffee Day Consultancy Services Pvt. Ltd for $15 million (~ Rs 104 crore).

The company has approved to enter in to the Share Subscription and Shareholders Agreement between Coffee Day Enterprises Limited (CDEL) along with its material subsidiary Coffee Day Global Limited (CDGL) and Coffee Day Consultancy Services Private Limited (CDCSPL) with Impact HD Inc. (IHD) for subscription to equity shares of the CDCSPL by IHD by investing rupee equivalent to $15 million for 49% stake in the CDCSPL.

Post subscription of equity shares by Impact HD, CDEL and CDGL will hold 51% of the paid-up-equity capital of CDCSPL.

Coffee Day group will have 51% stake in the joint venture. The joint venture will offer consultancy services in the retail sector, Coffee Day Enterprises said in a filing to the stock exchange on Monday. Additionally, it said that the subsidiary of joint venture company will operate and manage Coffee Day Fresh and Ground business.

Impact HD Inc. is a sales floor support service company and the provides solutions in the field marketing related services.
33 employees of the National High Speed Rail Corporation Limited (NHSRCL), received certificates on 3 May’19 from the Japan Foundation for successfully completing the Japanese language & culture learning training programme as part of the cooperation between Japan & India for the bullet train project between Mumbai and Ahmedabad. Last year, 35 NHSRCL employees received certification for similar training programme, a statement from the high speed corporation said.

"The high-speed rail technology is being adopted from Japanese Shinkansen train technology, hence there is a need of inter-country exchanges between the officials of two countries, which would be facilitated by proficiency in Japanese language and empathetic understanding of their culture. Similar course would continue to be organised for all the employees of NHSRCL,” the statement said.

More than 87 employees have received training in Japan in various fields like station area development, customer-centric approach in addition to Shinkansen technology and in operations and maintenance.

"NHSRCL employees are being trained in Japan for the right amount of exposure required for skill development and bringing in the right mind-set of safety and punctuality at all levels in the organisation. Two more batches comprising 60 employees are scheduled to receive similar training this year. The training institute of NHSRCL in Vadodara has also started functioning," the release said.

As per the estimation by the Japanese, the project requires around 4,000 personnel under several categories such as locomotive drivers, guards, station staff, operation control centre staff, maintenance personnel, signal maintainers and electrical staff. There will be a big depot at Sabarmati for periodic overhaul of the trains, while a small depot at Thane will be built for weekly and monthly maintenance. Around 20,000-25,000 persons would be required for construction of the project.

NHSRCL will also give preference to job applicants who have Japanese language proficiency. The proficiency shall be evaluated based on the qualification acquired through Japanese Language Proficiency Test (JLPT) N-1 to N-5. However, candidates with N-3 level of Japanese language proficiency will be required initially. The recruitment will be undertaken in next one to two years.

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Sumitomo Life Insurance Company (Head Office: Osaka) and ABeam Consulting Ltd. (Head Office: Tokyo; will conduct proof-of-concept (PoC) research on a new smartphone application with VYMO (Head Office: Bangalore, India; CEO: Yamini Bhat), a start-up whose Asia-Pacific hub is located in Singapore.

VYMO's solution utilizes locational information from GPS to realize efficient sales activities of corporate sales representatives. It also increases productivity of marketing through centralized management of information on client companies and sales activities. In addition, VYMO's solution offers a function which suggests the most suitable sales route and action using artificial intelligence (AI) technology which is planned to be verified in view of implementation in the future.

VYMO has been adopted by various global insurance companies in Singapore and Sumitomo Life is the first in Japan to execute PoC with VYMO. VYMO’s Japanese partner ABeam Consulting, which has a wealth of consulting experience in the insurance industry will support the implementation process.

For more details read at the link [http://sp.sumitomolife.co.jp/english/newsrelease/pdf/nr20190509.pdf](http://sp.sumitomolife.co.jp/english/newsrelease/pdf/nr20190509.pdf)
Rice cracker maker Kamedea Seika to open Indian plant in June 2019

Source: Nikkei Asian Review, 21 April 2019

Rice cracker manufacturer Kamedea Seika is betting that Indians have a healthy appetite for its popular snack. It plans to start local production of its Kaki-no-Tane, a mix of flavored rice crackers and peanuts, in June.

The investment amount and production capacity of the new operation are unclear. Kamedea is the 1st Japanese rice cracker maker to jump into India’s huge market. In 2017 it established a JV with local giant LT Foods in northern state of Haryana.

