



International Conference on Data Management, Analytics and Innovation

Lincoln University College, Kuala Lumpur | 18 – 20 January 2019

REPORT



3rd International Conference on Data Management, Analytics & Innovation 2019

18th – 20th January 2019

Venue: Lincoln University College, Kelana Jaya Learning Site



TECHNICAL PARTNER



PUBLICATION PARTNER



KNOWLEDGE PARTNER



Report Prepared By:

Dr. Neha Sharma

Steering Committee Chair, ICDMAI 2019
Founder Secretary, Society for Data Science



**International Conference on
Data Management, Analytics and Innovation**
Lincoln University College, Kuala Lumpur | 18 – 20 January

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Conference Organizing Committee with Operational Team of ICDMAI 2019

ACKNOWLEDGEMENT

I acknowledge the initiative and support by Lincoln University College, Kuala Lumpur to host this highly regarded flagship event of Society for Data Science (S4DS). I appreciate the bonhomie and support extended by industry leader IBM, publication partner Springer and other partners like Wizer and DSMS College of Tourism & Management, West Bengal, India.

Planning for this conference initiated 14 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 entire team of Lincoln University College, Kuala Lumpur, advisory body members, technical programme committee, people from industry and academia, reviewers, session chairs, media and authors, who have been instrumental in making this conference possible.



Dr. Neha Sharma

Steering Committee Chair, ICDMAI 2019
Founder Secretary, Society for Data Science

1. EVENT DETAILS

Event Type	:	Research Consortium
Description	:	International Conference
Event Name	:	3 rd International Conference on Data Management, Analytics and Innovation (ICDMAI 2018)
Venue	:	Lincoln University College, Kuala Lumpur, Malaysia
Date	:	18-20 January 2019
Technical Support	:	IBM

2. CONCEPTION OF THE PROGRAMME

As per the survey, in the list of top 10 leading companies in 2006, there were 05 energy companies and only 01 IT company ie. Microsoft. But just 10 years later, in 2016, with just a blink of an eye, the situation reversed and in the list of top 10 companies, there were 05 IT companies and only one Energy Company. What happened in just a decades time? We all are aware that the data is available in abundance, and they say it's a new soil. However, a true wealth lies in innovations done using data. All the leading companies like apple, google, amazon, facebook, tesla, they all have research centers and research is going on in continuous basis. They have a reason to do so because this is an era of confluence of bigdata, connectivity and artificial intelligence. This has revolutionized the old industries and created an entirely new industry. Therefore, to prepare ourselves for this global competition, **Third International Conference of Data Management, Analytics and Innovation (ICDMAI 2019)** on **18-20 January 2019** 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-2019

The three-day International Conference ICDMAI 2019 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 2019:

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 2019.

4. CALL FOR PAPERS

Third International Conference on Data Management, Analytics and Innovation (ICDMAI – 2019) 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-2019 conference is 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-2019 was fortunate enough to get some of the renowned professors and researchers of the world, on the board. The details are as follows:-

PATRONS

1. **Dr. Amol Goje**, President, Society for Data Science;
2. **Dr. Amiya Bhaumik**, Vice-Chancellor, Lincoln University College, Malaysia
3. **Datuk Dr. Hjh. Bibi Florina Binti Abdullah**, Pro-Chancellor, Lincoln University College, Malaysia

GENERAL CHAIRS

1. **Dr. P.K. Sinha**, Vice Chancellor and Director, Dr S P Mukherjee International Institute of Information Technology, Raipur, Chhattisgarh
2. **Dr. Vincenzo Piuri**, Professor, Università degli Studi di Milano, Italy

STEERING COMMITTEE CHAIRS

1. **Amlan Chakrabarti**, Dean, Faculty of Engineering, University of Calcutta, Director and Professor, A.K.Choudhury School of Information Technology, Kolkata, India
2. **Neha Sharma**, Secretary, Society for Data Science

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Research Director, Lincoln University College, Malaysia



Balaganesh D.

Lincoln University College, Malaysia

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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



Sruti Das Choudhury
University of Nebraska-Lincoln (UNL), USA



Ozen Ozer
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3. **Venkatesh Gauri Shankar**, School of Computing and IT, Manipal University, Jaipur
4. **Abdur Rahman**, Lincoln University College, Malaysia

TECHNICAL PROGRAM CHAIRS



Prof. Neha Sharma is a Founder Secretary of Society for Data Science, India. 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 alumnus of a premier College of Engineering affiliated to Orissa University of Agriculture and Technology, Bhubaneshwar. Neha Sharma has completed her PhD from prestigious

Indian Institute of Technology (ISM), Dhanbad. She is a Senior IEEE Member, 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, Cloud Computing, Data Science and Block Chain.



Prof. 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.



Prof. 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 (IJCysE), 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 Technical Programme Committee List)

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

Every conference has its own model of operation in organizing the event. ICDMAI-2019 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 14 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, it was decided to host it at Lincoln University College, Kuala Lumpur. IBM was approached to be the Technical Partners and Springer to be the Publication Partner. Experts and researchers from academia and industry were approached to take up the responsibility to review the papers submitted to ICDMAI-2019. 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 sponsorship brochures were sent to prospective industries and academic institutions. 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

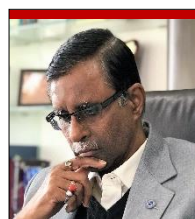
Honor as well as other Guests. Application to seek permission from Ministry of External Affairs, Home Affairs and Nodal Ministry was submitted was submitted to Malaysian Government and international attendees were supported / guided to get visa.

