



# International Conference on Data Management, Analytics and Innovation

IICMR, Pune | 19 – 21 January 2018

## REPORT



Report Prepared By:

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Organizing Chair, ICDMAI 2018

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Savitribai Phule Pune University



**International Conference on  
Data Management, Analytics and Innovation**  
IICMR, Pune | 19 – 21 January 2018

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**Conference Organizing Committee with Guests at ICDMAI 2018**

## **ACKNOWLEDGEMENT**

I acknowledge the initiative and support by Institute of Industrial and Computer Management and Research (IICMR), Pune and Computer Society of India, Division II & Pune Section to host this highly regarded event. I appreciate the bonhomie and support extended by industry leaders like TCS, IBM, start-ups like Ellicium Solutions Pvt. Ltd., Omneslaw Pvt. Ltd and premier academic universities like Savitribai Phule Pune University, Lincoln University-Malaysia, Defence Institute of Advanced Technology.

Planning for this conference initiated 18 months back and it couldn't have been possible without consistent, concerted and focused efforts of many good souls. At this juncture, I would like to take the opportunity to thank and acknowledge the effort of our advisory body members, technical programme committee, people from industry and academia, reviewers, session chairs, media, authors, students and team of IICMR, who have been instrumental in making this conference possible.



Dr. Neha Sharma  
Organizing Chair, ICDMAI 2018

## 1. EVENT DETAILS

<b>Event Type</b>	: Research Consortium
<b>Description</b>	: International Conference
<b>Event Name</b>	: 2 <sup>nd</sup> International Conference on Data Management, Analytics and Innovation (ICDMAI 2018)
<b>Venue</b>	: ATSS's, Institute of Industrial and Computer Management and Research (IICMR), Pune
<b>Date</b>	: 19-21 January 2018
<b>Technical Support</b>	: Computer Society of India, Division II Computer Society of India, Pune Section

## 2. CONCEPTION OF THE PROGRAMME

The recent developments at global level shows growth in cloud-based data warehousing, real-time technology and big-data platforms, influencing business to a large extent and intensifying the competition. Together, data and analytics are the single most powerful catalysts for change in the enterprise. The effective management of corporate data has grown in importance as businesses are subject to an increasing number of compliance regulations. Companies are moving from business intelligence standardization to experimentation, data-quality concerns are easing a bit, and cloud-based, real-time, big-data platforms are on the rise. This has led to exponential increase in the number of people using latest technologies and also their interest in research and development activities. To prepare ourselves for this global competition, **Second International Conference of Data Management, Analytics and Innovation (ICDMAI 2018)** on **19-21 January 2018** was conceptualized. The conference aims to focus on Data Management, Analytics and Innovations associated with it, which we believe would play a pivotal role in making of new digital India, involving researchers from Industry and Academia. The conference would strive to give a thrust to research and make global impact using technology, as well as enable innovations to create positive impact on humanity and economy. Conference is designed to provide great opportunities to learn from and offer quality research work and innovations to academicians, scientists, research scholars, industry experts and students in the field of data management and analytics.

## 3. OBJECTIVES OF ICDMAI-2018

The three-day International Conference ICDMAI 2018 is designed to provide a common platform to the scientists, professors, research scholars, industry experts and students from all over the globe to share and disseminate knowledge on their original research. The conference would be a gathering of experts to “confer” about their own and each other’s work, to hear experts illustrate on their work and to exchange their views on various topics relevant to the conference theme. The notable objectives of ICDMAI 2018:

1. To organize a keynote session by an expert to set the central theme of a conference.
2. To arrange pre-conference tutorial sessions and workshops, a day before the main conference, to set the right context.
3. To organize plenary talks to provide additional research highlights.
4. To arrange demonstrations and workshops on the innovative projects and products by experts from government sector and industry.

5. To provide the platform to present the research work in the form of oral/poster presentation in the field of Data Management & Smart Informatics, Big Data Management, Artificial Intelligence & Data Analytic, Advances in Network Technologies.
6. To arrange discussions on novel ideas and innovations to provide insight on various aspects of evolving technological advances for digitizing India.
7. To discuss the challenges in adopting the technologies, with a view to make recommendations concerning the problems under discussion.

The conference ensured the tangible takeaways for each participant of ICDMAI 2018.

#### **4. CALL FOR PAPERS**

Second International Conference on Data Management, Analytics and Innovation (ICDMAI – 2018) solicit papers in the areas of Computer Science, Information Technology, Computational Engineering, Electronics and Telecommunication, Electrical, Computer Application and all the relevant disciplines, to be presented at a common forum. Original, unpublished research papers highlighting specific research domains from all viewpoints are invited from delegates all over the globe. The selected and presented paper would be included in the proceedings published by prestigious AISC series of **SPRINGER**. Following are the topics of interest but not limited to:

##### **Track I – Data Management & Smart Informatics**

Data Exchange, Integration, quality, cleaning and Lineage, Database administration and upgrading challenges, Algorithms and Programming Techniques, Real-time data management in navigation and mobility, Agricultural Informatics and Communication, Community Information Systems, Computational Economics, Digital Photogrammetry, Remote Sensing, GIS and GPS, Disaster Management, e-governance, e-Commerce, e-business, e-Learning, Forest Genomics and Irrigation Informatics, Healthcare Informatics and Neuroinformatics, Information Ecology and Knowledge Management, Open Source: Challenges and opportunities, Web-Based Learning: Innovation and Challenges

##### **Track II – Big Data Management**

Algorithm for Big Data, Big Data Fundamentals, Infrastructures for Big Data, Big Data Management and Frameworks, Big Data Search, Security and Search in the era of Big Data, Applications of Big Data, Big Data Analytics, Metrics, Platforms, Business Performance Management using Big Data Technique

##### **Track III – Artificial Intelligence and Data Analytics**

Artificial Intelligence and Machine Learning, Evolutionary Computation Techniques, Mobile Robotics, Speech Recognition & Synthesis, Facial Detection for Security and Tracking, Heuristic and Genetic Algorithms for Scheduling problems, Pattern Recognition, Image and Video processing, Bio Informatics, Assistive Technology, Augmented Cognition, Calm Technology, Ubiquitous and Pervasive Applications

##### **Track IV – Advances in Network Technologies**

Data Models and Applications of Social Networks and Social Media, Mobile Software Architectures, Systems, Platforms, Services, and Regulatory Issues, Mobile Network Traffic Engineering, Performance, and Optimization, Cloud Computing Architectures and Cloud Solution Design Patterns, Cloud



Configuration, Performance, and Capacity Management, Fog Computing, Green Computing and ICT, 4G and Long Term Evolution (LTE), Computer Networks and Security

*(Annexure A-Conference Brochure)*

## 5. **CONFERENCE MANAGEMENT COMMITTEE**

Conference Management Committee is the key for successful organization of any international level conference and ICDMAI-2018 conference was not exception to it. The primary role of the committee was to provide independent advice that will contribute to the quality enhancement of the conference regulatory decision-making and lend credibility to the review process. They also recommended/suggested changes and amendments in the successful execution of the conference. ICDMAI-2018 was fortunate enough to get some of the renowned professors and researchers of the world, on the board.

The brief information about the Chief Mentor, General Chair, Organizing Chair and Technical Programme Chairs of the conference is as follows:-

### **Chief Mentor ICDMAI 2018**



**Dr. Vijay Bhatkar** is a thinker and thought leader, researcher and innovator, scientist and philosopher, educator and educationist, author and articulator, policy architect and institution builder, Dr. Vijay Bhatkar is one of the internationally acknowledged scientist and IT leaders of India. Dr. Bhatkar is widely known for bringing ICT to the masses through a wide range of path-breaking initiatives, such as the celebrated GIST multilingual technology covering India's 22 official languages with 10 diverse scripts, MKCL's computer literacy programme that made a world mark by creating 10 million computer literates within a decade. In the 80's, Dr. Bhatkar substantially contributed to the ushering of electronics revolution in India through the development of colour TV and colour broadcast in India. He is also credited with the creation of several national research labs and institutions, notably amongst them being C-DAC, ER&DC Trivandrum, IIITM-K, Techno-Park, MKCL, IsquareIT, ETH Research Lab and Multiversity. Simultaneously, he has mentored several innovation-based start-ups. Dr. Bhatkar is the recipient Padmabhushan award (third-highest civilian award in the Republic of India) and many other prestigious national and international awards and presently the chancellor of one of the world's oldest university, Nalanda University.

### **General Chair ICDMAI 2018**



**Dr. Pradeep Kumar Sinha** is the Vice Chancellor & Director of International Institute of Information Technology (IIIT), Naya Raipur. Earlier he was with the Centre for Development of Advanced Computing (C-DAC), where he had led National Programs in areas of High Performance Computing (HPC), Grid Computing, and Health Informatics. Dr. Sinha is an educationist, researcher, scientist, inventor, and internationally acclaimed author of computer textbooks, with more than twenty-five years of professional experience. He has significantly contributed to the advancement of Science & Technology and Technical Education. His technical contributions include national projects, HPC systems and

facilities, healthcare products and solutions, international patents, a number of technical papers and six books in the area of Computer Science & Engineering. Books authored by him are published and marketed by several national and international publishers. Indian, American, and other Universities across the globe cite his books as textbooks for their courses. On public demand, books authored by him have been translated in local languages like Japanese and Hindi. Dr. Sinha is a Fellow of IEEE, Fellow of Computer Society of India (CSI) and ACM Distinguished Engineer. He is also the recipient of several other awards and recognitions, including the “2011 VASVIK Research Award” and the “2013 Intel Pathfinder Award”. He has also served as the Chairman of the Executive Council of IEEE Pune Section for the year 2014 and 2015.

### **Organizing Chair ICDMAI 2018**



**Dr. Deepali Sawai** has completed her BE (Computer), Master of Computer Management, and PhD in Computer on RFID Technology implementation from University of Pune. She has about 25 + years of Industry & Academic Experience. At Present she is Professor & Director, Institute of Industrial & Computer Management & Research, IICMR - MCA , affiliated to SP Pune University, approved by AICTE, New Delhi, accredited by NAAC Director, City Pride School , Nigdi , affiliated to CBSE, accredited by NABET Director , ATSS College of Business studies & Computer Application , Chinchwad, affiliated to SP Pune University conducting BSc, BCA,BBA Recently has Published a book “Global Success @ IT Career”, for students pursuing or want to pursue IT career . The book is co - authored with Dr. Deepak Shikarpur. Awarded „Paul Harris Fellow? by Rotary International in appreciation of tangible and significant assistance given for the furtherance of better understanding and friendly relation among peoples of the world.