Until now, Kamedea has imported its rice crackers into India from its plant in China. It will switch to local production when its new factory is up and running. India will be Kamedea’s 6th overseas production base, along with the U.S., Thailand and Cambodia. The new plant will produce an Indian version of Kaki-no-Tane under the Kari Kari brand. The company has shipped wasabi and chili garlic flavored crackers to India since 2017. They come in two sizes -- a 70 gram pack at 50 rupees (72 cents) and a 150 gram pack at 99 rupees.

Test marketing in Delhi and other cities showed there was more demand for the snacks than expected, particularly among the wealthy. India’s population is expected to continue growing for some time, so there will be no shortage of potential consumers. Kamedea decided to start producing locally, betting that it will be more profitable than importing from China.

The company will also enhance its product lineup in Vietnam, where it started selling fried rice crackers in 2014.

Japan's Daifuku buys 100% stake in India’s Vega Automation

Source: Business Standard, April 15, 2019

Japanese material handling equipment supplier Daifuku Co., Limited has acquired Hyderabad-based warehouse automation company Vega Conveyors and Automation for an undisclosed sum.

Vega will become a 100 % subsidiary of Daifuku post acquisition even though its MD Srinivas Garimella, who is the promoter, will continue to head the company as part of the deal that includes an earn-out package. Earn-out is a pricing structure where a part of the purchase price is based on the performance of the business following the acquisition, which comes in the backdrop of a booming warehousing infrastructure development in India.

Vega Conveyors, which operates a factory in Hyderabad and a design and development center in Pune, has several big corporate names on its client list, including Amazon, Flipkart, Hindustan Unilever among others. It has done a business of around Rs 60 crore last year, according to sources.

Daifuku established its Mumbai sales office in 2016 for their factory and distribution automation (FA&DA) division of its Indian subsidiary, Daifuku Indian Private Ltd. As the products must be manufactured and shipped from Japan to its Indian customers directly, Daifuku found a suitable target in Vega for business expansion and manufacturing footprint in India.

Following the acquisition Daifuku would setup the entire FA&DA manufacturing operations, involving a much bigger factory at Vega's present manufacturing facility in Telangana, according to Srinivas.

"Consolidating our expertise and capabilities with Vega will allow for the expansion of our manufacturing and distribution business segments within Asia," said Daifuku Co Limited managing officer Kanji Anno, who is also the general manager of FA&DA global operations at Daifuku.

Indian edtech startup “Classplus” raises $1.6 M Pre-Series A funding from Times Internet, GREE Ventures (Japan), others

Source: Yourstory 9th May 2019

Delhi-based edtech startup Classplus has raised $1.6 million in a pre-Series A funding round led by Times Internet and GREE ventures. Japanese VC firm Spiral Ventures, and existing investor Rising Stars Fund from the Netherlands also participated in the funding round.

Launched in January 2018 by Mukul Rustagi and Bhaswat Agarwal, Classplus is a mobile first SaaS platform that enables private coaching institutes and their tutors to streamline their content distribution, payments, communication and online assessments through the app. Tutors can conduct online assessments on the app and identify students’ learning gaps and track their performance over the a period of time.

The company plans to use the funds to expand its product offerings, ramp up the leadership team, and scale its operations. It is also building a data science engine that will leverage data on students’ learning patterns and enable predictive analysis on their assessment scores to prepare them better for competitive exams.

For more details read at the link https://yourstory.com/2019/05/edtech-startup-classplus-funding-times-internet
A sewage treatment system developed by a Japanese company has been introduced in India, where environmental contamination is increasingly severe while its economy continues to grow fast partly on the back of its population of some 1.3 billion.

The system developed by Taisei Kougyou Co., based in Yonago, Tottori Prefecture, facilitates the decomposition of foul water with the use of microorganisms. The system went on stream in Varanasi in northern India, a holy city for Hinduism, which is located along the Ganges, on April 22, in a project undertaken by the Japan International Cooperation Agency.

In India, work to install sewage facilities has failed to catch up with the pace of population growth. According to an Indian government survey whose results were announced last year, fecal coliform bacteria levels of up to 20 times the standard were detected at a ritual bath in Varanasi, attesting to severe water contamination.

Connected to public toilets in Varanasi, the water treatment system takes out liquids from sewage tanks. Using a special water-treating agent, the decomposition of foul water by microorganisms is facilitated, and the liquids are returned to the earth after being made clean and transparent through the process, according to Taisei Kougyou. Maintenance of the system is relatively easy. In Japan, the system has been adopted for toilets at parks and mountains.

