In a first, IIT Hyderabad has started a B.Tech degree in Artificial Intelligence. The aim is to create a complete ecosystem for AI academics and research. This involves B.Tech, M.Tech and minor programmes in Al. Moreover, the R&D will be strongly entwined with academics.

INTERVIEW:

PRIYANKA ANAND,

MONDAY, JANUARY 21, 2019

VP & head, HR, Ericsson

We've done away with Bell Curve system for appraisals

Companies are moving away from the 'bell curve system' of performance appraisal, and are instead looking at a holistic appraisal process. A 'bell curve' typically segregates employees as non-performers, average and top performers—with majority treated as average—and hikes, if any, are usually based on the rating given. Ericsson, the telecom MNC, is one of the latest to drop this system. "We now focus on assessing the impact an individual makes, as opposed to activities undertaken," says Priyanka Anand, the vicepresident & head of HR, South East Asia, Oceania & India, Ericsson. In an interview with FE's Vikram Chaudhary, she shares how technologies like AI and ML are reshaping the traditional workplace. Excerpts:



How is talent requirement in the Indian telecom space evolving?

The digital boom has changed talent requirements. Advent of technologies like AI and ML has created new opportunities, and are reshaping the traditional workplace—polls have indicated it will have a positive impact on job creation. AI and ML will create opportunities for reskilling and redeployment of the workforce, as some jobs will become automated. It will also necessitate fresh hiring of professionals.

Which are the new skill-sets in demand, and how are you meeting them?

Current hiring trends show the need of people with techno-commercial skills and strong business acumen has increased. At Ericsson, we ensure talent is future-ready. While we do classroom sessions, major upskilling is executed via training on-thejob and partnering with vendors and customers to co-create products and services.

How do you retain talent?

Retention keeps me and my team up at night.While we provide cutting-edge projects to work on, a great work environment, the ability to work and live across the globe, the market is changing fast. To retain people, we understand their needs, and then create avenues to enable their growth. Retention and RoI are a two-way street. Employees have the responsibility to deliver, while organisations have the responsibility to provide opportunities and rewards that work for employees.

Why did Ericsson drop the bell curve system for performance appraisals?

We focus on assessing the impact an individual makes, as opposed to merely the activities undertaken. It's not just about what has been achieved, but also about how it is achieved—that's why we have done away with the bell curve system.

How do you see future hiring?

This year will see a rise in the requirement of skilled network engineers. New roles will emerge in the areas of R&D and analytics as we get closer to 5G deployment. At Ericsson, we plan to hire 150 data scientists, engineers, ML/AI architects and software developers this year for the newly set up Global Artificial Intelligence Accelerator (GAIA) in Bengaluru.

The MBA Tour is now part of GMAC

Graduate Management Admission Council (GMAC), a global B-school association, has acquired The MBA Tour, which supports B-schools' recruiting efforts by organising business education events around the world. "GMAC will grow The MBA Tour's core offering, expand into more markets, and deepen interaction between B-schools and prospective students in a personalised, data-rich manner," GMAC said in a statement. GMAC will expand The MBA Tour events into the underserved markets. The MBA Tour started in 1993. It hosts over 60 business education events each year and connects students with B-schools from Europe, Asia, North/South America & Australia.

FE BUREAU

INDIAN MANAGEMENT EDUCATION

Resurrection on the global map?

Can the Times Higher Education (THE) Emerging Economies University Rankings 2019 of Indian institutions show the way?

RAJIV R THAKUR

THE INDIAN HIGHER education fraternity is abuzz with the Times Higher Education (THE) Emerging Economies University Rankings 2019, where 49 universities from India have found place in top-450, up from 42 last year. Also, while 17 Indian universities were ranked in top-200 last year, this year the figure has risen to 25. However, the top-two—Indian Institute of Science and IIT Bombay—dropped a rank each due to increased competition.

As far as management education is concerned, the FT Global MBA Ranking 2018 included three Indian institutions (ISB, IIMA, IIMB) in top-100. An indicator of the strength of institutions is the application pull they enjoy across the globe. The Graduate Management Admission Council, owner of GMAT, publishes application trends for management programmes, which shows that while global application pipelines were the largest for programmes in Europe (89%), Canada (70%) and the US (57%), in India's case it is abysmally low



China represent the largest volumes of applicants to programmes worldwide, indicating interests of students outside their own country. This is a sad state of affairs for Indian management education. But what are the reasons for the same?