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. The participants got an opportunity to listen to many eminent personalities of the world, in their keynote and plenary talks. Besides, the conference showcased workshops and tutorials by leaders from industry and academia. To add on, there was 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 2019



Mr Eddy Liew is currently the Cloud and Solutions Country Technical Leader for IBM Malaysia. He is responsible for helping clients embrace innovative solutions such as Intelligent Predictive AI, Advanced Analytics and Blockchain on IBM Cloud platform to expand the value of information and enhance customer experience in the digital economy. Eddy has over 21 years of IT and industry experience. He is an agile design thinking practitioner and helps raise market awareness on new technologies through industry use cases especially in the financial and telecommunication sectors. Prior to this role, Eddy also served as an Analytics Practice Leader and Enterprise Architecture Leader. He has received multiple recognitions for his technical leadership and contributions.



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.



Prof. 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.



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.



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.



Hanaa Hachimi, Ph.D in Applied Mathematics & Computer Science and a Ph.D in Mechanics & Systems Reliability, I am Associate Professor at the Ibn Tofail University, in the National School of Applied Sciences ENSA in Kenitra. I am affiliated to the Systems Engineering Laboratory, precisely at the BOSS team Big Data, Optimization, Service and Security. I am the responsible and coordinator of the courses: Operational Research, Graph Theory, Statistics, Probability, Reliability and Scientific Computing.



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.



Mohd Helmy Abd Wahab is a senior lecturer and former head of Multimedia Engineering Lab at the Department of Computer Engineering, Faculty of Electrical and Electronic Engineering, Universiti Tun Hussein Onn Malaysia (UTHM). He is currently an associate researcher in IoT focused group from UTHM and associate research at Green ICT group at Unimap. He also an Industrial Advisory Panel for Diploma Program for Polytechnic Seberang Perai, Penang (2018 – 2020). He has actively involved in many academic activities such as being a keynote/invited speaker, several research grants, won several medals in research and innovation showcases and awarded several publication award and teaching awards. He has authored and co-authored 2 books in database system (2013) and this book received consolation prize by Society of Science and Mathematics Malaysia (PESAMA) in 2014 and WAP application (2009), published several both local and international book chapters (11), technical papers in conferences and peer-reviewed journals (>100) papers. He also involve in publishing articles in periodicals such as newspaper (Utusan Malaysia) and national magazine (Dewan Kosmik). He also served as guest editor for Special Issue in Wireless and Mobile Networks in International Journal of Advanced Computer Science and Applications (2011) and as Deputy Editor in Chief for Int. Journal of Software Engineering and Computing since 2009 and scholarly contributed as committee for conferences, editorial team and manuscript reviewers and also invited to be session chair in conferences.



Himadri Nath Saha is the Head of the Department of Computer Science & Engineering and Department of Electrical & Electronics Engineering at Institute of Engineering & Management, Kolkata. He has completed his Bachelor of Engineering from Jadavpur University and has received his Master of Engineering from Indian Institute of Engineering, Science and Technology. After completing his Master of Business Administration, he has completed his Ph.D. in Engineering from Jadavpur University. He has received a good number of awards during his career and some of them include "Gold Faculty Award" from Infosys Technology Limited in 2013, "Outstanding Contribution Award" from Infosys Technology Limited in 2011. He has been conferred as "Best Innovative Faculty" from Infosys Technology Limited in 2012 for implementing a unique innovative case study on operating systems. He has been awarded the "Best Faculty" award from Institute of Engineering & Management in 2011. Dr. Saha is the "Fellow" of many premiere organizations like Institution of Engineers India (IEI) and The Institution of Electronics and Telecommunications Engineers (IETE), India and senior member of IEEE (USA). He has also written a textbook on "Database Management System" which became popular among students. He has been invited to address students and professors from University of Connecticut, USA. He has lots of

collaborations with many worldwide renowned professors in the field of research like Dr. Philip G Bradford, University of Connecticut, Dr. Lanier Watkins, Johns Hopkins University, USA, Dr. Babak Esfandiari, Carleton University, Canada, Dr. Detlef Streitferdt, Technische University Ilmenau, Germany, Dr. Mamun Quazi, Charles Sturt University, Australia, Robert P. Schumaker, University of Texas, Tyler & many more.

He has conducted many workshops on IoT in India as well as abroad in many world-class conferences like IEEE-IEMCON, IEEE-UEMCON, IEEE-CCWC, IEMECON etc. His research interest includes Machine Learning, IOT, Wireless Communication, Mobile Ad-hoc Networks, Network Security, Cryptography and Algorithms. He has several publications in many International Journals and Conferences with many citations



Santanu Roy is currently working at Future Institute of Engineering and Management, Kolkata, India. His area of specialization includes Data Science, Machine Learning, Artificial Intelligence, Distributed Computing. His significant research works have been published in reputed peer reviewed Journals like Elsevier and Springer and International Conferences in USA, Vietnam, Poland, Croatia etc. Mr. Roy has organized and conducted several workshops on Machine Learning, Cloud computing and Programing in Python and R. He has six- month industry internship experience HP, India.