“In India, sewage has been discharged into ditches, often leading to outbreaks of mosquitoes and flies, a situation that never happens in Japan,” Taisei Kougyou President Hiroyuki Mihara said. “As Indian society continues to develop, sewage treatment is an issue that should be dealt with right now,” he said, expressing hope that the company’s system will be of help.

From Udaipur to Japan: Agritech startup raises 10 M Yen, is selected for incubation programme

Udaipur-based agritech startup EF Polymer was selected for a 1-year residency incubation programme by the Japanese government at the Okinawa Institute of Science & Technology. The startup will also get a funding of 10 million Yen as part of the programme, as well as access to market, mentorship, clients, training, residency and a connect with other investors.

With OSIT, the founders of EF Polymer will look to explore ways to build better natural polymers. “Since it is a global programme, the Japanese government will be working with us closely. And if they like what we do, they will even help us set up a team and process there,” said Narayan Lal Gurjar, Co-founder of ePolymer.

The Eco-Friendly Water Retention Polymer is a super absorbent polymer that helps soil absorb and retain water for a long period of time to help crop growth. A completely natural product, polymer also helps preserve the integrity of the soil. The startup supplies the polymer to nurseries, farmers, vertical agriculturists and horticulturists near Udaipur & Rajsamand.

“We aim to gain as much experience and exposure. We want to expand to different parts of the globe and increase our reach. The problem is a global one and we believe working on it can change the lives of many farmers,” says Narayan.

Japanese teaching organic rice farming in UP

Japanese experts are teaching organic farming of Japanese rice in Allahabad for more than 10 years ago.

Their efforts are beginning to bear fruit. Crop yields have become stable, and farmers are enjoying income growth.

Among the experts is Teruo Miura, who heads the Makino School of Continuing and Nonformal Education at Sam Higginbottom University of Agriculture, Technology and Sciences in Allahabad in Uttar Pradesh.
Training Programme on “Good Fishing Vessel Practices”

Source: 2019 January MPEDA Newsletter - Focus Area

A training Programme on “Good Fishing Vessel Practices” to crew of fishing vessels in Thengaipattinam Fishing Harbour, Tamil Nadu with emphasis on quality control and deck maintenance was conducted on 7th December 2018. Network for Fish Quality Management and Sustainable Fishing (NETFISH), a society formed in 2006, took up this special event based on the request from the State Fisheries Office, Chinnamuttom.

Thengaipattinam is an emerging fishing harbor in Kanyakumari district with export potential landings. Good harvesting, handling and storage practices that minimize the risk of food safety problems help to preserve the value of the product need to be popularized.

As part of this initiative, 12 crew members of two mechanized fishing boards of Thengaipattinam were trained (awareness about the concept as well as demonstration) on “Good Fishing Vessel Practices for handling Tuna On-board”, with emphasis on the use of ice, hygienic handling, importance of dress code, proper cleaning of fishing vessels, etc.

A team of Japanese buyers led by Mr Kiyoshi Kimura, President, Kiyumura Corporation, Japan visited the Thengaipattinam, Colachel and Muttom fishing harbors during December 2018. The team had a look at fishing activities at the harbors, looked over the fishing boats and chatted with the crew. Impressed by the quality of fish, they asked the fishermen about the price they get for the catch and were surprised to know that the fishers are getting very low price for the tuna catch. They remarked that the fishers can gain more than double the price for the catch, provided the standards required in Japan are met. The delegates demonstrated to the fishers the procedure for cutting of Tuna, removing blood and packing in polythene covers.

The training offered by NETFISH to boat crew of Thengaipattinam helped to a great extent in meeting the quality standards of Japanese buyers. They expressed the willingness to buy tuna from the deep sea fishersmen of Thoothoor region in western Kanyakumari district, thus assuring a much better price.
Ambassador H.E. Mr Sanjay Kumar Verma inaugurated the India Autoparts Business Matching Expo organized by FOURIN and co-organized by Japan India Industry Promotion Association (JIIPA) & Automotive Component Manufacturers Association of India (ACMA) at Nagoya. Ambassador delivered Welcome Address at the expo and interacted with the participating companies.

The auto component Industry in India is a fast-growing sector with an increase in turnover of US $ 43.5 billion in 2016-17 to US$ 51.2 billion in FY 2017-18. “ACMA Vision 2020” is to achieve a turnover of US $ 100 billion by 2020 is a feasible target. Autoparts Match Making Expo is aimed at creating an enabling environment for the auto component industry to achieve greater efficiency through robust collaboration with Japan. Autoparts Match Making Expo will showcase the engineering and manufacturing capabilities of the Indian auto component industry and will serve as a platform for joint ventures and technical collaboration between the auto component industries of India and Japan.