To begin with, students and aspirants feel that India is producing nothing but workbots for MNCs. A typical management programme offered in India is of two years, spread across trimesters/semesters comprising of 35-plus courses, between compulsory (20-25) and electives (10-12), with the overall teaching load of 1,100-(less than 1%). On the contrary, India and odd hours plus internships (globally, this School of Management, US, emphasise on

figure is 700-800). Core courses are more or less standard across programmes and electives (though offered in bouquet and revised according to needs) are limited, even though students have diverse backgrounds, work experiences, purposes, interests and aptitude. Initiatives on new pedagogical tools for experiential learning lag behind global standards.

Aglance at the programme design, curriculum and pedagogical tools used by top global institutions reveals startling differences as compared to those in India. For instance, MBA programmes of the Kellogg

an "innovative portfolio that helps students find the ideal balance among professional, educational and personal goals." Also, in most noted global institutions, MBA students typically have work experience nothing less than three years.

A major differentiator is personalised curriculum. MIT Sloan offers students a choice to "self-manage" their curriculum to match their interests and career goals. INSEAD (Europe) has a one-year accelerated full-time MBA. At Wharton, students can choose their own electives—from 200 courses across 10 academic departments.

Coming back to the THE University Rankings 2019, while these take note of the good teaching capabilities developed in India, these also mention shortcomings in research and international outlook indicators. Taking cue from these rankings, management education in India can draw a roadmap for itself. Also, while it is a good sign that some corporates have set up institutions with good intention, it is the institutes of national importance (IIMs, IITs) and others established ones who have to gear up to the needs of the nation. Institution building of eminence is a time-taking process, and a shortcut and populist approach so far followed by the government, devoid of futuristic realities, will not be good for management education.

The author is dean, Development, and professor, Strategy, Birla Institute of Management Technology

One-year MBA: Should you consider it?

The role of one-year MBA in changing market dynamics

HIMADRI DAS

OLD BUSINESSES ARE fighting a battle of survival and new ones with asset-light models are disrupting the status quo. There are two key developments: One, the omnipresence of high-speed internet and its accessibility at everyone's fingertips, thanks to smartphones; two, rapid advances in data storage and computing. Skills and competencies required in this landscape have undergone a tsunami-like upheaval. The career growth of executives hinges on their ability to acquire new competencies in a comprehensive manner. Unfortunately, there are no shortcuts to this; it requires putting in the hard yards through the rigours of good quality management education. The good news is that business schools are cognisant of this, as is evident from the full-time one-year MBA programmes that have been designed especially for mid-level executives.

Building new-age competencies: Top one-year MBA programmes focus on executives with typically five or more years of work experience, and help them develop the competencies that will equip them to take on the challenges of the current busi-

ness environment. These programmes have specialised curriculum in the areas of analytics, AI, ML, IoT, blockchain, in addition to core management functional areas of marketing, finance, opera-

tions and HR.

curriculum in the areas of analytics, blockchain, AI, ML, IoT, in addition to core management areas of finance, HR, marketing, operations, etc

Top one-year MBA

programmes have

Moving up the corporate ladder: It often happens that after certain years at work, due to limited opportunities, career growth slows down. One-year MBA helps experienced executives in climbing a steeper learning curve.

Dopportunity to unlearn, relearn: Companies recognise the value of such programmes and often sponsor their executives to enrol in these. Also, a growing number of mid-level executives are quitting their jobs and enrolling in such programmes as they realise it is imperative for them to unlearn and relearn, to transform themselves from old economy to new economy executives. This is the only way to catalyse career growth in a business environment that is caught in the swirling rapids of fast-changing market dynamics.

▶ Industry-aligned curriculum: The best way to develop curriculum for such programmes is by collaborating with industry. In addition, the competency development for mid-level executives is significantly enhanced when industry practitioners teach part of the curriculum. Business schools located in corporate hubs and with a strong industry connect obviously have a distinct advantage in creating a superior curriculum and learning outcomes for their students.

Networking opportunities: It opens a multitude of networking opportunities. The classroom is composed of a diverse pool of professionals from different sectors and functions, making it easier to learn from the peer group and build relationships that will help in the future.