### **Technical Programme Chairs ICDMAI 2018**



**Dr. Neha Sharma** is serving as Professor at IICMR. Prior to this she has worked as Director, Zeal Institute of Business Administration, Computer Application & Research, Pune, Maharashtra, India and as Dy. Director, Padmashree Dr. D.Y.Patil Institute of Master of Computer Applications, Akurdi, Pune. She is an alumna of a premier College of Engineering affiliated to Orissa University of Agriculture and Technology, Bhubaneswar. Neha Sharma has completed her PhD from prestigious Indian Institute of Technology (ISM), Dhanbad. She is a Website and Newsletter Chair of IEEE Pune Section and served as Student Activity Committee Chair for IEEE Pune Section as well. She is an astute academician and has organized several national and international conferences and seminars. She has published several papers in reputed indexed journals, both national as well as international. She is a well-known figure among the IT circle of Pune, and well sought over for her sound knowledge and professional skills. Neha Sharma has been instrumental in integrating teaching with the current needs of the Industry and steering the college to the present stature. Not only loved by her students, who currently are employed in reputed firms; for her passion to mingle freely with every one, Neha Sharma enjoys the support of her colleagues as well. She is the recipient of “**Best PhD Thesis Award**” and “**Best Paper Presenter at International Conference Award**” at National Level by Computer Society of India. Her area of interest includes Data Mining, Database Design, Analysis and Design, Artificial intelligence, Big data and Cloud Computing. ***Dr. Neha Sharma was also the Organizing Chair for ICDMAI 2018.***





**Dr Amlan Chakrabarti** is an ACM Distinguished Speaker, who is presently the Dean Faculty of Engineering and Technology and Director of the A.K.Choudhury School of Information Technology, University of Calcutta. He is an M.Tech from University of Calcutta and did his Doctoral research at the Indian Statistical Institute, Kolkata. He was a Post-Doctoral fellow at the School of Engineering, Princeton University, USA during 2011-2012. He is the recipient of DST BOYSCAST fellowship award in the area of Engineering Science in 2011, Indian National Science Academy Visiting Scientist Fellowship in 2014, JSPS Invitation Research Award from Japan in 2016, and Erasmus Mundus Leaders Award from European Union in 2017. He is the Team Leader of European Center for Research in Nuclear Science (CERN, Geneva) ALICE-India project for University of Calcutta and also a key member of the CBM-FAIR project at Darmstadt Germany. He is also the Principal Investigator of the Center of Excellence in Systems Biology and Biomedical Engineering, University of Calcutta funded by MHRD (TEQIP-II). He has published around 100 research papers in referred journals and conferences. He has been involved in research projects funded by DRDO, DST, DAE, DeITy, UGC, Ministry of Social Empowerment, TCS and TEQIP-II and has mobilized funding of around 8 crore INR. He is a Sr. Member of IEEE, Secretary of IEEE CEDA India Chapter and Member of ACM. His research interests are: Quantum Computing, VLSI design, Embedded System Design, Computer Vision and Analytics.



**Dr. Valentina E. Balas** is currently Professor at the University Aurel Vlaicu of Arad, Romania. She is author of more than 270 research papers in refereed journals and International Conferences. Her research interests are in Intelligent Systems, Fuzzy Control, Soft Computing, Smart Sensors, Information Fusion, Modeling and Simulation. She is Editor-in Chief to International Journal of Advanced Intelligence Paradigms (IJAIP) and International Journal of Computational Systems Engineering (IJCSysE), member in Editorial Boards for national and international journals, serves as reviewer for many International Journals. She is General Co-Chair to seven editions of International Workshop Soft Computing Applications (SOFA) starting from 2005. Dr. Balas was editor for more than 25 books in Springer and Elsevier. She is series editor for the work entitled Elsevier Biomedical Engineering from October 2017. Dr. Balas was participating in many international conferences as General Chair, Organizer, Session Chair and member in International Program Committee. She was Vice-president (Awards) of IFSA International Fuzzy Systems Association Council (2013-2015), responsible with recruiting to European Society for Fuzzy logic and Technology – EUSFLAT (2011-2013), Senior member IEEE, member in Technical Committees to Fuzzy Sets and Systems and Emergent Technologies to IEEE CIS and member in Technical Committee to Soft Computing to IEEE SMC.

*(Annexure B-Conference Management Committee List)*

## 6. **CONFERENCE OPERATING MODEL - Preparation of the Event**

Every conference has its own model of operation in organizing the event. ICDMAI-2018 opted to serve as a vehicle for thought-leaders, academicians, researchers and industry personnel, to have a spirited debate and discussion on the many advances and challenges in the field of Data Management, Analytics and Innovation and at the end propose creative solutions to combat the challenges in these areas.

Keeping **QUALITY** as single point agenda, we started preparation of this mega event around 18 months back. Various activities of the conference were identified and accordingly timeline was prepared. Also, various roles for the conference were finalized and the responsibilities were defined. General Chair,

Technical Programme Chairs and other committee chairs / members were appointed.

To elevate the level of the conference and give it a wide visibility, Computer Society of India (CSI) was approached for technical association and Springer was approached for publication association. Exclusive CSI advisory board was constituted for guidance and advice. CSI Division II and CSI Pune Chapter became the partner for organizing the conference. At the same time, SPRINGER accepted our proposal to publish selected and presented papers in the proceedings in their prestigious AISC Series. Experts and researchers from academia and industry were approached to take up the responsibility to review the papers submitted to ICDMAI-2018. It was decided after a rigorous brainstorming session, that there should be four tracks in the conference in order to cover all the aspects of Data Management, Analytics and Innovation and encourage inter-disciplinary research. A Call for Paper was released with deadline for paper submission, notification and registration.

An exclusive website (<http://www.icdmai.org>) was developed for the conference, keeping in view the need of communication with researchers, reviewers and guests. The website helped the prospective paper presenters and delegates in getting important details such as guidelines for papers submission, important dates with respects to submission of papers, venue of the conference, etc. We registered with conference management portal, **easychair** to provide a hassle free interface to authors for paper submission, smooth paper review and unbiased paper selection process. The conference was registered on various conference alert websites and simultaneous email blast was done to reach out to the research community and provide the wide publicity to the mega event.

Conference budget was prepared and a separate bank account which was meant exclusively for “Research and Development”, was used for conference transactions. Further, proposals for grant were submitted to government organization and sponsorship brochures were sent to prospective industries. Rigorous efforts were taken to outreach to educational institutions, corporates, government and industry for support and patronage. A diligent effort was made to identify the Key note speakers and Resource Persons for invited talks, Call for Tutorials / Workshops, Chief Guests, Guest of Honor as well as other Guests. Application to seek permission from Ministry of External Affairs, Home Affairs and Nodal Ministry was submitted and Visa process was established for international attendees.

The beautifully crafted programme schedule of the conference promised it to be more than a just another “talk shop”. Delegates and participants got many insights after listening to the variety of research work which are being carried out across the globe. Besides, the participants got an opportunity to listen to many eminent personalities of the world, in their keynote, plenary and Banquet talks. The conference showcased 04 workshops, 04 tutorials by leaders from industry and academia and an Aero modeling demonstrations by trainers from National Defence Academy. They also got an opportunity to listen to 06 Keynotes and 05 Plenary talks by experts of the domain during the conference. To add on, there was a CSI-Startup and Entrepreneurship Award as well as Best Paper Award in all the four tracks. Finally, a **press release** was given to brief the media and readers about the conference, countries participating, guests, speakers, and quality of paper submitted and other highlights of the conference.

## 7. RESOURCE PERSON AT ICDMAI 2018

### Invited / Keynote Speakers



**Prof. Rajat Moona** heads the Indian Institute of Technology, Bhilai (IIT Bhilai). IIT Bhilai is one of the six new IITs established by the Ministry of Human Resource Development, Government of India. Prof. Moona is also a Professor of Computer Science at IIT Kanpur and has supervised several postgraduate theses. He along with his students and colleagues, has authored 10 patents, several research papers and books. He had been instrumental in defining applications such as smart card driving license, vehicle registration, e-passport, electronic toll collection, mobility card, etc. The research area of Prof. Rajat Moona spans over embedded computing, computer security, VLSI design and Operating Systems. In the past Prof. Moona was the Director of the Centre for Development of Advanced Computing (C-DAC) in capacity of Director General and lead C-DAC's initiatives in the areas of High Performance Computing, Multilingual Computing, Professional Electronics, Cyber Security, Health Informatics, e-Governance, Education and Training. Prof. Moona is recipient of several awards and recognitions, including Indo-US Science and Technology Fellowship, Poonam and Prabhu Goel Chair Professorship, VASVIK Award for the year 2010, IESA Techno Visionary Award 2014, fellowship of Maharashtra Academy of Sciences 2015 and on National Voters Day in January 2017, Prof. Moona received an award from the Hon'ble President of India, Shri. Pranab Mukherjee for his role as member of Technical Expert Committee for Election Commission of India.



**Dr. Juergen Seitz**, received his diploma in business administration and business information systems from University of Cooperative Education Stuttgart, nowadays, Baden-Wuerttemberg Cooperative State University Stuttgart, Germany, and in business administration and economics from University of Stuttgart-Hohenheim. He received his Ph.D. from Viadrina European University, Frankfurt (Oder), Germany. He is professor for business information systems and head of the business information systems department at Baden-Wuerttemberg Cooperative State University Heidenheim, Germany. Dr. Seitz is editor, associate editor and editorial board member of several international journals. He is member of Gesellschaft für Informatik (German association) and Association for Information Systems (AIS). He served as an executive council member of Information Resource Management Association. He is member of program and/or organizing committees of several international conferences. He is co-chair of the Wuhan International Conference on E-Business, co-chair of the special interest track on e-health and research track co-chair of 2018 Bled eConference, Slovenia. His research focusses on e-finance, e-health, IT security from a business perspective, business modelling and systems modelling.



**Dr. Valentina E. Balas** is currently Professor at the University Aurel Vlaicu of Arad, Romania. She is author of more than 270 research papers in refereed journals and International Conferences. Her research interests are in Intelligent Systems, Fuzzy Control, Soft Computing, Smart Sensors, Information Fusion, Modeling and Simulation.

(Please go to page 9 for detail profile of Dr. Valentina)



**Aninda Bose** is presently working as a Senior Publishing Editor with Springer India Pvt. Ltd. Mr. Bose is part of the Global Acquisition Team at Springer and responsible for acquisition of scientific content across the globe. The disciplines he is responsible for are Chemistry, Material Sciences, Earth Sciences and Computational Intelligence. He has more than 23 years of industrial experience in marketing and different fields of publishing. Mr. Bose has completed Masters in Organic Chemistry from Delhi University and Masters in Marketing Research from Symbiosis Institute of Management Studies, Pune. He has published books for secondary level in Chemistry and a member of American Chemical Society, USA. Mr. Bose has delivered more than 50 talks on Scientific Writing and Publishing Ethics in reputed Universities, International Conferences and Author Workshops.



**Dr. Vincenzo Piuri** has received his Ph.D. in computer engineering at Politecnico di Milano, Italy (1989). He has been Associate Professor at Politecnico di Milano, Italy and Visiting Professor at the University of Texas at Austin and at George Mason University, USA. He is Full Professor in computer engineering at the Università degli Studi di Milano, Italy (since 2000). His main research interests are: signal and image processing, biometrics, machine learning, pattern analysis and recognition, theory and industrial applications of neural networks, intelligent measurement systems, industrial applications, fault tolerance, digital processing architectures, embedded systems, and arithmetic architectures. Original results have been published in more than 400 papers in international journals, proceedings of international conferences, books, and book chapters. He is Fellow of the IEEE, Distinguished Scientist of ACM, and Senior Member of INNS. He has been IEEE Past Vice President for Technical Activities (2016), IEEE Vice President for Technical Activities (2015), IEEE Director, President of the IEEE Computational Intelligence Society, Vice President for Education of the IEEE Biometrics Council, Vice President for Publications of the IEEE Instrumentation and Measurement Society and the IEEE Systems Council, and Vice President for Membership of the IEEE Computational Intelligence Society. He is Editor-in-Chief of the IEEE Systems Journal (2013-17), and has been Associate Editor of the IEEE Transactions on Neural Networks and the IEEE Transactions on Instrumentation and Measurement. He received the IEEE Instrumentation and Measurement Society Technical Award (2002) for the contributions to the advancement of theory and practice of computational intelligence in measurement systems and industrial applications. He is Honorary Professor at the Obuda University, Budapest, Hungary (since 2014), Guangdong University of Petrochemical Technology, China (since 2014), Muroran Institute of Technology, Japan (since 2016).