External Affairs Minister of India Mrs Sushma Swaraj attended the celebrations at the Embassy of Japan, New Delhi to commemorate the Imperial Succession by His Majesty the Emperor Naruhito and extended warmest greetings to the People of Japan for the new Reiwa Era.

Prime Minister of India Narendra Modi conveyed his congratulation in words ‘As Japan embarks on the new Reiwa era of beautiful harmony, I wish my dear friend Shinzo Abe, the Prime Minister of Japan and through him, all the people of Japan peace, prosperity and happiness’.

Please see the message by Mrs Sushma Swaraj (English) below with official translation (Japanese).

On behalf of the people of India and myself, I would like to extend our warmest greetings to the people of Japan on this historic day when Japan makes the historic transition from the Heisei era to the Reiwa era with the accession of His Majesty the Emperor Naruhito to the Chrysanthemum Throne. We will forever remember the Heisei era under His Majesty the Emperor Akihito, particularly his visit to India in 2013, as India-Japan relations witnessed the monumental transformation into a Special Strategic and Global Partnership. India earnestly looks forward to the Reiwa era as ushering in a new chapter of ‘beautiful harmony’ in our bilateral relationship, taking it to unprecedented heights and bringing shared peace and prosperity for our peoples.

(Sushma Swaraj)
May 1, 2019

2019年5月1日の新天皇陛下即位に際し、インド外務大臣
が在インド日本国大使館内の方名帳に記した挨拶のメッセージ

徳仁親王殿下が新天皇に即位され，平成から
令和へと日本の元号が厳かに変わったこの記念すべき日には，インド国民を代表して日本国民の皆様に心よりお詫び申し上げます。また同時に，明仁上皇陛下が天皇でいらした平成の時代を大変模様しかרבいます。特に日印関係が特別戦略的グローバルパートナーシップへと記念すべき移行を遂げた2013年のインド御訪問のことは鮮明に思い出されます。インドの私たちは，令和時代が両国の二国間関係に“美しい調和”という新たな章をもたらし，これをかつてない高みへと押し上げ，両国民が共有する平和と

(Sushma Swaraj)
(スシュマ・スワラージ)
2019年5月1日
A 9 member steel delegation from India led by Secretary (Steel) Mr. Binoy Kumar paid a 4 days visit (13-16 May’19) to Tokyo where secretary was to participate in the steering committee meeting of the Global Forum for Steel Excess Capacity (GFSEC) under G20 mandate. The other member of the delegation comprised Chairman & ED, SAIL, Director & ED, National Mineral Dev. Corp. (NMDC) and Chairman & ED of Rashtriya Ispat Nigam Ltd (RINL). On the eve of the GFSEC meeting (15-16 May’19), the delegation made a field trip to JFE Steel Works Chiba to get a first hand experience of steel making in a Japanese facility. Apart from attending several one-to-one meetings with Japanese steel companies including Kobe Steel, Mitsui, Mitsubishi Steel, Daido Steel, the delegation met with the Vice Minister of METI Mr. Terazawa on May 13. An India-Japan Steel Seminar was organized by Japan Iron & Steel Federation in association with METI and Indian Embassy to promote Japanese investment in steel sector in India. Cd’A a.i Mr. Raj Kumar Srivastava delivered the opening remarks while Secretary (Steel) Mr. Binoy Kumar delivered the key note speech. During the visit a networking dinner was hosted on 13th May 2019 which saw participation of executives from 10 Japanese Steel companies. Opening remarks were made by Cd’A a.i. Mr. Raj Kumar Srivastava followed by remarks by Secretary (Steel). Mr. Yoshitake, Director from MOFA, Japan offered the toast.

**G20 Agricultural Ministers’ Meeting, Niigata**

The G20 Agriculture Ministers’ Meeting was hosted by Japan in the city of Niigata on 11-12 May 2019 in which the Indian delegation was led by Dr. Ramesh Chand, Member, NITI Aayog and Indian candidate for the forthcoming election for the post of DG, FAO (elections due on 23 June 2019). Using the opportunity of this meeting attended by 26 countries, in all 17 bilateral meetings were organized by the Mission to provide the member countries of FAO the credentials of Dr. Ramesh Chand for the post of DG, FAO.
As per the Part V of the Constitution of India (https://www.india.gov.in/sites/upload_files/npi/files/coi_part_full.pdf), the Union executive consists of the President, the Vice-President, and the Council of Ministers with the Prime Minister as the head to aid and advise the President.