The author is director general, IMI Delhi

Science & tech

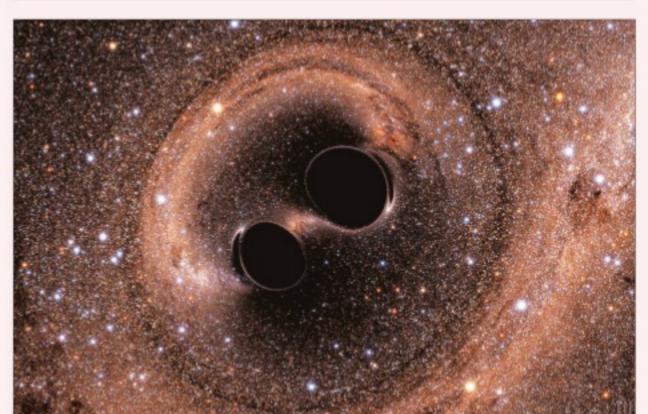
Cutting-edge physics & imagination

FAYE FLAM

IF PHYSICISTS ARE NOT badly mistaken, a new kind of observatory is endowing humanity with the ability to "hear" ripples in space. We are told that these ripples, called gravitational waves, are emanating from a dramatic series of collisions between black holes, and one between two burned out stars made of material so dense that a teaspoon made from it would weigh a billion tons. Scientists this week announced four new collisions, making a total of 11 since 2015. When black holes collide, they can give off, for an instant, more energy than all the stars in the known universe combined. With our universe such an active demolition zone, it's probably a good thing that "hearing" is strictly an analogy.

But what if the physicists are wrong? Some critics have floated the possibility that the researchers are misinterpreting the signals from their detectors—twin instruments in Louisiana and Washington state, collectively known as LIGO, joined more recently by a third, called Virgo, in Italy. One group, led by physicist Andrew Jackson of the Niels Bohr Institute in Copenhagen, has used LIGO data to try to replicate some of LIGO's early results. The group found they couldn't.

That failed replication led to a cover story in the magazine *New Scientist* under the headline "Exclusive: Grave doubts over LIGO's discovery of gravitational waves." The story was not necessarily so grave, however. One of the strengths of physics is that this kind of cross checking is normal. In social science and some areas of biology, it's been traditional for papers to enter the scientific literature without independent verification. That's led to the unhappy discovery of a "replication crisis," with follow-up studies in those fields callThere's a leap of faith to believe in invisible collisions between invisible objects sending out invisible waves



ing into question as much as half the published literature. Physics has had its share of blunders, many of them back in the early and mid-20th century, but since then, physicists have gotten in the habit of verification. Bad results often get exposed within weeks of initial publication. And so the science can build upon itself. We don't have to assume, for example, that black holes exist even though we can't see, hear or smell them.

Back in the early 1990s, I wrote a story for Science called "How to Find a Black Hole,"which explained how, if black holes indeed existed, they would exert gravitational force and could move objects around them in such a way that scientists could infer their locations and masses. Now there's a whole catalogue of them.

It's one thing to observe the way invis-

ible objects move visible ones, but now we're talking about invisible collisions between invisible objects sending out invisible waves. Is this getting too far from reality? To find out, I called LIGO physicist Neil Cornish, of Montana State University. He'd been quoted in the New Scientist story talking about the failed replication.

He said he and his colleagues have taken those criticisms seriously. They've looked at the Danish group's calculation and figured out why it differed from their own. It doesn't call into question any of the 11 published detections, he said.

Another criticism in the New Scientist story was that some of the LIGO group's detections rely on a sort of template—a theoretical picture of what a black hole collision would look like, against which they compare their data.

laboration and there are multiple semiindependent groups within the collaboration that used really quite different methods." And so they are moving on from detecting gravitational waves to using

confirmation bias.

When they subtract what they think is a

signal, they should be left with noise.

That, so the critics charged, would limit

them to finding only what they expect to

see—and perhaps put them at risk for

methods that rely on different theories, or

don't rely on pre-conceived models in the

first place, Cornish said. "We're a large col-

But they also analyse their data with

them to observe the cosmos. "We'd like to see a neutron star get torn apart by a black hole," he said. Then there's the possibility of detecting weird effects from spinning black holes, including what he called a space-time tornado. And then there's the hope they will find something completely unexpected. Could this all be illusory? As time goes on the odds get lower. MIT physicist Scott Hughes, who is not part of the LIGO collaboration, said that the data have always been available and that now the collaborators are planning to offer tutorials in how they did their analysis. There's always a risk of being wrong in science, but less so when there's ample opportunity for outside criticism and

double checking. As more of the obvious, easy things in the universe are discovered and studied, scientists are forced to resort to ever more indirect, difficult kinds of observations. Beyond the risk that LIGO wouldn't work, there was also a risk that the kinds of phenomena powerful enough to set off its detectors didn't exist. But if these results are not a grand illusion, we can conclude that there's a lot more to the universe than meets the eye.