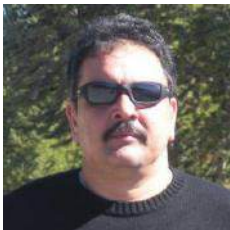


**Dr. Jan Martinovic** is currently Head of Advanced Data Analysis and Simulations Lab at IT4Innovations National Supercomputing Centre of the Czech Republic, located at the VSB - Technical University of Ostrava. His research is focused on large scale data processing and analysis as well as on data based simulations with diverse real-life applications. Those applications comprise support for management and decision-making in emergency situations, intelligent navigation and traffic prediction, flood modelling, smart cities and information retrieval. It also includes research work on HyperLoom which is a platform for defining and executing workflow pipelines in large-scale distributed environments (<http://hyperloom.eu>). His activities also cover a development of HPC as a Service Middleware which allows using HPC infrastructure remotely by specific API. He is co-investigator of H2020-FETHPC projects ANTAREX (AutoTuning and Adaptivity appRoach for Energy efficient eXascale HPC systems - [http:// www.antarex-project.eu](http://www.antarex-project.eu)) and ExCAPE (Exascale Compound Activity Prediction -

<http://excape-h2020.eu>). He is also responsible for the research and development team of FLOREON+ system (<http://floreon.eu>) - a system for disaster management support. He has published more than 100 papers in international journals and conferences.



**Birjodh Tiwana** is a staff software engineer at LinkedIn, California. He graduated with a bachelor's degree in computer science from IIT Kharagpur and went on to pursue a master's degree from University of Michigan, Ann Arbor. He is currently working on personalizing the LinkedIn feed via machine learning. Previously, he led a team of engineers building large scale recommendation engines for LinkedIn messaging. His current interests are recommendation systems, natural language processing and reinforcement learning.



**Mr. Makarand Gadre**

1985-1992 – Owner of a software company producing software for Civil, Telecom, Industrial and Textile Engineering fields.

1992-2012 - Software Engineer, Development Manager and Architect at Microsoft, Member of the Development Team of Microsoft Word and Microsoft Excel for Windows 3.1 and later versions for many years; owned– Unicode compliance, 64 bit re-architecture. Development Manager in Visual Studio and .net team. Architect

for SAML Claims for Identity Management in Sharepoint. Architect for Dynamic Ephemeral Device discovery in Embedder Windows.

2012-2015 – Various consulting projects and a couple of startups in USA and India. 2015-onwards – CTO of Hexanika and continuing the above consulting projects / startups.



**Col Inderjit Singh Barara** is a well-known personality in technical world especially in the world of Information System. An experienced Information Systems Professional with experience of more than 25 year across a wide spectrum of areas spanning solution architecture, program/ project management Telecom, IT Infrastructure Management, Info Security Advisory and Architecture, Cyber Security and Cyber Forensics, Data Centers Design and Operations, Cloud Computing and E-Commerce. He has consistently delivered mission-critical results

and seamlessly managed diverse functions related to Project Management, Service Delivery and Key Account Management. He exhibits and models, influential leadership skills through efficient management of large and dispersed teams while promoting a cooperative working atmosphere. He delegates assignments according to skills and expects implementation of quality strategies. He demonstrates a strong work ethic and encourages teamwork, while clearly defining standards and expectations. He has a strong visioning and strategic thinking ability. He envisions opportunities and converts successfully into business through swift and analytical decision making. Keen eye for innovations in Technology. His Core Competencies are Creating business value supported by technology, Aligning IT with business, thought leadership, IT Transformation, turn around IT organization and improve effectiveness, Managing teams with focus on outcomes, Strategic Outsourcing and cost management, Business Process Improvement & Organizational Efficiency and Effectiveness, leading to applied cross-industry learning towards problem solving, thought leadership for E-Commerce start up.





**Dr. Satish Chand** did MSc in Mathematics from IIT Kanpur, M.Tech. in Computer Science from IIT Kharagpur, and PhD in Computer Science from Jawaharlal Nehru University, Delhi. Currently, working as Professor in the school of Computer & Systems Sciences, Jawaharlal Nehru University, Delhi. Has published more than 100 research papers in international journals of high repute and conferences. Has been given the responsibility of Chairman, All India Board of Information Technology Education, AICTE. Holds different administrative responsibilities in university such as Director, University placement cell, member of international collaboration research committee, etc. has interest in variety of areas such as video processing, image processing, digital watermarking, sensor networks, etc.



**Col. Professor (Dr.) Rajesh Arora's** career graph has advanced from Front Line Sales experience to Managerial Directions to Academic Leadership in past 29 years. He has equivalent time invested in Industry and Academics. This includes overseeing the entire Educational Institutions by crafting varied Business strategies for growth and expansion globally. He has earned his Doctorate in Business Policy & Administration from University of Mumbai and a Fellow Doctorate from Royal institution of Management, Singapore. He is an approved Professor Cum Director by University of Mumbai & SPPU. He was associated with a UK based company called TACK Training International, where he got the opportunity to build competencies of industry professionals in alignment to their role. He has wide exposure in different industry verticals. He was designated Vice Chancellor at kings University College, Ghana and has been a Visiting faculty to DHBW, Heidenheim-Germany, American University of Sovereign Nations, Arizona, USA, GSO - Germany, Maritime Academy of the Asia and Pacific – Philippines, Technological University of the Philippines. He has learnt the best practices of Teaching Learning & Assessment at Heriot Wat University, UK at the Kuwait & Dubai Campuses. As Director he contributed to Quality Assurance processes where Padmashree Dr. D Y Patil Institute of Management Studies, Pune, was accredited by NBA and NAAC Accredited during his tenure with A Grade. He is presented with the title of "Contribution to Higher Education" by the World Chancellor and Vice Chancellor Congress, Bharat Shiksha Ratan Award by Global Education Foundation, New Delhi, HOST SCIENTIST for Dr C V Raman Fellowship for Post Doctoral Research by Government of India, Department of Science and Technology, FICCI and a Medallion Honour by the Admiral Santos of Maritime Academy of the Asia and the Pacific, Philippines.



**Dr. Deepak Shikarpur** is an IT Engineer with a global repute. He has obtained Doctorate (PhD) in the field of his profession – Information Technology. He was working in the Tata group for 16 years and then became a Technopreneur. His profession spheres over Directorship with several Global Information Technology companies and academic institutions. Hon. Vice Chancellor of Yashwantrao Chavan Maharashtra Open University has appointed him as Member of Academic Council from 2014-17. He is member of the governing body of Bharatiya Vidya Bhavan, Pune center. He is a Hon. Fellow of Maharashtra Academy of Science, Computer Society of India and a Hon. Fellow of Institution of Engineers. He is member Executive committee and chairman Computer Literacy committee of Mahratta chamber of commerce industries and agriculture. Union Government has constituted a separate Board for revitalizing and enhancing skill oriented IT education in India. Dr Deepak Shikarpur from Pune has been nominated as Member of the Board of IT Education for a 3 year term May 2016-2019. He has so far authored 38 books on IT in Marathi/English. He has won several awards for his literary work from Governmental and non-governmental bodies. On 3rd January 2016 policy paper written by him on eWaste management was released by Hon Environment Minister.



**Prof. (Dr.) Nitin R. Karmalkar** is a Vice Chancellor of Savitribai Phule Pune University and is a well-known scientist in the field of igneous petrology. He also works as Director, IQAC and has been motivating academicians for embellishments towards quality assurance. This provides him with blend of strong academic/research experience with administrative expertise. He is working on various national as well as international projects in countries like Australia, Germany and France. He has authored more than 40 books and articles. Dr. Karmalkar has been awarded 'Prof. C. Naganna Gold Medal' of the

Mineralogical Society of India (Mysore) 2005 for contributions in the field of Alkaline Magmatism of the Kutchregion, Gujarat.

### Tutorial Speakers



**Dr Amlan Chakrabarti** is an ACM Distinguished Speaker, who is presently the Dean Faculty of Engineering and Technology and Director of the A.K.Choudhury School of Information Technology, University of Calcutta. He is an M.Tech. from University of Calcutta and did his Doctoral research at the Indian Statistical Institute, Kolkata. He was a Post-Doctoral fellow at the School of Engineering, Princeton University, USA during 2011-2012.

(Please go to page 9 for detail profile of DrAmlan)



**Dr. Harold D'Costa** is CEO, Intelligent Quotient Security System and is Advisor (Law Enforcement Agencies – Cyber Crime), Sr. Trainer (Judges & PP) and also CEO of Intelligent Quotient Security System (IQSS). A top notch trainer in the cyber-crime, cyber forensics, digital evidence and cyber law domain. Overall he has trained more than 2, 50,000 participants in the domain of cyber security in India, about 3,000 judicial officers from 17 states is widely acclaimed from people of all fraternity. He has trained more than 20,000 cops and assisted in more than 3,500

cases of cyber-crime globally. He has trained officers from Police Sub Inspectors to Police Commissioner Level. He is involved with National Police Academy, Maharashtra Police Academy, Centre for Police Research, Maharashtra Intelligence Academy, National Investigation Agency, Detection Training School, CID to name a few. He has been on various panels of Government advising them on the technical and legal framework of cyber security breaches and detection. He has co-authored 14 books in the cyber space domain and is widely used by cops, judiciary, corporates and student fraternity. And regularly writes for many leading newspaper and magazines.



**Dr. Nisheeth Joshi** is an Associate Professor in Department of Computer Science, Faculty Mathematics and Computing at Banasthali University. He has done his PhD in the area of Natural Language Processing. Being involved in teaching and research for over 10 years, he has developed the art of explaining even the most complicated topics in a straight forward and easily understandable fashion. He also has vast experience of handling large scale research projects sponsored by various funding agencies. This has helped him in developing practical insights of complex

AI systems. He has delivered invited talks in several conferences, workshops and training programmes. He has authored several papers in international journals and conferences on various topics in AI and NLP.



**Saptarsi Goswami** has done his B.Tech from NIT, Jaipur. After completing his B.Tech he has worked in companies like Tata Infotech, PwC and Cognizant Technology solution for 10 + Years. He has done his M.Tech from Calcutta University and then has submitted his Ph.D. thesis in the area of feature selection in Calcutta University. He has 30 + papers in different reputed journals and conferences.

### Workshop Speakers



**Kranti Athalye** is a Sr. Manager with IBM India University Relations. She had 18 years of industry experience and is currently working on Employer branding and Technology Evangelism across Domestic Universities and Colleges. She has worked as a delivery manager in the IBM Cloud domain as well as the Network Management domain when she worked in AT&T in the US. She has a Master's degree in Computer Science and Mathematics from the University of Illinois at Chicago. She has received the Best People Manager Award – IBM India/South Asia in 2011. She was a keynote speaker at the 2017 NAO Robot Users and Developers Conference at Boston.



**Amol Dhondse** is an IBM Senior Solution Architect, Open Group Master Certified Architect & TOGAF Certified Senior IT Architect. He is IBM Master Inventor and filed over 25 patents in areas such as Big Data, Cloud, AI and the Internet of Things (IoT). He has over 17 years of experience in the IT Industry and 11 years in Architecture profession. Amol is active among multiple IBM technical communities as a technical evangelist and thought leader, and is leading multiple initiatives within the IBM Academy of Technology & its affiliates. Amol has presented white papers in Regional Technical exchanges, external forums and has been invited in various universities to conduct workshops on Social, Mobile and Portal technologies. He has presented on "Cognitive Collaboration" in San Francisco, US as part of Connect 2017.