**President**

The President is elected by members of an electoral college consisting of elected members of both Houses of Parliament and Legislative Assemblies of the States in accordance with the system of proportional representation, by means of single transferable vote. To secure uniformity among states *inter-se*, as well as parity between the states as a whole, and the Union, suitable weightage is given to each vote. The President must be a citizen of India, not less than 35 years of age, and qualified for election as member of the Lok Sabha. His term of office is five years, and he is eligible for re-election. His removal from office is to be in accordance with procedure prescribed in Article 61 of the Constitution. He may, by writing under his hand addressed to the Vice-President, resign his office.

Executive power of the Union is vested in the President, and is exercised by him either directly or through officers subordinate to him in accordance with the Constitution. Supreme command of defence forces of the Union also vests in him. The President summons, prorogues, addresses, sends messages to Parliament and dissolves the Lok Sabha, promulgates Ordinances at any time, except when both Houses of Parliament are in session, makes recommendations for introducing financial and money bills and gives assent to bills, grants pardons, reprieves, respites or remission of punishment or suspends, and remits or commutes sentences in certain cases. When there is a failure of the constitutional machinery in a state, he can assume to himself all, or any of the functions of the government of that state. The President can proclaim emergency in the country if he is satisfied that a grave emergency exists, whereby security of India or any part of its territory is threatened, whether by war or external aggression or armed rebellion.

The present President of India is Shri Ram Nath Kovind (https://presidentofindia.nic.in/).

**Vice-President**

The Vice-President is elected by members of an electoral college consisting of members of both Houses of Parliament in accordance with the system of proportional representation by means of single transferable vote. He must be a citizen of India, not less than 35 years of age, and eligible for election as a member of the Rajya Sabha. His term of office is five years, and he is eligible for re-election. His removal from office is to be in accordance with procedure prescribed in Article 67B.

The Vice-President is ex-officio Chairman of the Rajya Sabha and acts as President when the latter is unable to discharge his functions due to absence, illness or any other cause, or till the election of a new President (to be held within six months when a vacancy is caused by death, resignation or removal or otherwise of President). While so acting, he ceases to perform the function of the Chairman of the Rajya Sabha.

The present Vice-President of India is Shri M. Venkaiah Naidu (https://vicepresidentofindia.nic.in/).

**Council of Ministers**

There is a Council of Ministers headed by the Prime Minister to aid and advise the President in exercise of his functions. The Prime Minister is appointed by the President, who also appoints other ministers on the advice of Prime Minister. The Council is collectively responsible to the Lok Sabha. It is the duty of the Prime Minister to communicate to the President all decisions of Council of Ministers relating to administration of affairs of the Union and proposals for legislation and information relating to them.

The Council of Ministers comprises Ministers who are members of Cabinet, Ministers of State (independent charge), Ministers of State and Deputy Ministers.

For details about the present Council of Ministers please visit https://www.india.gov.in/my-government/whos-who/council-
# The Indian Connection

## Science & Technology / Sports / Education

### India-Japan Joint Research Projects under MHRD, GoI’s SPARC

With aim to bring greater international exposure and to strengthen research collaborations, the Ministry of Human Resource Development (MHRD), Government of India (GoI) announced its flagship programme “Scheme for Promotion of Academic and Research Collaboration (SPARC)” in 2018. The scheme funds/promotes joint research projects between the best Indian Institutions and highly ranked foreign universities. The scheme has drawn enthusiastic response from the academic community and as on date out of total approved projects, 12 joint projects are from the Universities of Japan. For more details of the scheme visit the website [https://sparc.iitkgp.ac.in/apProposal_list.php](https://sparc.iitkgp.ac.in/apProposal_list.php)

### Ayurveda Research

**Extract of Emblica officinalis enhances growth of human keratinocytes**

A group of researchers led by Dr. Takaaji Y. of Graduate School of Nanobioscience, Yokohama City University, Kanagawa, Japan conducted a study on extract of *Emblica officinalis* (Amla fruit and commonly used in Ayurvedic medicines) and on the basis of study suggested that it enhances the growth of human keratinocytes in culture as it contains the compounds that would be beneficial for human skin health because enhanced growth of keratinocytes would promote wound healing. The research was published in the Journal of integrative medicine 17(2): 141-146, March 2019.

### Japanese learning centre opens at CUSAT, Kerala

The CUSAT-Shimane Joint centre for Japanese language was inaugurated by Yasunao Hattori, President of Shimane University, Japan at the Cochin University of Science and Technology (CUSAT) in December 2018.

The centre assumed significance at a time when knowledge of Japanese language was a pre-requisite for opportunities emerging in technical and non-technical fields.