Anand Nayyar received a PhD degree in Computer Science from Desh Bhagat University, Mandi Gobindgarh. Currently, he is Faculty, Researcher and Scientist in Graduate School at Duy Tan University, Vietnam. He has a total academic teaching experience of 12 years with more than 250 publications in reputed international conferences, journals and book chapters (Indexed By: SCI, SCIE, Scopus, ACM, DBLP). He is a Certified Professional with more than 75 certifications from various IT companies like: CISCO, Microsoft, Oracle, Cyberoam, GAQM, Beingcert.com, ISQTB, EXIN, Google and many more. His areas of interest include: Wireless Sensor Networks, MANETS, Cloud Computing, Network Security, Swarm Intelligence, Machine Learning, Network Simulation, Ethical Hacking, Forensics, Internet of Things (IoT), Big Data, Linux and Open Source and Next Generation Wireless Communications. He is a Programme Committee Member/Technical Committee Member/Reviewer for more than 300 International Conferences to date. He has published 18 books in Computer Science by GRIN, Scholar Press, VSRD Publishing. He has been awarded 20 Awards for Teaching and Research including: Young Scientist, Best Scientist, Exemplary Educationist, Young Researcher and Outstanding Reviewer Award. India (Mysore) 2005 for contributions in the field of Alkaline Magmatism of the Kutchregion, Gujarat.



Saptarsi Goswami is currently working in A.K. Choudhury School of IT, University of Calcutta. He has 16+ years of professional experience, out of which he has spent 10 + years in IT Services Industry in companies like Cognizant, PwC and Tata Infotech. He has managed large data warehousing programs, as well as took active role in solutioning and designing. He has done his B.Tech from NIT, Jaipur and his M.Tech from University of Calcutta. He has completed his Ph.D in the area of feature selection in the year 2018 from University of Calcutta. He has authored 40 + Journal, conference articles and book chapters with 150 + citations. He has delivered tutorials in different conferences like ICDMAI, MAMI etc.

and acted as reviewer to some of the conferences like IEMCON2015, IEMCON2016, IEMCON2017, ICISIM2017, ICCAIAIT 2018. He is also working as the Tutorial chair for ICDMAI2019. His area of interest is feature selection, outlier detection etc.

8. PARTNERS FOR ICDMAI 2019



Springer is a leading global scientific, technical and medical portfolio, providing researchers in academia, scientific institutions and corporate R&D departments with quality content through innovative information, products and services. Springer has one of the strongest 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.



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.



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.



Durgapur Society of Management Science popularly known as DSMS, started on its mission in 1990. It was designed to play a key role by producing performance oriented hotel management professionals who would shape the destiny of the service industry. Today it is also shaping future leaders in the fields of Business Administration, Computer Application, Hospital Management and Finance Management.



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3RD INTERNATIONAL CONFERENCE ON DATA MANAGEMENT, ANALYTICS AND INNOVATION 2019