**Anand Pikle** is an IBM Certified Senior IT Architect and Master Inventor, with roughly 17 years of total IT experience and 10 years as IT Architect. Anand is working as Lead Architect for a large Telco and brings with him strong domain understanding of Multi-Channel Commerce, Service Delivery, Marketing, Sales, and Finance, with deep experience in Enterprise, Application, Middleware, SOA, Systems/ Infrastructure Solutions Design & Architecture. Anand is active among multiple IBM technical communities as a technical enthusiast and thought leader, and has filed over 25 patent applications in areas such as Big Data, AI and IoT.



**Priyanka Sharma** is a Client Success Leader in IBM Collaboration Solutions where she is responsible for providing best possible support to customers on the entire ICS stack of products in the APAC region. Priyanka in her previous role was Sr. Product Development Manager for ICS at IBM, where she was responsible for IBM Verse & IBM Notes which are emerging and cloud-based technologies. She has held various roles in IBM across multiple product organizations including development, quality assurance and customer support. Priyanka is very passionate about customer success and partner eco system building. Priyanka is also very passionate about innovation with few patents in her name.



**Surit Shome** is a CA (U.S. CPA equivalent) & MBA with 16+ years of experience across various roles in Business & Management Consulting, Data Management & Regulatory Reporting, Commercial/Corporate Lending, Capital Markets & Investment Banking & Corporate Finance. He has been managing the solutions development for CCAR & Regulatory domain and heading service delivery for multiple U.S. Banking clients in the CCAR space including MUB (formerly Union Bank of California), Silicon Valley Bank & Toronto Dominion. He has led multiple consulting engagements for business re-engineering and process & technology transformation for leading U.S. banks like Capital One, Keybank, Citizens Bank, Silicon Valley Bank among others in Risk and Finance areas. He is currently Heading Solutions development for TCS Analytics Centre of Excellence (COE) for the CCAR Stress Testing & Regulatory domain. He has set-up, managed and led processes in (1) Commercial Banking – Structured Credit & Risk Management teams (2) Capital Markets & Investment Banking – Middle office support for Fixed Income & Equity Research (3) Regulatory Reporting (incl data management) – CCAR Stress Testing, Liquidity Reporting, Basel Reporting etc.



**Kuldeep Deshpande** is founder CEO of one of the fastest growing Big Data and Artificial Intelligence company in Pune, Ellicium Solutions. Kuldeep has over 17 years of experience in consulting high growth ventures, primarily in analytics and data-driven areas. A passionate techie, Kuldeep loves solving high visibility business problems through data-based solutions. His primary interests are in big data management, analytics, financial risk management and machine learning. To tell you more about Ellicium Solutions, Ellicium is on a quest to help businesses with innovative Big Data and Artificial Intelligence solutions. With a team of young and vibrant 50 people, they have offices in India, USA, and Australia. Ellicium recently got recognized as one of the 20 most promising Big Data solutions providers in India by CIO review magazine.



**Gurbans** comes with 25+ years of executive and technology consulting experience. He has been accountable for large and complex projects for IT, steered organization wide transformation programs, and incubated new service offerings, provide sturdy guidance for entire progression cycle from conceptualization to implementation of technology solutions, and lead global functions with large and qualified multicultural teams. He has been working in AI since the early 90's and carries that passion today while building machine learning based business applications. Gurbans earned his Master's degree in Business Administration from IIT Delhi and completed M.Sc. in Computer Science from J K Institute of Applied Physics and Technology. He is passionate about Teaching, Photography, Traveling and the practice of Systems Thinking.



**Vijayta** is an attorney with 6+ years of project and product management experience across Contract Management, Legal Research, and eDiscovery (including Fact Finding Investigations, Managed Document Review, Redaction and Privilege Log creation). She advises law firms and corporations on process improvements, TAR and AI. She is currently works on building machine learning embedded CLM product.





**Dinesh Nathani** is Founder – Synergy with Energy. For the past 15 yrs, as an instrument, Life Energy Coach – Dinesh Nathani has been conducting enriching, empowering, thought provoking and consciousness transforming sessions on a Pan India and Global platform for Corporate, Industries & Educational Institutions, Nuclear and Joint Families as well as One on One Mentoring and continues to make an influential impact in the lives of hundreds of thousands of participants. Mr. Nathani has done two healing and Spiritual Retreat in 2017 for Times Group

Speaking Tree, one at Bekal, Kerala and another at Egypt and is scheduled to do several National and International programmes throughout 2018 including Singapore, Egypt, Turkey, Jordan, Australia and France.

## 8. PARTNERS FOR ICDMAI 2018

### Supported By



The conference was supported by Ministry of Electronics & Information Technology (MeiTY, Government of India). The Digital India programme is a flagship programme of the Ministry of Electronics & Information Technology.

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STM and HSS eBook collections and archives, as well as a comprehensive range of hybrid and open access journals. The publication partner for the conference is their prestigious AISC Series.

### Academic Partners



Savitribai Phule Pune University, one of the premier universities in India, is positioned in the North-western part of Pune city. It was established on 10th February, 1949 under the Poona University Act. The university houses 46 academic departments. It is popularly known as the 'Oxford of the East'. It has about 307 recognized research institutes and 612 affiliated colleges offering graduate and under-graduate courses. Savitribai Phule Pune University is one of the finest and most

popular educational centers in the city. It offers excellent programs in various areas including Science, Commerce, Arts, Languages and Management Studies.



Lincoln University College, Petaling Jaya, Malaysia, was founded in the year in 2002 as Lincoln College and in 2011 Lincoln College was upgraded to Lincoln University College. Lincoln University College is a private institution that provides higher education, approved by the Malaysian

Qualifications Agency (MQA, National Accreditation Board) and the Ministry of Higher Education. Situated in the cosmopolitan town of Petaling Jaya, the university college is close to the capital city, Kuala Lumpur.





The Defence Institute of Advanced Technology, (DIAT) as it is known today, came into being as the Institute of Armament Studies in 1952 in the CME campus. DIAT is committed to creating a center of Excellence for Education, Training and Research in contemporary and futuristic Technologies by way of continual improvement and consistent Innovation in material as well as Intellectual Infrastructure towards customer's delight.

### Technology Partners



IBM India Private Limited is the Indian subsidiary of IBM. It has facilities in Bengaluru, Ahmedabad, Delhi, Kolkata, Mumbai, Chennai, Pune, Gurgaon, Noida and Hyderabad. IBM is the multinational company with the largest number of employees in India. IBM is very secretive about the geographic distribution of its employees.



Tata Consultancy Services Limited (TCS) is an Indian multinational information technology (IT) service, consulting and business solutions company headquartered in Mumbai, Maharashtra. It is a subsidiary of the Tata Group and operates in 46 countries. TCS is one of the largest Indian companies by market capitalization. TCS is now placed among the most valuable IT services brands worldwide and is ranked 10th on the Fortune India 500 list, in the year 2015.



OmnesLaw believes in “thinking with you” and decoding this complexity. Allow to bring strategic insight, productized solutions, legal domain expertise, and operational competence to not just shape your strategy but also execute it with measurable and desired business impact. Client expectations are changing, there is demand for better efficiency, information security is now discussed at the board level, and new technology is exploding at the doorstep of every industry, including Legal. Allow us to step in and assess your requirements and design solutions that will help you enhance your client relationships.



Founded in 2012, Ellicium is a young and passionate Big Data and Data Science company. They believe that Big Data Technologies can empower businesses to take right decisions, work we have done since our inception testifies the same. They want to help businesses to access business critical information fast and comprehend it easily. Ellicium is focused on providing solutions and developing products to derive insights from unstructured data and streaming data. Ellicians' are mix of data nerds, shrewd business analysts and competent data visualizers.



CUBIX Micro Systems (I) Pvt. Ltd. (CUBIX) Is a trusted partner for various companies across India. Providing a gamut of Server, Bandwidth and Network integration solutions, they converge technology to business to help customers achieve their strategic business goals and objectives more precisely. The breadth and depth of our offerings make us the ideal choice for a host of companies where we manage all IT needs of an enterprise network, from start-to-end. Coupled with our expertise in managing large enterprises, is our deep understanding of small and medium businesses and how best to maximize your ROIs from the IT setup.

9. ITINERARY

19 January 2018, IICMR, Nigdi, Pune						
Date/Time	Min(s)		Session I	Session II		
09:30 - 10:30	60		Breakfast and Registration			
			Room No. SI 01	Room No. SI 02		
10:30 - 11:45	75	Workshop Sessions	Workshop by TCS on Application of Analytics for Solving Business Problems		Workshop by IBM on Watson and the Cognitive Era	
11:45 - 12:00	15		Break			
12:00 - 13:15	75		Workshop by TCS on Application of Analytics for Solving Business Problems		Workshop by IBM on Watson and the Cognitive Era	
13:15 - 13:30	15		Photo Session			
13:30 - 14:10	40		Lunch			
			Room No. SI 01	Room No. SI 02		
14:15 - 15:00	45	Tutorial Sessions	Dr. Anjan Chakraborty (ACM Distinguished Speaker) Medical Image Processing: Analysis and Visualization		Dr. Harold D'Costa On-line Scams	
15:00 - 15:45	45	Tutorial Sessions	Prof. Saptarsi Guptani Feature Selection Techniques using R		Dr. Nishanth Joshi Machine Translation: Where we have come, where we have to go.	
15:45 - 16:00	15		Break			
16:00 - 17:00	60	Workshop Sessions	Workshop by Elicium Solutions Pvt. Ltd.		Workshop by Omenslaw Pvt. Ltd.	
17:00 - 17:30	30	Demonstration	Aero Modelling Show			
20 January 2018, IICMR, Nigdi, Pune						
			Auditorium			
08:30 - 09:30	60		Registration & Breakfast			
09:30 - 10:30	60	Inauguration	Inauguration Function			
10:30 - 11:00	30	Key Note Address	Keynote Address 1: Dr. Rajat Misra - <i>Compute is Shaping the New Engineering</i>			
11:00 - 11:30	30		Keynote Address 2: Dr. Jaergen Sottz - <i>Blockchain - Only another hype or a new revolutionary technology?</i>			
			Room No. SI 01	Room No. SI 02	Room No. SI 03	Room No. SI 04
11:30 - 13:00	90	Session 1	Track 1 (Data Management and Smart Informatics)	Track 2 (Big Data Management)	Track 3 (Artificial Intelligence and Data Analytics)	Track 4 (Advances in Network Technologies)
13:00 - 13:10	10		Photo Session			
13:10 - 13:55	45		Lunch			
			Auditorium			
14:00 - 14:30	30		Keynote Address: Dr. Valentina Balas - <i>Next Generation of Computing Technologies</i>			
14:30 - 15:00	30		Plenary Talk: Mr. Aninda Bose - <i>Publishing Ethics and Author Services</i>			
			Room No. SI 01	Room No. SI 02	Room No. SI 03	Room No. SI 04
15:00 - 16:30	90	Session 2	Track 1 (Data Management and Smart Informatics)	Track 2 (Big Data Management)	Track 3 (Artificial Intelligence and Data Analytics)	Track 4 (Advances in Network Technologies)
16:30 - 17:00	30		Keynote Address: Dr. Vincenzo Pirri - <i>Emerging technological areas where data analytics can make the difference</i>			
17:00 - 17:30	30		Plenary Talk: Mr. Birjodh Tiwana - <i>Personalizing the LinkedIn feed</i>			
17:30 - 17:40	10		High Tea			
18:30 onwards			Banquet Talk: Dinesh Nathani - <i>Synergy with Energy- Alignment of Mind/Body/Heart and Soul to EXCEL in the 21st Century</i> Banquet Dinner			