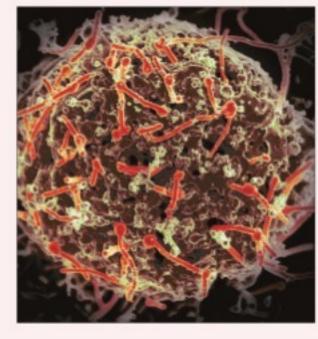
BLOOMBERG

The X factor

Vaccine researchers are preparing for Disease X. They hope to be able to create new vaccines in just four months

LASTYEAR, THE World Health Organisation published a plan to accelerate research into pathogens that could cause publichealth emergencies. One priority was the bafflinglynamed"DiseaseX".TheXstands for unexpected, and represents concern that the next big epidemic might be

caused by something currently unknown. Preparing for such an eventuality is challenging, but not impossible. That, at



least, is the view of the Coalition for Epidemic Preparedness Innovations (CEPI), a charity in Oslo, Norway. Over the past few years, CEPI has spent more than \$250m trying to accelerate progress in vaccines for Lassa fever, MERS and Nipah virus. Work on Rift Valley fever and Chikungunya should start soon. Dealing with Disease X, however, requires a novel approach, so CEPI is sponsoring attempts to find quicker ways of making vaccines in general. At the moment, says Melanie Saville, the organisation's director of vaccine development, it takes two or three years from the isolation of a previously unknown virus to the clinical availability of a vaccine against it. The coalition is therefore dividing almost \$20m between two groups who are working on ways to speed up the process.

The first hails from Imperial College, London. Its members are trying to develop a reliable way of making "self-amplifying" RNA vaccines. Conventional vaccination involves injecting into a recipient's body either pieces of protein from a virus's outer surface or whole viruses that have been weakened in some way. That lets the immune system learn what the virus looks like. However, a similar effect can be achieved by injecting, in the form of RNA, a molecule similar to DNA, genes that encode the relevant protein. The body's own cellular machinery can then create the target protein from these instructions. The vaccine is termed self-amplifying because, along with code for the protein, further code is injected that will amplify

the amount of RNA. The second new approach CEPI is sponsoring is called a "molecular clamp". This is being developed at the University of Queensland, in Australia. It is a way of synthesising viral-surface proteins with particularly high fidelity. Typically, these proteins are unstable and tend to change shape easily. If the immune system learns the wrong shape, it will not generate the necessary immunity. The Queensland process clamps viral proteins as they are synthesised, using a special molecular

scaffold. That means they do not go wonky. Success by either group promises to reduce the interval between identifying a virus and running the first clinical trial to a mere 16 weeks. Moreover, because both approaches synthesise the vaccines chemically rather than involving live viruses in the process, a vaccine that did emerge from one of them could then be manufactured rapidly. All this may then eliminate the fear, surprise and ruthless efficiency of unexpected viruses.

THE ECONOMIST

Indian jobseekers are now preferring Canada, the UK

According to a recent report from

the Indeed job site, Canada and the UK have gained in popularity amongst international jobseekers, including Indians. "There has been a fall in share of searches for jobs in the US, presumably owing to its immigration policies, and a large portion of jobseeker interest has been picked up by Canada and the UK. The searches are primarily for high-paying tech, research and finance roles," the report noted. Through its visa programmes such as Express Entry and Global Skills, Canada is opening avenues to skilled foreign workers. In fact, the report indicated that Indians are exploring opportunities in Canada nearly twice as much as they did two years ago, with a substantial shift in cross-border searches from the US to Canada. Between August 2016 and July 2018, the US share of job searches from India fell from 60% to 50%, while there was a rise in searches for Canada from 6% to 13%. When it comes to the UK, data indicated that jobs that involve technology, finance and language skills are getting popular with foreign jobseekers. **FE BUREAU**