9. ITINERARY

 3rd International Conference on Data Management, Analytics and Innovation Lincoln University College, Malaysia 18-20 January 2019		Jointly Organized by  			
18 January 2019, Lincoln University College, Wisma Lincoln, Malaysia					
Date/Time	Min(s)	Track I	Track II		
FRIDAY 18-January-2019	08:00 - 10:00	120	Breakfast and Registration		
		Venue ->	Block C, Room No 209, 2nd Floor	Block C, Network Lab, 2nd Floor	
	10:00 - 11:00	21/1/19	Tutorial Session by IBM on Cognitive Systems, IoT and Watson	Dr. Saptarsi, Prof. Santanu Machine Learning Using R	
	11:00 - 12:00	60	Break		
	12:00 - 12:15	15	Break		
	12:15 - 13:15	60	Tutorial Session by IBM on Cognitive Systems, IoT and Watson	Dr. Saptarsi, Prof. Santanu Machine Learning Using R	
	13:15 - 13:30	15	Photo Session		
	13:30 - 14:30	60	Lunch Break		
	14:30 - 15:30	60	Dr. Himadri Nath Saha Internet of Things: Concepts to Implementation	Dr. Saptarsi, Prof. Santanu Machine Learning Using R	
	15:30 - 16:30	60	Photo Session		
16:30 - 16:45	15	Photo Session			
19 January 2019, Lincoln University College No. 2, Jalan Stadium, SS 7/15, Kelana Jaya, 47301 Petaling Jaya					
Malaysian Airline Academy Auditorium					
SAT 19-January-2019	08:00 - 09:30	90	Registration & Networking		
	09:30 - 10:30	60	Inauguration Function		
	10:30 - 10:50	20	Chief Guest Address: Mr Eddy Liew, Cloud and Solutions Country Technical Leader, IBM Malaysia		
	10:50 - 11:10	20	Keynote Address : Ms. Kranti Athalye - <i>Data and Artificial Intelligence</i>		
	11:10-11:30	20	Break		
			Floor 3	Room No. D-01	Room No. PBL 04
	11:30-13:00	90	Session 1	Track 1 (Data Management and Smart Informatics)	Track 2 (Big Data Management)
				Room No. D 08	Room No. PBL 01
				Track 3 (Artificial Intelligence and Data Analytics)	Track 4 (Advances in Network Technologies)
	13:00 - 13:05	5	Photo Session		
	13:05 - 14:00	55	Lunch		
			Auditorium		
	14:00 - 14:20	20	Keynote Address 1: Dr. Vincenzo Puri - <i>Ambient intelligence: convergence of artificial intelligence, machine learning, biometrics, cloud-computing, and internet-of-things</i>		
	14:20 - 14:40	20	Keynote Address 2: Dr. P. K. Sinha - <i>Skilling the IT Workforce for Data Driven Social Ecosystem</i>		
		Floor 3	Room No. D-01	Room No. PBL 04	
14:40 - 16:40	120	Session 2	Track 1 (Data Management and Smart Informatics)	Track 2 (Big Data Management)	
			Room No. D 08	Room No. PBL 01	
			Track 3 (Artificial Intelligence and Data Analytics)	Track 4 (Advances in Network Technologies)	
16:40 - 17:00	20	Networking Break (High Tea)			
17:00 Onwards		Kuala Lumpur City Tour and Dinner			
20 January 2019, Lincoln University College No. 2, Jalan Stadium, SS 7/15, Kelana Jaya, 47301 Petaling Jaya					
SUN 20-January-2019	08:00 - 09:00	60	Registration & Breakfast		
	09:00 - 09:20	20	keynote Address 1: Mr. Aninda Bose - <i>Publishing Ethics and Author Services</i>		
	09:20 - 09:40	20	keynote Address 2: Dr. Hanaa Hachimi - : <i>Optimization Inspired by Nature and Applications</i>		
	09:40 - 10:00	20	Plenary Talk: Dr. Anand Nayyar - <i>Industry 4.0</i>		
			Floor 3	Room No. D-01	Room No. PBL 04
	10:00 - 11:30	90	Session 3	Track 1 (Data Management and Smart Informatics)	Track 2 (Big Data Management)
				Room No. D 08	Room No. PBL 01
				Track 3 (Artificial Intelligence and Data Analytics)	Track 4 (Advances in Network Technologies)
	11:30 - 11:45	15	Break		
			Floor 3	Room No. D-01	Room No. PBL 04
	11:45 - 13:15	90	Session 4	Track 1 (Data Management and Smart Informatics)	Track 2 (Big Data Management)
				Room No. D 08	Room No. PBL 01
				Track 3 (Artificial Intelligence and Data Analytics)	Track 4 (Advances in Network Technologies)
	13:15 - 13:30	15	Photo Session		
13:30 - 14:15	45	Lunch			
		Lincoln University College No. 2, Jalan Stadium, SS 7/15, Kelana Jaya, 47301 Petaling Jaya			
		Valedictory Session - Room No. D 08			
14:15 - 14:35	20	Valedictory Keynote: Dr. Juergen Seitz - <i>Is each blockchain a blockchain or are some of them only chains of blocks?</i>			
14:35 - 15:55	20	Valedictory Plenary Talk: Mohd Helmy Abd Wahab - <i>Internet-of-things and Its Applications</i>			
15:55 - 16:15	20	Valedictory Session			
16:15 - 16:30	15	Award Distribution			

10. EXECUTIVE SUMMARY

Day 01: 18 January 2019 (Pre-Conference Workshops / Tutorials)

Venue: Lincoln University College, Wisma Lincoln, Malaysia

The conference began on 18th January 2019 with pre-conference activities in two parallel tracks, conducted by the experts from industry and academia. Pre-Conference activities are organized usually to set the context of the conference and to encourage the detail discussion on some interesting topics pertaining to conference themes. Its main objective is to provide deeper insights on vital topics to the students and research scholars.

The delegates and the participants from various industries and institutions from across the globe 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. After completing the registration process, attendees had their breakfast and assembled in the pre-conference workshop venue of their interest.



Participants Registering for ICDMAI 2019

The programme begun at 10.00 AM as per the schedule, in two parallel tracks. The Track 1 was dedicated to Tutorial Talks, whereas Track 2 was dedicated for hands-on workshop. Dr. Midhun Charavarthy, Professor, Lincoln University College was the coordinator for Track 1 and Dr. Divya, Dean, PhD Programme, Lincoln University College was the coordinator for Track 2.

TRACK 1:

Tutorial Talk 1: Cognitive Systems, IoT and Watson by IBM (18-January-2019, 10:00 – 13:15)

Dr. Midhun Charavarthy, coordinator for the Track 1, introduced the experts for the first Tutorial Talk, **Ms. Kranti Athalye**, Sr. Manager, IBM India University Relations and **Mr. Amol Dhondse**, IBM Senior Solution Architect, to the audience. He explained that the session is relevant to each one of us as 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. This can be achieved with the Cognitive systems like Watson. Further, he requested Dr. Neha Sharma, Steering Committee Chair and Col. Inderjit Singh Barara, Execom Member, S4DS to felicitate the experts with the token of appreciation.



Experts from IBM being felicitated at the Tutorial Session of ICDMAI 2019

Ms. Kranti Athalye and Amol Dhondse, presented a Tutorial Talk on very interesting topic **“Cognitive Systems, IoT and Watson”**. They shared that 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. The session started with an overview on Artificial Intelligence and Cognitive Systems. They covered many new and interesting areas of Artificial Intelligence using Base Modelling Techniques and Transfer Learning. Further, they discussed about how Transfer Learning can be used with base Artificial Intelligence and Machine Learning Models. They also responded to the queries of the participants in brilliant manner.