21 January 2018, HCMR, Nigdi, Pune							
Auditorium							
	08:30 - 09:30	30	Registration & Breakfast				
	09:30 - 10:00	30	Keynote Address: Dr. Jan Martinovic - <i>Accessible HPC Platform for Executing Scientific Pipelines on Supercomputing Facilities</i>				
	10:00 - 10:30	30	Plenary Talk: Mr. Malharand Gatre - <i>IOT - All things considered, some things must communicate: Case Study</i>				
			Room No. SI 01	Room No. SI 02	Room No. SI 03	Room No. SI 05	
M/W 21-January-2018	10:30 - 12:00	90	Session 3	Track 1 (Data Management and Smart Informatics)	Track 2 (Big Data Management)	Track 3 (Artificial Intelligence and Data Analytics)	Track 4 (Advances in Network Technologies)
	12:00 - 12:15	15	Photo Session				
	12:15 - 12:55	40	Lunch				
	13:00 - 13:30	30	Keynote Address: Dr. Indrajit Singh Barua: <i>Cyber Security Challenges in the Implementation of Smart City</i>				
	13:30 - 13:50	20	Plenary Talk: Dr. Rajesh Arora: <i>Building the Competency Architecture for IT Professionals</i>				
				Room No. SI 01	Room No. SI 02	Room No. SI 03	Room No. SI 05
	13:50 - 15:20	90	Session 4	Track 1 (Data Management and Smart Informatics)	Track 2 (Big Data Management)	Track 3 (Artificial Intelligence and Data Analytics)	Track 4 (Advances in Network Technologies)
				Auditorium			
	15:20 - 15:45	25		Plenary Talk: Dr. Deepak Shikarpur, Member, IT Board, AICTE - <i>IT Careers 2020+</i>			
	15:45 - 16:15	30	Valedictory Session	Keynote Address 1: Dr. Satish Chand, Chair, IT Board, AICTE - <i>Some Aspects of Clustering</i>			
16:15 - 16:45	30	Chief Guest's Address: Prof. (Dr.) Nitin R. Karmalkar, Vice Chancellor, Savitribai Phule Pune University					

## 10. EXECUTIVE SUMMARY

### Day 01: 19 January 2018 (Pre-Conference Workshops / Tutorials / Demonstration)

The conference began on 19<sup>th</sup> January 2018 with pre-conference activities in two parallel sessions, conducted by the experts from industry and academia. Pre-Conference activities are organized usually to set the context of the conference and to encourage detail discussion on some interesting topics pertaining to conference themes. It is mainly organized to provide deeper insights on vital topics to the students and research scholars. We had planned 02 parallel workshops by the industry leaders and 02 parallel workshops by start-ups. We had also planned 04 tutorial sessions in two parallel tracks. Besides, an aero modelling demonstration session was organized by the trainers of National Defence Academy.

The delegates and the participants from various industries and institutions from across the country as well as outside the country started arriving at the venue from 09.00 AM onwards. They registered themselves for the Pre-Conference workshops / tutorials of their interest at the Registration Desk. There was an overwhelming response recorded for pre-conference activities and more than 100 participants registered for each track. After completing the registration process, attendees had their breakfast and prepared themselves for the pre-conference sessions to commence.

The programme begun at 10.30 AM as per the schedule, in parallel sessions at two venues. The first session was a workshop by IBM in a class room and the second parallel session was by TCS in computer lab. All the participants assembled at the pre-conference workshop venue of their interest. Prof. Kiran



Shinde, Assistant Professor, IICMR was the coordinator for Session 1 and Prof. Renu Mathews, Assistant Professor, IICMR was the coordinator for Session 2.

**Session 1: Workshop by IBM (19-January-2018, 10:30 – 13:15)**

Prof. Kiran Shinde, coordinator for Session, briefly introduced the experts from IBM and also shared some quick information about the workshop. She requested Dr. Neha Sharma, Organizing Chair and Dr. P. K. Sinha, General Chair to felicitate the experts with the token of appreciation.



Participants of Pre-Conference Workshop by IBM on 19<sup>th</sup> January 2018 at ICDMAI 2018



Experts from IBM being felicitated at ICDMAI 2018

Ms. Kranti Athalye along with her team members (Amol Dhondse, Anand Pikle and Priyanka Sharma) had conducted 03 hours workshop which covered many interesting topics like cognitive systems, IoT and AI. The workshop started with powerful session on **“Watson and the New Era of Cognitive Systems”** by **Kranti Athalye**. She said, we are living in a world where data is generated constantly and there is a huge amount of data that needs to be processed, interpreted and sorted so that it can be utilized appropriately. To understand this data we need intelligent systems to observe, interpret and decide how to use it. This is where Cognitive systems like Watson help the experts with Data Analysis and Management. Kranti’s talk set the right context for the workshop.



Ms. Kranti Athalye, Sr. Manager, University Relations, IBM India Pvt. Ltd conducting a workshop with her team of Experts

Next section of the workshop focused on **“How IoT and Artificial Intelligence are reshaping Business Across Industries?”** and was conducted by **Amol Dhondse and Anand Pikle**. They explained that there is a “fourth industrial revolution” unfolding, as the Internet of Things (IoT) continues to pick up speed. According to a leading consulting agency’s prediction, up to 40% of today’s F500 companies on the S&P 500 will no longer exist in 10 years. The Internet of Things provides us with lots of sensor data. However, the data by itself does not provide value unless we can turn it into actionable, contextualized information. Artificial Intelligence provides us the framework and tools to go beyond trivial real-time decision and automation use cases for IoT. They explored the following central concepts and techniques, and how they are the game-changers in IoT solutions:

1. Role of Rational agents: which perceive their environment through sensors and acts upon that environment via actuators. The most appropriate action depends on not only the performance criterion defined for the agent, but also on the agent's prior knowledge of the environment, the sequence of observations the agent has made in the past and the choice of actions that an agent can perform.
2. Data Science and Feature engineering for IoT: such as working with Time series data (using models like ARIMA) where we consider a range of technologies relevant to IoT including LSTMs, as well as Differences between traditional datasets and IoT Datasets include processing of noise, skew etc. Will look at what differentiates a good model from a bad model, such as in systems that comprise a large number of sensors (such as in autonomous vehicles).
3. Natural Language Interfaces: including the role of voice interfaces like Alexa and IBM Watson, and their role in interacting with sensors including Automotive applications, and how natural language processing will play a key role in IoT, as consumers desire products that understand them and are less inclined to use technologies that require them to learn commands and mechanical usage instructions.



Participants at IBM Workshop





**Amol Dhondse, Senior Solution Architect and Anand Pikle, IBM Certified Senior IT Architect and Master Inventor, IBM India**

The third and the last part of the workshop was on **“Cognitive Collaboration - A New way to work”** by **Amol Dhondse and Priyanka Sharma**. They shared that the Collaboration Networking platforms today are evolving, tapping into collaborative mindsets that continue to be more evolutionary in the area of innovation, becoming unique touch points to engage communities, start conversations, recruit skillful employees, and develop new innovative ideas. They further shared that the enterprises are engaging their employee to communities in conversation explicitly to tap into their brainpower and energy. Enterprises are also engaging customers, business partners and ecosystem members to learn and offer better products and services by embracing collaboration and community based networks enterprises. They discussed the impact of effective computing and Cognitive capabilities in collaboration are going to be embraced by enterprises which eventually helps them to deliver faster, efficient, concise and more accurate information to different stakeholders. Cognitive collaboration would help to reduce noise in communication across enterprise and get information they are looking, this information acts as single source of accurate and correct information targeted for that stakeholder.



**Amol Dhondse, Senior Solution Architect and Priyanka Sharma, Client Success Leader in IBM Collaboration Solutions, IBM**

The workshop by IBM was beautifully crafted with a series of talks by the experts of the field, with one talk better than the other. The workshop was appreciated by all the participants and they shares that

they had a great take away from the session. Along with the delegates of the conference, the workshop was also attended by the very senior people from industry and academia (including Vice Chancellor, IIIT, Naya Raipur) from our country as well as abroad. And everybody has appreciated the thought process gone into finalizing the content, its powerful delivery and the videos which were shared intermittently.



Experts from IBM India Pvt. Ltd conducting workshop at ICDMAI 2018

### Session 2: Workshop by TCS (19-January-2018, 10:30 – 13:15)

Prof. Renu Mathews, coordinator for Session, briefly introduced the conference and then introduced the experts from TCS. The topic of the workshop was “**Using Analytics for Solving Business Problems**” and conducted by **Mr. Surit Shome**, CCAR & Regulatory Consultant, TCS and his extremely dynamic team (**Durgaprasad Nambadoori, Chirag Jain and Pulkit Singhal**). The session coordinator requested Dr. Deepali Sawai, Director-MCA and Organizing Chair to felicitate the experts from TCS.



Experts from TCS being felicitated at ICDMAI 2018

Mr. Surit Shome and his team started the workshop with an overview of analytics. Analytics is the discovery and communication of meaningful patterns in data using tabulation and visualization techniques to communicate insights. Whereas business analytics (BA) is the practice of iterative, methodical exploration of an organization's data, with an emphasis on statistical analysis. It is primarily used by companies committed to data-driven decision-making. Data analysis is used to generate insight which is communicated to recommend action whereas analytics consist of entire methodology of entire analysis, insight generation and communication. They also shared that business intelligence uses past and current data to optimize the present for current success and advanced analytics uses the past data to analyze the present to prepare companies for the future. Further, they spoke about types of analytics, states of analytics maturity, application of analytics in key business areas, challenges in analytics, trends in analytics, advanced analytics, tools and software used for BI and analytics.



**Mr. Surit Shome, CCAR & Regulatory Consultant, TCS conducting a workshop on 19<sup>th</sup> January 2018 at ICDMAI 2018**

Moving ahead, the experts for the workshop discussed various types of data variables, as it is very essential to understand and categorize data properly for correct analysis. They conducted a quick test to ascertain that all the delegates attending the workshop have understood the types of data properly. Then they shared different ways to summarize data like frequency distribution, grouped frequency distribution, cumulative frequency distribution, stem leaf diagram and line plots, followed by explanation on different ways of measure of central tendency, measure of spread and measure of skewness. Data collection and management framework was discussed in detail, which covered data collection mechanism, maintaining data dictionary, mission value handling and outlier treatment.



**Experts from TCS conducting a workshop at ICDMAI 2018**

The third part of the workshop focused on basics of predictive modeling. They started by discussing common analytical problems and then explained predictive analytics usage and techniques. Explanation to complete predictive modeling process was brilliant and it covered from preliminary data exploration to data preparation, variable creation, variable reduction, modeling, validation and stabilization. They also spent some time on discussing key modeling steps described below:

1. Define Problems
2. Data Preparation
3. Exploratory Data Analysis
4. Model Selection and Refinement
5. Model Diagnostics
6. Performance Monitoring

At the end, they also discussed some specific modeling considerations like variable transformation, normality and other assumptions, hetero-skedascity, multi-collinearity, serial correlation and what-why-how for each modeling consideration in depth.





Participants attending Workshop by TCS at ICDMAI 2018

The workshop by TCS was a very well designed to provide complete insight into application of analytics to solve business problems. The team of experts helped the participants and delegates to learn the basics of analytics, followed by a case study to give them a hands-on experience. The workshop was attended by approximately 100 participants which included students, faculty members, senior academicians, directors, industry and foreign participants. Each one of them were soaked in the knowledge and appreciated the content profusely. The delivery of the workshop was very effective, leading to encouraging feedback.