Shimane University had entered into an agreement with CUSAT in 2016. A two-week-long student exchange programme was started as part of the initiative and nearly 24 students from School of Engineering, Polymer Science and Rubber Technology and Marine Science departments are in Japan as the part of the programme.

### Sano International Cricket Ground, Japan

Sano International Cricket Ground is a cricket ground in Sano, Japan. The stadium is a headquarters of the Japan Cricket Association and has hosted various international tournaments such as the Women’s East Asia Pacific Trophy in 2014, the East Asia Cup in 2016 and the 2019 Under 19 World Cup Qualifier for the EAP Region. The ground features three turf pitches and there are plans to develop the ground to in order to host one day international matches.

### CSIR lab Central Drug Research Institute developed a Nutraceutical Formulation of Spinacea oleracea (Spinach) for Osteoarthritis

The CUSIR lab Central Drug Research Institute developed a Nutraceutical Formulation of *Spinacea oleracea* (Spinach) for Osteoarthritis.

### Rabindranath Tagore

Rabindranath Tagore, India’s 1st Nobel Prize winner, was a great admirer of Japanese martial art. He invited Shinzo Takagaki, known as the father of Judo in Asia, to Shantiniketan in 1929 & that’s how India’s journey of...
Tour of ICCR sponsored Odisha folk dance and music troupe ‘Vision Odisha’ to Japan

An Odisha folk dance and music troupe “Vision Odisha” led by Sh. Sarbeswar Behera and sponsored by the Indian Council for Cultural Relations (ICCR) toured Japan.

The troupe participated in the 4th Namaste India in Onagawa held on 4th May 2019 as an offshoot of the annual Namaste India Festival in Yoyogi Park, Tokyo. The event was organised by NPO Society to Promote India-Japan Cultural Relations. Onagawa was the site where the 46 member Indian NDRF team conducted relief and rehabilitation operations immediately after the earthquake and tsunami of 2011, and the Namaste India event being held there was a direct result of the NDRF’s efforts as well as continued mutual exchange activities by the Embassy. The event was inaugurated by Sh Bramha Kumar, Counsellor (IEC & Political). The varied programme included performances, demonstrations and talks by Mr Chadha, an Indian Enka singer; Ms Hitomi Kobayashi, Yoga Teacher; Bharatanatyam dancers Ms Kimiko Ohtani, Ms Miki Yahiro and Ms Kaname Tomiyasu; Ms Nae Meguro of Kadamb Japan; Silsila Lica Bollywood Dancers with Teju Kathak; Mr Kenichiro Hiramoto of NDRF Interpreters Team; and, Mohiniyattam no Kai. Mr Dai Miyamoto, a local junior high school student talked about his interest in India, and gave thanks on behalf of the people of Onagawa. The event saw enthusiastic participation by local residents and visitors to Onagawa.

The troupe performed to great acclaim at the Vivekenanda Cultural Centre, Embassy of India on 9th May 2019. Performance items included Abhimanyu Chakravyuha, based on the story of the battle of Kurukshetra from Mahabharata; Pangu Langhayate Giri, a dance portraying a story of a one-legged dancer who overcomes insurmountable odds; and, Laudhi, a dance performed by the Gopal people of Odisha on the occasion of Holi. To conclude the event, H.E. Sanjay Kumar Verma, Ambassador of India to Japan, felicitated the artists and the local sponsor team.

Nohkalikai falls, the tallest plunge waterfall in India. The waterfall is located near Cherrapunjee, Meghalaya

There is a very important bridge of culture joining the countries of India and Japan. Buddhist and Hindu deities of India are worshiped by the people of Japan. The 5th century Sanskrit script is revered in Japan and its letters denoting different deities, are considered sacred by the Japanese.

To watch the documentary visit the link https://www.youtube.com/watch?v=ff95twceJR4&feature=youtu.be

Documentary - “Indian Deities Worshipped in Japan”
H. E. Sanjay Kumar Verma, Ambassador of India to Japan visited on 9th May 2019 the exhibition “Wisdom of India” organized by Toyo Bunko Museum, Tokyo. Toyo Bunko Museum, founded in 1924, is one of the five largest Asian studies research libraries in the world and the oldest and the largest institution of its kind in Japan. The dignitaries of Toyo Bunko Museum like Mr. Yasuyuki Sugiu, Managing Director, Hirano Kenichiro, Director, Mr. Yamakawa Naoyoshi, Executive Advisor and Ms. Rena Okazaki, Chief Curator took Ambassador on a tour of the exhibition and museum. Ambassador donated the book on Gandhi to the library and assured the authorities of all the possible help from the Embassy of India.