Pre-Conference Tutorial Talk by Ms. Kranti and Mr. Amol from IBM on 18 January at ICDMAI 2019



Participants of Tutorial Session by IBM on 18 January at ICDMAI 2019



Pre-Conference Tutorial Talk by IBM on 18 January 2019 at ICDMAI 2019

Tutorial Talk 2: Internet of Things: Concept to Implementation (18-January-2019, 14:30 – 16:30)

Dr. Midhun Charavarthy, coordinator for the Track 1, briefly introduced the expert **Dr. Himadri Nath Saha**, Head of the Department of Computer Science & Engineering and Department of Electrical & Electronics Engineering at Institute of Engineering & Management, Kolkata, to the audience. He requested Dr. Amol Goje, President, Execom Member, S4DS to felicitate Dr. Himadri Nath Saha with the token of appreciation.



Pre-Conference Tutorial Talk by Dr. Himadri Nath Saha from IEM, Kolkata on 18 January at ICDMAI 2019

The Internet of Things (IoT) is the latest in an ever-growing realm of technology that modern developers have to know about. To get into the IoT, it is essential to learn about small form-factor and low-energy devices that interact with the physical world, and to know about the Cloud services that will interface with these devices, for both data ingestion, command and control.

The tutorial talk focused on both sides of the IoT. The session begun by diving into the world of Things and building applications that run on the Raspberry Pi 3, running Windows 10 IoT Core – a small form-factor variant of the popular Windows 10 family. There was a demonstration on how to connect the things to support millions of devices sending millions of messages. Further, Dr. Saha demonstrated to build a data ingestion pipeline, including visualizations of IoT data that enabled the participants to gain insight into the solution, and a command capability that enables us to control our device remotely. By the end of the session, participants got a fair idea built a complete IoT solution.



Participants of Tutorial Session by Dr. Himadri Nath Saha on 18 January at ICDMAI 2019

TRACK 2:

Workshop: Machine Learning using R (18-January-2019, 10:00 – 16:30)

Dr. Divya, coordinator for the Track 2, briefly introduced the experts **Dr. Saptarsi Goswami** from A.K. Choudhury School of IT, University of Calcutta and **Prof. Santanu Roy** from Future Institute of Engineering and Management, Kolkata, India. She shared some quick information about the Workshop and requested Dr. Neha Sharma, Steering Committee Chair and Col. Inderjit Singh Barara, Execom Member, S4DS to felicitate the experts with the token of appreciation.



Pre-Conference Workshop on Machine Learning using R on 18 January 2019 at ICDMAI 2019

Machine learning is a branch of artificial intelligence that allows computer systems to learn directly from examples, data, and experience. Through enabling computers to perform specific tasks intelligently, machine learning systems can carry out complex processes by learning from data, rather than following pre-programmed rules. Whereas, '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.



Participants of Pre-Conference Workshop at ICDMAI 2019

The workshop started with a quick overview of Machine Learning and various Machine learning Tasks. A gentle introduction of R programming was also given. The basics of Clustering and Classification tasks were

explained and were demonstrated with the help of K-Means and Support Vector Machine algorithms respectively. The workshop created lots of interest among the participants and they interacted particularly to understand the applicability of these techniques to their research problems.

18th January 2019 concluded successfully with beautifully crafted Tutorial Talks and Workshop. Each session was better than the other. The talks and the workshop was appreciated by all the participants and they shared that they had a great take away from the sessions. Experts complemented participants for being interactive and asking brilliant question, which made the session more interesting and inclusive.



Glimpses of Participants of Pre-Conference Day (18 January) at ICDMAI 2019

Day 02: 19 January 2019

(Keynote Address / Plenary Talk / Paper Presentations)

Inauguration Venue: Malaysian Airlines Auditorium

Presentation Venue: Lincoln University College No. 2, SS 7/15, Kelana Jaya, 47301 Petaling Jaya

All the Guests, delegates and participants started arriving at the venue ie. Malaysian Airlines Auditorium, Kuala Lumpur, for the inauguration function, since 8.30 AM onwards and registered themselves.



Guests, Delegates and Participants for the Inauguration Ceremony on 19th January 2019 at ICDMAI 2019

The auditorium was properly decked up and other preparations were diligently completed for the Inauguration ceremony.



Completely Decked up Venue for the Inauguration Ceremony on 19th January 2019 at ICDMAI 2019

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 – 09.40 am	10	Felicitation of Guests on the Dais
09.40 am – 09.50 am	10	Welcome Address by Dr. Amiya Bhaumik, Vice Chancellor, Lincoln University
09.50 am – 09.55 am	05	Welcome Address by Dr. Amol Goje, President, Society for Data Science
09.55 am – 10.00 am	05	Introduction of ICDMAI 2019 by Dr. Neha Sharma, Steering Committee Chair, ICDMAI 2019
10.00 am – 10.05 am	05	Release of Abstract Book
10.05 am – 10.10 am	05	Address by General Chair, Dr. P.K. Sinha
10.10am – 10.15am	05	Inaugural Address by Prof. Datuk Dr. Hajjah Bibi Florina Abdullah, Pro-Chancellor, Lincoln University College, Malaysia
10:15 am – 10:20 am	05	Message by Chief Guest, Mr. Eddy Liew Cloud and Solutions Country Technical Leader for IBM Malaysia, IBM
10:20 am – 10:25 am	05	Vote of Thanks by Col. Inderjit Singh Barara, Execom Member, S4DS

At the outset, the anchor of the inauguration ceremony, Prof. Noor Akma, Lincoln University College, briefed the guests and the delegates about the country, state, city and the host Institute. She invited Dr. Ali Abdulbaqi Ameen Ali, Lincoln University College to chant prayer, which is a Malaysian tradition to start the programme.