### **Session 1: Tutorial Talk by Dr. Amlan Chakrabarti (19-January-2018, 14:15 – 15:00)**

Topic: Medical Image Processing: Analysis and Visualization

Dr. Chakrabarti, in his tutorial covered the fundamental process steps for medical image analysis, with a brief insight on the CAD for various medical abnormalities viz. estimation of spinal deformity, early risk prediction for cancer etc. A special emphasis was given on multimodal image registration and fusion involving CT, MRI, PRT etc. Some preliminary ideas of 3D reconstruction and viewing as applied in medical image analysis was also shared.



Imaging has become an essential component in many fields of bio-medical research and clinical practice. Radiologists identify and quantify tumors from MRI and CT scans, and neuroscientists detect regional metabolic brain activity from PET and functional MRI scans. Analysis of these diverse types of images requires sophisticated computerized quantification and visualization tools. This motivates us to design and develop standard user interface and analysis tools (computer aided diagnostics: CAD) so that researcher and clinicians can easily share research data and analyses, thereby enhancing their ability to study, diagnose, monitor and treat medical disorders with better accuracy. Image acquisition, preprocessing, segmentation of region of interest, feature extraction and classification are some of the key process steps that are performed in extracting useful information from medical images. Multimodal medical image analysis along with 3D information extraction is also the recent trends in computer aided diagnostics.



Dr. Amlan Chakrabarti, Dean, Faculty of Engineering, UoK, delivering a Tutorial Talk on 19<sup>th</sup> January 2018 at ICDMAI 2018

### Session 2: Tutorial Talk by Dr. Harold D'Costa (19-January-2018, 14:15 – 15:00)

Topic: On-Line Scams

Dr. D'Costa in his talk shared that cyber criminals have affected the online businesses and individuals since the internet networks first appeared and spread all over the world. Our freedom to navigate and access a wide number of online locations represents in the same time a main vulnerability, because an open door always allows access in both directions. Criminal minds can reach these days further than before, into our private lives, our homes and work offices. And there is little we can do about it. He further said that the recent revolutionary demonetization in India has opened up doors to great many technological innovations. However many cyber perils lie in wait for the un-suspecting users of the online economy and which if left unaddressed could undermine the benefits of demonetization besides

financially crippling the affected users. Hence education and understanding of this important matter by the general public besides leveraging innovation opportunities by technology experts in this field is a must. Dr. Harold D'Costa is a renowned cyber security expert who consults and collaborates at the state, national and international levels especially with law enforcement agencies and judicial system on cyber crime breaches.



Dr. Harold D'Costa, CEO, Intelligent Quotient Security System delivering a Tutorial Talk on 19<sup>th</sup> January 2018 at ICDMAI 2018

### Session 1: Tutorial Talk by Prof. Saptarsi Goswami (19-January-2018, 15:00 – 15:45)

Topic: Machine Learning using R

'R' has been in top 10 programming language for quite some time now. It is one of the leading statistical environments which is open source and supported by a strong community. In this session Prof. Saptarsi discussed the following topics in detail:

1. Introduction to Rstudio, R , History of R, Important Machine Learning Packages
2. Example of regression using R (building a lm model , interpretation of the model)
3. Example of classification using R (building a naive byes model, cross validation, building a decision tree model and clustering using R ( building a k-means model, interpreting the model)

### Session 2: Tutorial Talk by Dr. Nisheeth Joshi (19-January-2018, 15:00 – 15:45)

Topic: Machine Translation: Where we have come, where we have to go.

Dr. Joshi in his talk focused on Machine Translation, which is the study of translation of languages being spoken by human beings. Translation has been the subject of study for thousands of years and is a need for the society. In ancient times, traders while traveling to foreign countries needed translators to translate their language to foreign language. He said that mainly in the past sixty years, we have seen a considerable interest in Machine Translation (MT), where the work of the (human) translator is being done by a machine. His tutorial broadly covered the following points:

1. Machine Translation Introduction, Core Challenges of MT-Coverage, Ambiguity, Accuracy
2. Overview of Current State of the Art Working MT Systems, Types of MT
3. Translation Divergence, Translator's Workbench, Statistical MT an Introduction
4. Development of Language Modeling, Development of Translation Modeling

## 5. Development of Decoder for Translation, Evaluation of Machine Translation System



Prof. Saptarsi Goswami, A.K.Choudhury School of IT, University of Calcutta delivering a Tutorial Talk at ICDMAI 2018



Dr. Nisheeth Joshi, Department of Computer Science, Faculty Mathematics and Computing at Banasthali University

### Session 1: Workshop by Ellicium Solutions Pvt. Ltd. (19-January-2018, 16:00 – 17:00)

**Mr. Mandar Deshpande**, an expert from Ellicium Solutions Pvt. Ltd had conducted 01 hours workshop on a very niche products of the company. First product was Gadfly, which is a platform for management and analytics of unstructured data. A gadfly is a person, who interferes with the status quo of a society by posing novel, potently upsetting questions. Their decades of experience have taught them to uncover novel and challenging questions to business and primarily using unstructured data. Hence they call themselves 'gadfly' of the business world! Ellicium's Gadfly is a framework for analyzing unstructured data generated through Human interactions, extracting relevant information and presenting the intelligence. Second product was Gazelles which are known as swift animals. They run at a sustained high



speed. Ability to run swiftly at high data speeds is very important for managing streaming data that is becoming core to the business applications today. Ellicium Gazelle is a framework for management and analytics of high velocity, streaming data.

### **Session 2: Workshop by Omneslaw Private Limited (19-January-2018, 16:00 – 17:00)**

**Mr. Kunal Gandhi**, Marketing Head, Omneslaw Pvt. Ltd conducted a workshop of 1 hour on Text Mining. Text analytics is the process of drawing meaning out of written communication. Emails, online reviews, tweets, call center agent notes, survey results, and other types of written feedback all hold insight into your customers. There is also a wealth of information in recorded interactions that can easily be turned into text. Text analytics is the way to unlock the meaning from all of this unstructured text. It lets you uncover patterns and themes, so you know what customers are thinking about. It reveals their wants and needs. In addition, the expert shared that the text analytics software can provide an early warning of trouble, because it shows what customers are complaining about. Using text analytics tools gives you valuable information from data that isn't easily quantified in any other way. It turns the unstructured thoughts of customers into structured data that can be used by business. They said that in a customer experience context, text analytics means examining text that was written by, or about, customers. Text analytics can be performed manually, but it is an inefficient process. Therefore, text analytics software has been created that uses text mining and natural language processing algorithms to find meaning in huge amounts of text.



Workshop conducted by Ellicium Solutions Pvt. Ltd and Omneslaw Pvt. Ltd. on 19<sup>th</sup> January 2018 at ICDMAI 2018

### **Final Session: Aero Modeling Demonstrations (19-January-2018, 17:00 – 17:30)**

Aero-modeling demonstration was conducted by **Mr. Rochan Kulkarni**, instructor at Air Force Training Team, National Defence Academy. He is associated with Indian Air Force publicity campaign at schools &



Colleges under Pune University's quality improvement program. He has worked with Defence Research Development organization (DRDO). He was accompanied by a team mate, **Mr Dhananjay Dhamale**, who is an expert Aero modelers. He has also trained many students and has won many competitions. Aero-modelling is the one of the finest hobbies, which is very popular worldwide among people of all ages and professions. It has often been the starting point of many Pilots and Aeronautical Engineers. In the demonstration, they displayed flying of Multi rotor (Drone) DJI-550. They shared that now a days drones are not only used for sports purpose but have a vast purpose such as solar panel installation, mapping , security, medical aids, rescue operation etc. Participants witnessed the drone dropping a medical aid. The second model they demonstrated was a flying disc from the building terrace. Flying disc is a new innovative design which rarely uses the law of aerodynamics.



Aero-Modeling Demonstrations on 19<sup>th</sup> January 2018 at ICDMAI 2018



Participants of Pre-Conference Activities at ICDMAI 2018

**Day 02: 20 January 2018****(Keynote Address / Plenary Talk / Paper Presentations / CSI Start-Up and Innovation Award Scrutiny)**

All the delegates and participants started arriving at the conference venue ie. Institute of Industrial and Computer Management and Research, Pune, since 8.30 AM onwards, and registered themselves at registration desk. The auditorium was properly decked up and other preparations were diligently completed for the Inauguration function.



Completely Decked up Venue for the Inauguration Ceremony on 20<sup>th</sup> January 2018 at ICDMAI 2018

The inauguration ceremony begun at 9:30 AM as per the schedule and the agenda for the programme is given below:

TIME	Min(s)	DETAILS
08.30 am – 09.30 am	60	Registration
09.30 am – 09.35 am	05	Lighting of Lamp
09.35 am – 09.40 am	05	Felicitation of Guests on the Dais
09.40 am – 09.45 am	05	Welcome Address by Dr. Deepali Sawai, Director - MCA, IICMR
09.45 am – 09.50 am	05	Introduction of ICDMAI 2018 by Dr. Neha Sharma, Organizing Chair, ICDMAI 2018
09.50 am – 10.00 am	05	Release of Abstract Book
10.00 am – 10.10 am	10	Address by General Chair, Dr. P.K. Sinha
10.10 am – 10.15 am	05	Address by Guest of Honor, Dr. Juergen Seitz
10.15 am – 10.20 am	05	Address by Guest of Honor, Dr. Rajat Moona
10:20 am – 10:25 am	05	Message by Chief Guest, Dr. Vijay Bhatkar
10:25 am – 10:30 am	05	Vote of Thanks by Dr. Amlan Chakrabarti and National Anthem

At the outset, the anchor of the inauguration ceremony, Prof. Usha Madyar, Assistant Professor, IICMR, briefed the guests and the delegates about the country, state, city and the host Institute. She invited the guest on the dais to light the lamp and formally inaugurate the conference. Dr. Deepali Sawai, Director-MCA, IICMR and Organizing Chair, ICDMAI 2018, welcomed all the guest and delegates from various parts of our country and abroad. Dr. Neha Sharma, Professor, IICMR and Organizing Chair, ICDMAI 2018, gave a comprehensive introduction to the conference. She shared the genesis of the event, vision associated with it and the support received from industry and academia. She also shared that there are participants



from 14 countries which includes 14 corporate sectors and approximately 10 international universities. She mentioned that out of 488 papers submitted to ICDMAI 2018 from 133 institutions, only 19% are selected for oral presentation after a rigorous review process.



The Inauguration Ceremony on 20<sup>th</sup> January 2018 at ICDMAI 2018



Lighting of the Lamp to mark the commencement of ICDMAI 2018



Felicitations of the Guest during the Inauguration Ceremony of ICDMAI 2018

Dr. P. K. Sinha, General Chair, ICDMAI 2018, invited all the guests on the dais to release the abstract book. He said in his address that data science has become mainstream today in all domains be it science, engineering, finance, marketing or any other area. Most of today's business and research decisions are based on proper analysis of relevant data. Hence, the conference is very topical in today's context. The ability to achieve full potential of data analytics requires not only data, tools, and infrastructure, but also data scientists - the people with skills to navigate all this data. Data scientists today are in great demand in data-driven companies. This conference will bring together the researchers, scientists, academicians and students working in the area of data science. During the conference, they will deliberate on various issues and challenges of data science.