An event commemorating the Buddhist monk Bodhisena, who was the first recorded Indian to arrive in Japan, was held at Daianji, Nara Prefecture on 12 May 2019, by NPO Society to Promote India-Japan Cultural Relations with the support of the Consulate General of India, Osaka-Kobe; and Embassy of India, Tokyo. On the invitation of Emperor Shōmu, Bodhisena travelled to Japan to spread the use of Sanskrit and establish Huayan Buddhism. The event was inaugurated by Shri Balasubramanian Shyam, Consul General of India, Osaka-Kobe, and a lecture on Bodhisena was given by Prof. Siddharth Singh, Director, Vivekananda Cultural Centre. Vision Odisha, an east Indian folk dance and music troupe sponsored by the Indian Council of Cultural Relations, performed at the event.

Late Prof. Kazuo Azuma was the man behind the translation of Tagore’s complete works directly from Bengali into Japanese (project started in 1973 with a team of Japanese scholars). The work in 12 volumes was published by Daisanbummei Publications, Kolkata. Late Prof Azuma dedicated his life to bringing about a deeper appreciation of Tagore in Japan through his essays and translations of accounts by Japanese scholars who were closely associated with him. He was the driving force in executing Tagore’s dream of setting up Nippon Bhavan (centre for Indo-Japan studies) in Shantiniketan through the Japan-India Tagore Association and the establishment of Bharat-Japan Cultural Centre at Rabindra-Okakura Bhavan, Kolkata (inaugurated by the Prime Minister Shinzo Abe in 2007).
Today’s fast-paced and hectic world of ever-increasing competition, complemented by the deteriorating conditions of world peace, has greatly troubled the human mind. With plethora of things happening all around us, we are covered in knowledge and information like never before, and we don’t know how to handle it all. Humans now mostly live in a state of worried ness and tension rather than happiness. Hence, it is vital that we bring about the necessary changes in the roots of our teaching methods (SHIKSHA PADHHTI).

Until and unless we inculcate Yoga teachings in the current education system (SHIKSHA PADHHTI), the proper development of a person cannot take place.

Yoga teachings provide the person with physical (sharirik), mental (maansik), social (samajik) and spiritual (adhyatmik) developments resulting in an all-around development.

In order to control this troubled and impatient mind and lead it towards calmness and happiness. Everyone likes serenity of mind always. Everyone likes to be happy always, so Maharishi Patanjali has given four keys, in the first chapter of his yogdarshan (1:33) which is related to the philosophy of yogic lifestyle, provided the solution for such minds. Patanjali’s Yoga Sutra has a sloka (Sanskrit) i.e. maitra karuna mudita-pekshan sukha-dukhya punya-apunya-visayin bhavanatah citta-prasadanam ॥33॥ (मैत्री करुणा मुदितोपेक्षाणा सुखिुुःख पुण्यापुण्यविषयाणां भावनातः चित्तप्रसादनः ॥3३॥), which means “All that is mutable in human beings (chitta) is harmonized through the cultivation of love (maitri), helpfulness (karuna), conviviality (mudita) and imperturbability (upeksha) in situations that are happy, painful, successful or unfortunate.”

To open the four locks which comes in our life these are the four keys:
1) Maitree - Maitree means friendship and goodwill to one and all for happy people. One must always be friendly and kind to every person, regardless of whether or not one knows that person or not.
2) Karuna - Karuna means compassion to those who are unhappy or in distress. One must show compassion for someone who is suffering. This suffering can be of many types, it could be mental, physical, social problems but one must have sympathy for them.
3) Mudita - Mudita means delight or gladness for those who are virtuous or in good conditions. A person should be happy to see another person doing well in their life. There should not be jealousy but happiness for each other among the people.
4) Upeksha - Upeksha stands for Disregard or even-mindedness or letting go. It means that one must be let go, or be different to, people who are wicked, vicious, cruel, immoral only after giving them a chance to improve their behaviour.

One must love the happy ones and not be jealous of them. On seeing suffering and sad people, always look for ways in which you can help them to get rid of the sadness and show sympathy towards them, rather than looking at them with disgust and disdain.

Respect the good souls and appreciate their noble work with happiness, rather opposing them. Also, look for opportunities to guide and correct those who sin, or those who think evil of the others. If they do not change their ways, never agree with them on those points but do not hate them or show disgust. Let them find their path on their own. With a friendly heart and a calm mind, always strive for happiness.

International Day of Yoga Logo
Folding of both hands in the logo symbolizes Yoga, which reflects the union of individual consciousness with that of universal consciousness, a approach to health and well being. The brown leaves in the logo symbolize the earth element, the green leaves the nature, blue the fire element while the sun symbolizes the source of energy and inspiration. The logo reflects harmony and peace for the humanity which is the essence of Yoga.