Prof. Noor Akma and Dr. Ali at the Inauguration Ceremony on 19th January at ICDMAI 2019

Moving ahead, the Chief Guest and other dignitaries on the dais were felicitated on behalf of ICDMAI 2019.



Felicitation of Dr. Eddy Liew, Dr Amiya and Dr. P. K. Sinha at the Inauguration Ceremony on 19 January at ICDMAI 2019

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Dr. Amiya Bhaumik, Vice Chancellor, Lincoln University College, Kuala Lumpur and Patron, ICDMAI 2019, welcomed all the guest and delegates from various parts of the world. He shared his interesting experience during his China visit which made him realize the speed with which technology is advancing. He stressed on the fact that the technology should be for the benefit of the society. Dr. Amol Goje, President, S4DS and Patron, ICDMAI 2019, emphasized on the relevance of the conference in the current scenario and in future. Dr. Neha Sharma, Founder Secretary, S4DS and Steering Committee Chair, ICDMAI 2019, 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 20 countries, 12 Industries, 27 International Universities and 91 premier Indian Universities. She mentioned that out of 418 papers submitted to ICDMAI 2019, only 20% are selected for oral presentation after a rigorous review process. She promised that this conference will not be just another “talk shop”, but would provide an opportunity to listen to many eminent personalities of the world, in their keynote and plenary talks. She also shared the details of workshop and tutorials by leaders from industry and academia, on 18th January 2019.



Welcome address Dr. Amiya and Dr. Goje at the Inauguration Ceremony on 19 January at ICDMAI 2019



Dr. Neha Sharma presenting the Overview of ICDMAI 2019 during the Inauguration Ceremony on 19th January 2019

The anchor, Prof. Noor Akma, invited all the dignitaries on the dais to release the abstract book for ICDMAI 2019.



Release of Abstract Book during the Inauguration Ceremony of ICDMAI 2019

Going forward, Dr. P. K. Sinha, Vice Chancellor & Director of International Institute of Information Technology (IIIT), Naya Raipur and General Chair - ICDMAI 2019, welcomed all the guests and delegates on behalf of ICDMAI 2019. Sir shared that ICDMAI made a humble beginning in 2016 in India has become truly international in just two years. It not only has keynote speakers and paper presenters from participants across the globe, but it is also being organized this year outside India, in Kuala Lumpur, Malaysia. The past two versions of this conference (ICDMAI 2016 and ICDMAI 2017) saw eminent scientists, engineers and academicians delivering keynote speeches and invited talks, thus providing enriching experience for the participants. He said that he is sure that this year's version is going to be much more interesting. Further, sir said that with increasing use of data analysis for decision making in all spheres of our modern society, today Data Science has become main stream in all domains, be it science, engineering, finance, marketing or any other area. Most of today's business and research decisions as well as disruptive innovations are data-driven. In next few



Dr. P.K. Sinha Welcoming the Delegates of ICDMAI 2019

decades, several disruptive technologies based on data-driven innovations are going to impact our social ecosystem. Hence, the conference is very topical.

Proceeding further, Mr. Eddy Liew, Cloud and Solutions Country Technical Leader for IBM Malaysia, addressed the gathering and complemented on organizing 3rd International Conference on Data Management, Analytics and Innovation (ICDMAI-2019) on a very contemporary topic. He said, this will provide a useful channel of communication and idea exchanges among researchers, professionals, students and teachers. Finally, Col. Inderjit Barara proposed the vote of thanks to conclude the Inaugural ceremony. Dr. Barara shared that planning for this conference initiated 14 months back and it couldn't have been possible without consistent, concerted and focused efforts of many good souls. He thanked entire team of Lincoln University College, Advisory body members, technical programme committee, people from industry and academia, reviewers, session chairs, media, authors, students and his own Society for Data Science team, who have been instrumental in making this conference possible.



Message by Mr. Eddy Liew, Chief Guest and Vote of Thanks by Dr. Barara during the Inauguration Ceremony, ICDMAI2019



Glimpses of Guests, Delegates and Participants during the Inauguration Ceremony of ICDMAI 2019

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Inauguration ceremony was followed by Keynote sessions by **Ms. Kranti Athalye**, Sr. Manager, IBM India University Relations and **Mr. Eddy Liew**, Cloud and Solutions Country Technical Leader for IBM Malaysia. Ms. Kranti Athalye spoke on topic which is very useful for budding researchers – **“Data and Artificial Intelligence”** whereas Mr. Eddy Liew spoke on **Cognitive Systems**. Ms. Kranti delivered a very insightful speech on IBM Research strategic focal area and Evolution of Artificial Intelligence, whereas Mr. Eddy shared mind blowing applications of Cognitive systems. Both the Keynotes were brilliant and left the audience with many research ideas as well as set the stage for the conference.



Keynote Address by Ms. Kranti Athalye, Sr. Manager, IBM India University Relations at ICDMAI 2019 on 19th January



Keynote Address by Mr. Eddy Liew, Cloud and Solutions Country Technical Leader, IBM Malaysia at ICDMAI 2019 on 19th Jan

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Glimpses of Guests, Delegates and Participants during Inauguration Ceremony of ICDMAI 2019

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 24 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.