Release of Abstract Book during the Inauguration Ceremony of ICDMAI 2018



Address by the Guests and the Organizers during the Inauguration Ceremony of ICDMAI 2018



Dr. Ashwini Kulkarni, Executive Director, ATSS Trust, felicitated Mr. Dinanath Kholkar, Vice President and Global Head of Analytics & Insights, TCS and Mr. Jagdish Choudhari, Senior Consultant, Analytics and Insights, TCS for encouraging research and innovation in the corporate sector, which is truly commendable.



Dr. Rajat Moona was glad to note that Institute of Industrial and Computer Management and Research, Pune is organizing 2nd International Conference on Data Management, Analytics and Innovation (ICDAI-2018) on a very contemporary topic. He said, this will provide a useful channel of communication and idea exchanges among researchers, professionals, students and teachers. Dr. Juergen Seitz said he is looking forward to an interesting and successful conference which brings together people from all over the world to exchange and discuss ideas in the field of data management, analytics and innovation. He further said, this conference focusses on a topic which will increase the speed of changes in all areas of our lives. Data analytics is essential for the fourth industrial revolutions. It is essential e. g. for autonomous driving, intelligent power distribution, in total for a better live. India with its long history in mathematics is the perfect place for this conference. Finally, Dr. Amlan Chakrabarti proposed the vote of thanks to conclude the Inaugural ceremony.

Inauguration ceremony was followed by Keynote sessions by Dr. Rajat Moona, Director, IIT Bhilai (Ex-Director General, CDAC) and Dr. Juergen Seitz, Head of Business Information Systems Department, Baden-Wuerttemberg Cooperative State University, Heidenheim, Germany. **Dr. Rajat Moona** spoke on topic which is very useful for budding researchers – **“Compute is Shaping the New Engineering”**, whereas **Dr. Juergen Seitz’s** address on **“Blockchain – Only another hype or a new revolutionary technology?”** set the stage for the conference.



Keynote Address by Dr. Rajat Moona and Dr. Juergen Seitz at ICDMAI 2018 on 20 January 2018

After Keynote address, the delegates dispersed for the **Session 1** of paper presentation in four different tracks (Track 1: Data Management and Smart Informatics, Track 2: Big data Management, Track 3: Artificial Intelligence and Data Analytics, Track 4: Advances in Network Technologies) of 90 mins each. Total 21 papers were presented in different tracks. Each track had a track coordinator and was chaired by an expert of the domain to evaluate the papers presented. The details of the session chairs for paper presentations in four parallel tracks for all the four sessions on 20<sup>th</sup> and 21<sup>st</sup> January 2018 is shared below:

Session Chair Details							
Venue --> Second Floor				Room No. SI 01	Room No. SI 02	Room No. SI 03	Room No. SI 08
Date	Time	Min(s)	Session	Track 1 (Data Management and Smart Informatics)	Track 2 (Big Data Management)	Track 3 (Artificial Intelligence and Data Analytics)	Track 4 (Advances in Network Technologies)
				Session Co-ordinator: Prof. Renu Mathews	Session Co-ordinator: Prof. Sweety Chavan	Session Co-ordinator: Prof. Usha Madyan	Session Co-ordinator: Prof. Kiran Shinde
20-01-2018	11:30 - 13:00	90	Session 1	Session Chair: Dr. Ramanathan	Session Chair: Mr. Birjodh Tiwana	Session Chair: Dr. Chandra Sekhariah	Session Chair: Dr. Valentina
	15:00 - 16:30	90	Session 2	Session Chair: Dr. Jan Martinovic	Session Chair: Mr. Birjodh Tiwana	Session Chair: Dr. Chandra Sekhariah	Session Chair: Dr. Anlian Chakrabarti
21-01-2018	10:30 - 12:00	90	Session 3	Session Chair: Mr. Girish Khillari	Session Chair: Prof. Saptarsi Goswami	Session Chair: Dr. Manjiah	Session Chair: Dr. Rajesh Arora
	13:50 - 15:20	90	Session 4	Session Chair: Dr. Ramanathan	Session Chair: Mr. Girish Khillari	Session Chair: Dr. Manjiah	Session Chair: Dr. Juergen Seitz

Post lunch keynote address was by **Dr. Valentina Balas**, Professor, “Aurel Vlaicu” University, Arad, Romania, who spoke on “**Next Generation of Computing Technologies**”. Followed by a plenary Talk by **Mr. Aninda Bose**, Senior Publishing Editor, Springer India Pvt. Ltd. on “**Publishing Ethics and Author Services**”. Mr. Bose said that computerization and internet have changed the traditional ways of reading and writing. Hence, it is very important for scientists and students of the sciences in all disciplines to understand the complete process of writing and publishing of scientific paper in good journals. He further mentioned that there is also a downside of digital publishing. The principal challenge for publishers is to handle ethical issues and it is of utmost importance for the authors to understand the ethical practices involved in the process, which was the highlight of his talk.



Keynote Address by Dr. Valentina Balas and Plenary Talk by Mr. Aninda Bose at ICDMAI 2018 on 20 January 2018

After post-lunch keynote and plenary talk, the delegates once again dispersed for the **Session 2** in four parallel tracks of 90 mins each. 05 papers were presented and evaluated in each track of session 02. The delegates assembled back in the auditorium after their paper presentation, for final keynote and plenary



**Dr. Vincenzo**

talk of the day. **Dr. Vincenzo Piuri**, University of Milano, Italy, IEEE Fellow delivered the keynote talk through a recorded video on the very relevant topic “**Emerging technological areas where data analytics can make the difference**”. Dr. Piuri said Data analytics can help in extracting knowledge from data, by observing typical patterns in data and trends. Several emerging technological areas and applications are very complex and difficult to model and understand with classic approaches. However, modern data analysis techniques allow for extracting information and abstracting knowledge from the huge amount that these areas and applications are generating. His video presentation briefly overviewed some of these areas which are increasingly relevant in our modern life.

Followed by keynote, there was a plenary talk on “**Personalizing the LinkedIn feed**” by **Mr. Birjodh**



**Plenary Talk by Mr. Birjodh Tiwana, ICDMAI 2018**

**Tiwana**, Staff Software Engineer, LinkedIn, California. He said LinkedIn's feed relevance team strives to provide a personalized home page experience for every member. They use the principle of explore-exploit to achieve this goal. In the exploit phase, they use machine learning to score billions of updates every day with the primary objective of increasing member engagement. At the core of the ecosystem is a logistic regression model that scores each feed update with the probability that the viewer will take an action on the update. This model has more than 10K+ features. Some of the features are sparse like skill similarity between viewer and creator of the update whereas some are dense and are themselves generated by using state of the art techniques like gradient boosted techniques and deep learning. At the end of the scoring phase they blend in ads by solving a constrained optimization problem in order to achieve a good balance between revenue and engagement. In the explore phase, they show random updates to some of their users to collect training data. This training data is then used to train the model in Hadoop, where they also experiment with adding new features to the model.

Besides 04 parallel tracks for paper presentations on 20<sup>th</sup> January 2018, there was an exclusive presentation and interview conducted in a fifth track to evaluate the participants of **CSI Start-up and Entrepreneurship awards**. There were total 06 start-ups with 09 members from all across the country nominated for the award. The details of the participants are as follows:

<b>Name</b>	<b>Company</b>
Sandeep Deshmukh	Sadepach Labs Pvt Ltd
Shilpa Dhamne	BookMyactivity
uday Musale	BookMyactivity
Garima Dosar	Preleaf Technology
abishek verma	Preleaf Technology
Sushrut Deshpande	Questron Systems
aditi khot	Des Rangeela
Saket Kumar	Medx ai
Arul Srinivasan	Medx ai



The award has been announced to facilitate the entrepreneurs who has established the start up with an innovative idea and made it a successful yet unique venture. This award is to recognize the courageous people who have taken risk to set up their business. The programme chair for this award was **Col. Inderjit Singh Barara**, Technology Evangelist, Solution Architect and a Mentor



CSI Start-up and Entrepreneurship Awards Evaluation on 20<sup>th</sup> January 2018 at ICDMAI 2018



Glimpses of Guests and Delegates on 20<sup>th</sup> January 2018 at ICDMAI 2018





Glimpses of Guests and Delegates on 20<sup>th</sup> January 2018 at ICDMAI 2018

In the evening, a traditional **Cultural Program** by the children of City Pride School was organized. After the mesmerizing song and dance performances, we had a Banquet Talk by **Mr. Dinesh Nathani**, Founder, Synergy with Energy on “**Alignment of Mind Body Heart and Soul to EXCEL in the 21st Century**”, followed by gala **Banquet Dinner**. Mr. Nathani said ENERGY is the essence of EVERYTHING. Without it, initiatives of leadership, innovation and excellence are unsustainable in the fast changing global environment. His endeavor is to enable Corporate and Industries embrace a new paradigm of managing and motivating their team and workforce to succeed and EXCEL in the 21st century. He ushered a new attitude and approach to recharge and enthuse the Force Within among all the delegates of the ICDMAI 2018.



Banquet Talk by Mr. Dinesh Nathani on 20<sup>th</sup> January 2018 at ICDMAI 2018

**Day 03: 21 January 2018****(Keynote Address / Plenary Talk / Paper Presentations / Special Session / Award Function)**

Day 03 began with foot fall of the guests, delegates and participants at the conference venue since 8.30 AM. Everybody gathered at the auditorium of IICMR by 9.30 AM to start the proceeding of the day. The first keynote of the day was by **Dr. Jan Martinovic**, Head of Advanced Data Analysis and Simulations Lab at IT4 Innovations National Supercomputing Centre of the Czech Republic, VŠB Technical University of Ostrava, on “**Accessible HPC Platform for Executing Scientific Pipelines on Supercomputing Facilities**”. Followed by the keynote, was the plenary talk on “**IOT – All things considered, some things must communicate: Case Study**” by **Mr. Makarand Gadre**, CTO, Hexanika, Ex-Chief Architect, Microsoft. He presented a Case Study: How a leading manufacturer of Electric Generators leverages the power of IOT to increase operational efficiency and customer satisfaction improvements.



Keynote Address by Dr. Jan Martinovic and Plenary Talk by Mr. Makarand at ICDMAI 2018 on 21 January 2018

After plenary address, the delegates dispersed for the **Session 3** of paper presentation in four different tracks (Track 1: Data Management and Smart Informatics, Track 2: Big data Management, Track 3: Artificial Intelligence and Data Analytics, Track 4: Advances in Network Technologies) of 90 mins each. Total 23 papers were presented in different tracks of session 03.

The day progressed as delegates assembled back in the auditorium after lunch for another interesting keynote and plenary talk. **Dr. Inderjit Singh Barara**, Technology Evangelist, Solution Architect and a Mentor, delivered a keynote on “**Cyber Security Challenges in the Implementation of Smart City**”. His presentation was very systematic, easy to understand and covered all the aspects of the topic. **Dr. Rajesh Arora**, President and CEO, TQMS, delivered a plenary talk on “**Building the Competency Architecture for IT Professionals**”. Dr. Arora said it’s imperative to develop an exclusive review framework of competencies required for executives on their Performance. Across many firms spanning different industries and sectors, all IT architecture has to be viewed in conjunction with business processes & firm capabilities to draw business strategies. He further said it is essential to have a key understanding of



business and functional competencies needs to be explored to weigh the pros and cons for every business analytical study.