Common Yoga Protocol (CYP): CYP is essentially a specified sequence of Yoga Asanas of 45 minutes duration. The Asanas and practices forming part of the CYP are selected in such a way as to yield the max health & wellbeing rewards to a diverse group of people from different profiles of health, age, etc. Experts are of view that beginners can learn CYP in about 15 sessions of one-hour duration each. Please visit following links for free downloads:
The Embassy of India stands in front of the Chidorigafuchi Moat, in Kudanshita (Kudan-minami, Chiyoda-ku). For most of us, it is a place to go to obtain a visa, but some people go there to take lessons. The Embassy of India established the Indian Cultural Centre ten years ago. It was later renamed “Vivekananda Cultural Centre” by Prime Minister Mr. Narendra Modi. The centre offers five cultural courses including yoga.

The attendance fee for the yoga class is surprisingly affordable: 18,000 yen for the twice-a-week course, and 15,000 yen for the once-a-week course, for a term of six months. I first thought, “It can’t be that cheap. It must be 18,000 rupees, not yen.” (It would be 30,000 yen only, though) I called the embassy and found out that the unit is really “yen.”

The class is taught by an experienced Indian yoga teacher dispatched from India. The twice-a-week course consists of approximately fifty lessons. It means the attendance fee for one lesson is 360 yen only. When I asked the embassy’s person-in-charge why it is so inexpensive, he said, “It is because the Indian government wants to promote the authentic Indian yoga.”

Yoga was originally a religious training for obtaining the state of “enlightenment.” It later developed into a form of stretching exercise, and became popular in the western world. Nowadays hot yoga and other variations of yoga are practiced all over the world. Against this backdrop, Indian government is seeking to promote the authentic Indian yoga.

I decided to go to the embassy to check out yoga class. I attended Advanced Class taught by Dr. Reeta Sharma, who is from the state of Madhya Pradesh. About 10 lady students were attending the lesson at the embassy’s sunny yoga studio facing the Kitanomaru Park. The lesson was taught in English, but the students were following her instructions without difficulty. During the lesson, Dr. Sharma explained about the postures, Pranayama, and efficacy of each exercise. During difficult postures, some faces looked red. A few others were huffing and puffing. Dr. Sharma was effortlessly demonstrating all the postures.

After the lesson, I asked Dr. Sharma a few questions about the traditional Indian yoga. “Many people seem to think yoga is a form of stretching exercise, but, there are actually eight stages of the authentic yoga practiced in India. First, you must discipline your conduct. Then, you train your body in order to control your mind, turning five senses into inner self, meditate to attain the state of no-thought, and uplift your spirit.” There are different schools of yoga in India.

The eight stages of yoga are as follows: The objective of Yama and Niyama is to discipline your conduct. The purpose of Asana is to master basic sitting postures. Pranayama is a series of breathing exercise that you practice while maintaining correct postures. Pratyahara means to withdraw five senses and turn them towards inner self. Dharana is the practice of concentration. Dhyana is meditation or contemplation. The final stage is Samadhi, where you aim to attain enlightenment.

“Stretching is a part of Asana. It is only a part of yoga. If you cannot maintain an appropriate meditation posture, you will suffer from pain and a sense of discomfort, and lose your concentration.” “Asana and Pranayama can help you attain mental concentration, and improve your blood circulation. Many people in India practice these as means to improve their health.”

Dr. Sharma pointed out that the present-day yoga boom sheds light on yoga’s commercial aspects only. Sometimes, athletic stretching and different styles of exercise are taught as “yoga.”

“When I was living in the U.K., I was shocked to see what was called ‘Beer Yoga’ on TV. People were drinking beer as they stretched and danced. I would like you to know that in India, yoga was originally practiced for divine purposes. I am teaching yoga at this embassy to promote what yoga is really about. The origin of “Beer Yoga” is not known (one theory points to Germany). It is a form of exercise in which you drink beer while doing yoga postures and other forms of exercise. It seems to be spreading in Japan as well.

Dr. Sharma is teaching authentic yoga, which enables you to gradually integrate your body and mind. attain one-pointedness, and uplift yourself. The objective of the embassy’s yoga class is to promote the real yoga originated in India.

VVC will recruit students for the next term’s yoga class (starting July, 2019) at the end of May. The registration will be closed when the capacity is reached. New students and those who have taken a leave of absence for more than one term must pay the registration fee of 5,000 yen, in addition to the attendance fee.