Session Coordinators for ICDMAI 2019: Ms. Mukil, Dr. Divya, Ms. Supraja, Dr. Adrianna

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Session Chairs for ICDMAI 2019: Dr. Juergen, Dr. Himadri, Dr. Krishna Mohan, Dr. Malini, Dr. Suseendran, Mr. Amol Dhone, Dr. Saptarsi Goswami, Dr. Vivek Deshpande



Keynote Address by Dr. P.K. Sinha, at ICDMAI 2019 on 19th January 2019

Post lunch keynote address was by **Dr. P.K. Sinha**, Vice Chancellor & Director of International Institute of Information Technology (IIIT), Naya Raipur, and also an IEEE Fellow, CSI Fellow & ACM Distinguished Speaker. He spoke on very contemporary topic of **“Skilling the IT Workforce for Data Driven Social Ecosystem”**. Sir said that in the last few decades, Information Technology has brought through disruptive changes in our society with several advantages. Internet, social media, online shopping, online information availability, online banking, birth of new types of businesses and companies, death of several conventional types of business operations and companies, are only a few such examples. The social transformation due to this is often quoted to be the fastest ever in the history of humanity. However, due to the data driven innovations going on currently, we are on the verge of experiencing an even faster pace of development of disruptive technologies in the next few decades, resulting in a much-advanced social ecosystem. Driverless vehicles and factories; co-existence of humanoid robots with humans; IoT

driven smart homes, smart cities, smart farming, etc.; personalized healthcare; personalized education; augmented reality (AR); banking through distributed ledger and blockchain; etc. are a few technological changes that will affect our societal ecosystem in the next few decades. Dr. Sinha, further said that it is great to have disrupting technologies, but it is scary to be disrupted. Hence, many existing companies are busy in strategy planning for how to prepare for the future to survive the digital disruption impact. IT companies are even more concerned about this because of the direct impact that they anticipate. The talk focused on handling the problem at grass-root level by suggesting curriculum changes in IT education at undergraduate level for appropriately skilling the future IT workforce.

Followed by Keynote Talk by Dr. Sinha, there was **Session 2** of paper presentation in four tracks for 120 mins each. Total 28 papers were presented and evaluated by session chairs.



Paper Presenters at ICDMAI 2019 on 19th January 2019

In the evening, the **City Tour** of Kuala Lumpur city was organized for the guests, delegates and participants who had travelled from various countries across globe. Important sites like Istana Negara, War Memorial and Twin Towers were covered. Delegates enjoyed the sightseeing and overall arrangements.



Delegates ready for Kuala Lumpur City Tour at ICDMAI 2019 on 19th January 2019

The first destination was the **Istana Negara**, which is the official residence of the Yang di-Pertuan Agong, the monarch of Malaysia. It is located along Jalan Tuanku Abdul Halim in Segambut, northwestern Kuala Lumpur. The palace opened in 2011 and replaced the old Istana Negara which was located at a different compound in central Kuala Lumpur.



Delegates exploring Istana Negara, Kuala Lumpur on 19th January 2019

The next location was **War Memorial** or **Kuala Lumpur Cenotaph**, which was built to commemorate the Great War (1914–1918) and honour those from the British Malayan colonies who were killed in the war, the cenotaph's inscription would later include fallen British Malayan soldiers of World War II (1939–1945) after the conclusion of World War II and resumption of British rule. Names of the fallen are engraved on the plaques of the cenotaph as a token of tribute to their sacrifices. In 1964, the cenotaph was moved from its original location to the site of the National Monument in Lake Gardens. Following its move, inscriptions were added to include fallen soldiers from the Malayan Emergency (1948–1960) and an archaic Malay translation of "To Our Glorious Dead", "Untok Mengingati Jasa Pahlawan-pahlawan Yang Gugor" ("To Remember the Service of Warriors Who Have Fallen").

The final destination of the city tour was the Petronas Towers, also known as the **Petronas Twin Towers**, are twin skyscrapers. According to the Council on Tall Buildings and Urban Habitat's official definition and ranking, they were the tallest buildings in the world from 1998 to 2004 and remain the tallest twin towers in the world. The buildings are a landmark of Kuala Lumpur, along with nearby Kuala Lumpur Tower.

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Delegates at War Memorial / Kuala Lumpur Cenotaph on 19th January 2019



Delegates at Petronas Twin Tower, Kuala Lumpur on 19th January 2019

Day 03: 20 January 2019**(Keynote Address / Plenary Talk / Paper Presentations / Award Function)**

Conference Venue: Lincoln University College No. 2, SS 7/15, Kelana Jaya, 47301 Petaling Jaya

Day 03 began with the arrival of the guests, delegates and participants at the conference venue since 8.00 AM for registration and breakfast. At 9:00 AM, everybody gathered at the auditorium to start the proceedings of the day. The first keynote of the day was by **Mr. Aninda Bose**, Senior Publishing Editor, Springer India Pvt. Ltd. on **“Publishing Ethics and Author Services”**. Mr. Bose said that the importance of research publishing can be defined by a simple quote of Gerard Piel, which says “Without publication, science is dead.” He shared that the first scientific journal was published in 1665 and we have travelled 350 years since then. In the last 20 years, science and reporting of science have undergone revolutionary changes. 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. 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. Aninda’s talk was designed to provide information on different ethical practices and also on how to make use of various author services for the publishing work.