**Keynote Address by Dr. Inderjit Singh and Plenary Talk by Dr. Rajesh Arora at ICDMAI 2018 on 21 January 2018**

After an insightful talk by Dr. Arora, the delegates dispersed for the **Session 4** of paper presentation in four different tracks of 90 mins each. 06 papers were presented in each tracks of the final session. Due to unavoidable situation 06 authors requested for on-line presentation. After due deliberation, these 06 papers were allowed to be presented through skype as a special case. Dr. Aruna Deoskar, Principal, ATSS CBSCA, chaired the session of skype presenters. Besides, there was a special session on Teaching Innovation in Engineering organized by Defence Institute of Advanced Technology. This session was conducted as a fifth parallel track and evaluated by Dr. Aruna Deoskar. Shilpa Kolte, Associate Professor, RAIT, Mumbai and Sumithra T.V., Assistant Professor, RAIT, Mumbai, presented their work in the special session.

The guests and the delegates gathered in the auditorium for the final time for valedictory function and award ceremony. The valedictory function begun at 15:20 hrs as per the schedule and the agenda for the programme is given below:

TIME	Min(s)	DETAILS OF VALEDICTORY FUNCTION
03.30 pm – 03.35 pm	05	Felicitation of Guests on the Dais
03.35 pm – 03.45 pm	10	Report of ICDMAI 2018 by Dr. Deepali Sawai, Director - MCA, IICMR
03.45 pm – 04.10 pm	25	Plenary Talk: IT Careers 2020+ by Dr. Deepak Shikarpur, Member, IT Board, AICTE
04.10 pm – 04.40 pm	30	Keynote Address: Dr. Satish Chand, Chairman, IT Board, AICTE
04.40 pm – 05.10 pm	20	Address by Chief Guest Hon. Dr. Nitin Karmalkar, Vice Chancellor, SP Pune University
05.10 am –05.30 am	20	Prize Distribution
05.30 am –05.35 am	05	Vote of Thanks by Dr. Neha Sharma, Organizing Chair, ICDMAI 2018

The valedictory function commenced with the felicitation of guests on the dais and off the dais. Dr. Deepali Sawai, Director-MCA, IICMR, presented the elaborative report on three-days International Conference on Data Management, Analytics and Innovation 2018. **Dr. Deepak Shikarpur**, Technology Evangelist and Member, IT Board, AICTE, delivered a plenary talk on the very relevant topic “**IT Careers 2020+**”. Last keynote address was delivered by **Dr. Satish Chand**, Chairman, IT Board, AICTE on “**Some Aspects of Clustering**”.



Felicitations of Guests on the Dais and Off the Dais during Valedictory Function at ICDMAI 2018 on 21 January 2018



Keynote Address by Dr. Satish Chand and Plenary Talk by Dr. Deepak Shikarpur at ICDMAI 2018 on 21 January 2018

Award distribution is a much awaited event in every researcher's life, as it gives the returns to the efforts put in by them throughout their research endeavour. It gives a sense of achievement and a sense of responsibility towards fulfilling further commitments towards research. Therefore, the Best Paper



Awards were declared for each track and the winners were bestowed with a Trophy and Certificate. CSI Start-Up and Entrepreneurship Awards were also announced and distributed during the valedictory function. On the recommendations of Judges, one special award to encourage young entrepreneur was also given.



Best Paper Awards Distribution during Valedictory Function at ICDMAI 2018 on 21 January 2018



CSI Start-Up & Entrepreneurship Awards Distribution during Valedictory Function at ICDMAI 2018 on 21 January 2018





Award Winners at ICDMAI 2018 on 21 January 2018



Glimpses of Participants at ICDMAI 2018 on 21 January 2018



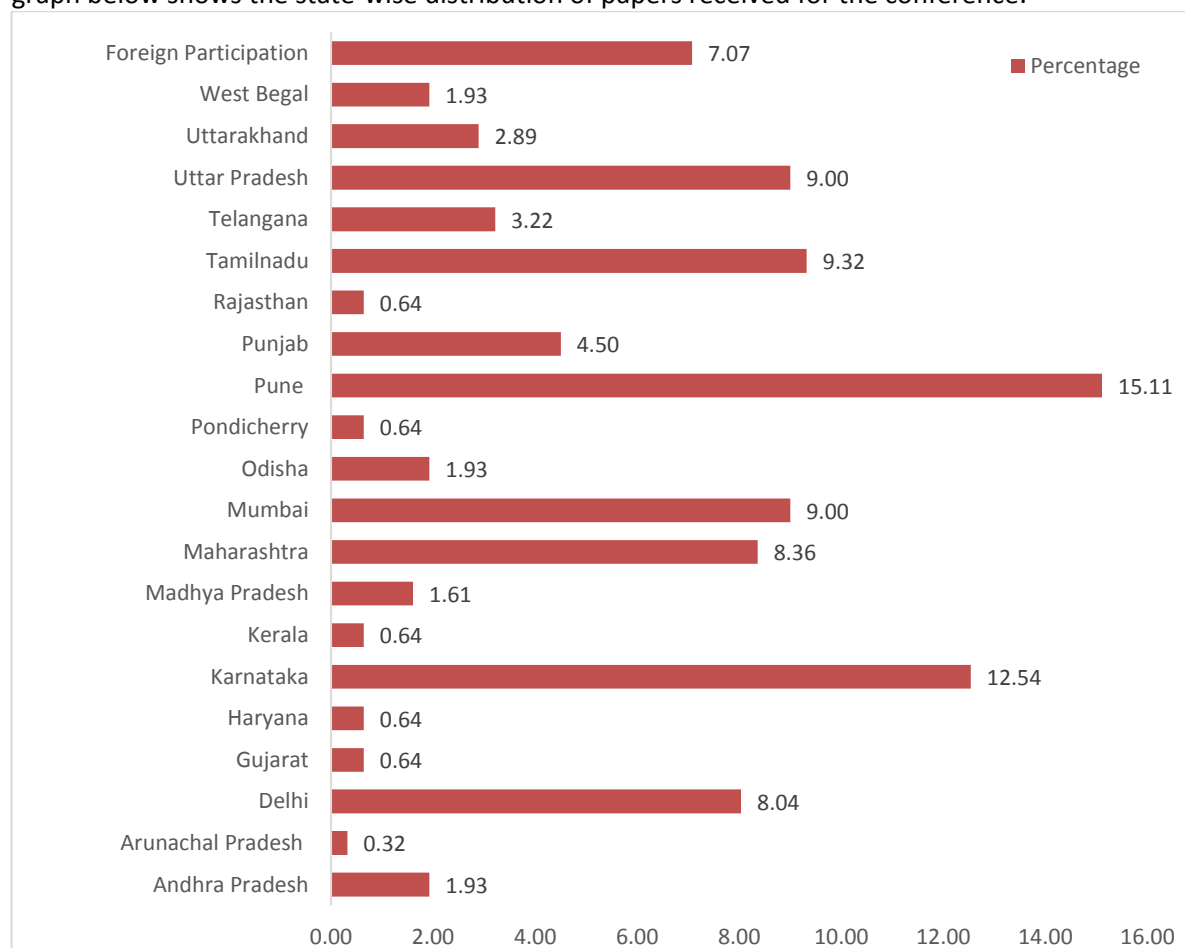
Glimpses of Participants at ICDMAI 2018 on 21 January 2018

Aristotle quoted that “**Excellence is never an accident. It is always the result of high intention, sincere effort, and intelligent execution; it represents the wise choice of many alternatives - choice, not chance, determines your destiny**”. As per the Technical Programme Committee of ICDMAI 2018, the efforts, innovation, intelligent execution presented by all the authors were exemplary and an achievement in itself. At the end, Delegates were requested to collect their certificate from the registration desk and submit their feedback form. Finally, Dr. Neha Sharma, Organizing Chair, ICDMAI 2018 proposed a vote of thanks and announced that ICDMAI 2019 would be in Lincoln University, Malaysia. She concluded with a promise to raise the standards of ICDMAI further and officially bid adieu to everyone.

## 11. ICDMAI-2017 PAPER SUBMISSION METRICS

### 11-A. Response to the Conference

The conference started receiving overwhelming response from all the states of our country as well as abroad, soon after the **Call for Paper** was announced and information was uploaded on the website. This response is evident from the fact that total **488 research papers** were submitted to the conference. The graph below shows the state-wise distribution of papers received for the conference:-



















**11-B. Review Process**

- 1) Solicited papers in four tracks through Call for paper
- 2) Conducted plagiarism check of the submitted paper in respective track using Turnitin Software.
- 3) Depending on the result, took appropriate action from the following options: -
  - a. If Plagiarism > 50%, then Rejected the submission and informed the author
  - b. If Plagiarism < 50 % and > 20%, then asked the author to improve the paper further
  - c. If Plagiarism < 20 %, then informed the author regarding provisional acceptance for review
- 4) Assign each paper to the three appropriate Reviewers for Double Blind-review.
- 5) Pursue with the reviewers and encourage them to submit timely review report.
- 6) Shared the reviews with authors and ensured that the suggestions have been incorporated fully.

**11-C. ICDMAI 2018 Metrics**

488 Research papers have been submitted for this conference and out of them only 92 papers ie. 18.8% papers are selected for oral presentation. The details of the paper selection and registration statistics are given below:-

Particulars	Information
Total paper received	488
<b>Paper selected after double blind review</b>	<b>92 (18.8%)</b>
Number of participants registered as listener	03
Number of participants registered for Pre-Conference Tutorials	13
CSI Start-Up and Entrepreneurship Award	09
Fellowship / Special Session	03
<b>Total Delegates registered for ICDMAI 2018</b>	<b>109</b>
Total papers presented at the conference	86
Absenteeism	06
Number of Indian States from where papers were received	18

Countries Participated in ICDMAI 2018					
India		Malaysia			
Bangladesh		Netherlands		Vietnam	
Yemen		Czech Republic		USA	
Saudi Arabia		Egypt		Germany	
Romania		Italy		UK	

Industries Participated in ICDMAI 2018		International Universities Participated in ICDMAI 2018	
Sr. No	Name	Sr. NO	Name
1	Inventum Technologies	1	Technical University of Ostrava, Czech Republic
2	Wipro Technologies	2	University of Dhaka
3	IBM, india	3	University of Asia Pacific, Bangladesh
4	ppl Tech	4	Suez University Suez, Egypt
5	Persistent Systems Ltd.	5	Mfasize, The Hague, The Netherlands
6	Uttar Pradesh Power Cooperation Lucknow	6	Aljouf University, Saudi Arabia
7	Innominds Software Pvt. Ltd.	7	Haiphong University, Vietnam
8	Tata Consultancy Services, Bangalore	8	Lincoln University College, Malaysia
9	Tata Consultancy Services, Pune	9	Bangladesh University of Engineering and
10	Tata Consultancy Services, Mumbai	10	Geomatik, The Hague, The Netherlands
11	Tata Consultancy Services, Kolkata		
12	Uttar Pradesh Power Cooperation Lucknow		
13	J.C Penney, Bangalore		

## 12. FEEDBACK

Obtaining feedback from the conference guests/delegates helps the organizer of the conference to strengthen the retrospection aspects to conduct similar kind of event in future. The feedback that we received from all the conference participants was overwhelming and the same has been compiled and depicted in below given table which was collected through the feedback form.

Category	About conference theme, arrangements, guest speakers, etc.	Ideas / improvements for the next conference	Overall remarks
Guests	Innovative ideas discussed, Topical theme, Excellent arrangements	Separate track for research scholars & students	Excellent Event Management, Cohesive Team
Paper Presenters	Very much contemporary Conference, Excellent keynote speakers, overall good arrangements	Inclusion of Panel Discussion, Keynote should adhere to the time assigned	Overall very good Experience