Keynote Address by Mr. Aninda Bose at ICDMAI 2019 on 20th January 2019

Next keynote was by **Dr. Hanaa Hachimi**, National School of Applied Sciences Ibn Tofail University, Kenitra, Morocco on very interesting topic **“Optimization Inspired by Nature and Applications”** as optimization is a pervasive discipline in several research fields of engineering science. Dr. Hanaa’s presentation consists of two parts; the first is of linear programming; how to design and reformulate a problem and provide resolution or simulation tools such as the Simplex method, the second part is dedicated to unveil some

algorithms for complex optimization using algorithms inspired by nature like ant colony, genetic algorithm or cuckoo search. The talk left the audience with many research insights.



Keynote Address by Dr. Hanaa Hachimi at ICDMAI 2019 on 20th January 2019

After that there was the plenary talk by **Dr. Anand Nayyar**, Duy Tan University, Vietnam on “**Industry 4.0**”. Dr. Anand explained the current trend of automation and data exchange in manufacturing, which includes cyber-physical systems, Internet of things, cloud computing and cognitive computing. Industry 4.0 is commonly referred to as the fourth industrial revolution. Industry 4.0 fosters what has been called a "smart factory". Within modular structured smart factories, cyber-physical systems monitor physical processes, create a virtual copy of the physical world and make decentralized decisions. Over the Internet of Things, cyber-physical systems communicate and cooperate with each other and with humans in real-time both internally and across organizational services offered and used by participants of the value chain. The session was truly informative.



Plenary Talk by Dr. Anand Nayyar at ICDMAI 2019 on 20th January 2019

Followed by so many diverse keynote and plenary talks, there were two sessions of paper presentation scheduled ie. **Session 3** and **Session 4** of 90 mins each, with a break of 15 mins. Total 25 and 10 papers were presented and evaluated by session chairs in respective sessions spread across 04 tracks.



Paper Presenters at ICDMAI 2019 on 20th January 2019

09 authors requested for on-line presentation as they were unable to attend the conference due to unavoidable situation. After due deliberation, the request were considered and the papers were allowed to be presented through skype as a special case. Prof. Vivek and Prof. Dinesh, co-chaired the special session of skype presenters.



Paper Presentation via Skype at ICDMAI 2019 on 20th January 2019

The guests and the delegates gathered in the auditorium for the final time after lunch for valedictory function and award ceremony. The valedictory function begun at 14:15 hrs as per the schedule given below:

TIME	Min(s)	DETAILS OF VALEDICTORY FUNCTION
14:15 - 14:35	20	Valedictory Keynote: Dr. Juergen Seitz - Is each blockchain a blockchain or are some of them only chains of blocks?
14:35 - 15:55	20	Valedictory Plenary Talk: Mohd Helmy Abd Wahab - Internet-of-things and Its Applications
15:55 - 16:15	20	Valedictory Address by Core Team of Society for Data Science
16:15 - 16:30	15	Award Distribution

The valedictory fuction commenced with the valedictory keynote by **Dr. Juergen Seitz**, Baden-Wuerttemberg Cooperative State University Stuttgart, Germany on “Is each blockchain a blockchain or are some of them only chains of blocks?”, followed by the Last plenary talk delivered by **Dr. Mohd Helmy Abd Wahab**, Universiti Tun Hussein Onn Malaysia (UTHM) on very contemporary topic “Internet-of-things and Its Applications”.

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Keynote by Dr. Juergen and Plenary Talk by Dr. Wahab at ICDMAI 2019 on 20th January 2019

After the valedictory talks, the core team of Society for Data Science came on the stage and shared their plan for next year, the offerings of S4DS and their vision for data science community at national and global level. The team also announce that the dates for ICDMAI 2020 would be **17-19 Jan 2020** and the venue would be the capital of India ie. **Delhi**.



Valedictory Address by Core Team of Society for Data Science at ICDMAI 2019 on 20th January 2019

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Moving forward, all the session chairs were felicitated for their un-tiring efforts in evaluating the papers and being unbiased in the selection of papers for awards.



Felicitating of Session Chairs at ICDMAI 2019 on 20th January 2019

Award distribution is a much awaited event in every researchers life, as it gives the returns to the efforts put in by them throughout their research endeavor. 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.



Track wise Best Paper Awards Distribution during Valedictory Function at ICDMAI 2019 on 20th January 2019

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This was not all, there was a surprise gift by Springer for the Best Paper in each track. Delegates were overwhelmed to receive the voucher of 180 Euros that can be utilized to purchase ebooks.



Gift from Springer to 04 Best Papers at ICDMAI 2019 on 20th January 2019

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 2019, the efforts, innovation, intelligent execution presented by all the delegates were exemplary and an achievement in itself.



Glimpses of Guests, Delegates and Participants at ICDMAI 2019 on 20th January 2019

At the end, Delegates were requested to collect their certificate from the registration desk and submit their feedback form. Finally, Vice Chancellor of Lincoln University, Dr. Amiya Bhaumik proposed a vote of thanks and formally brought ICDMAI 2019 to conclusion.



Vote of Thanks by Dr. Amiya Bhaumik at ICDMAI 2019 on 20th January 2019

ICDMAI 2019 concluded with a promise to raise the standards further to create a new benchmark and officially bid adieu to everyone.

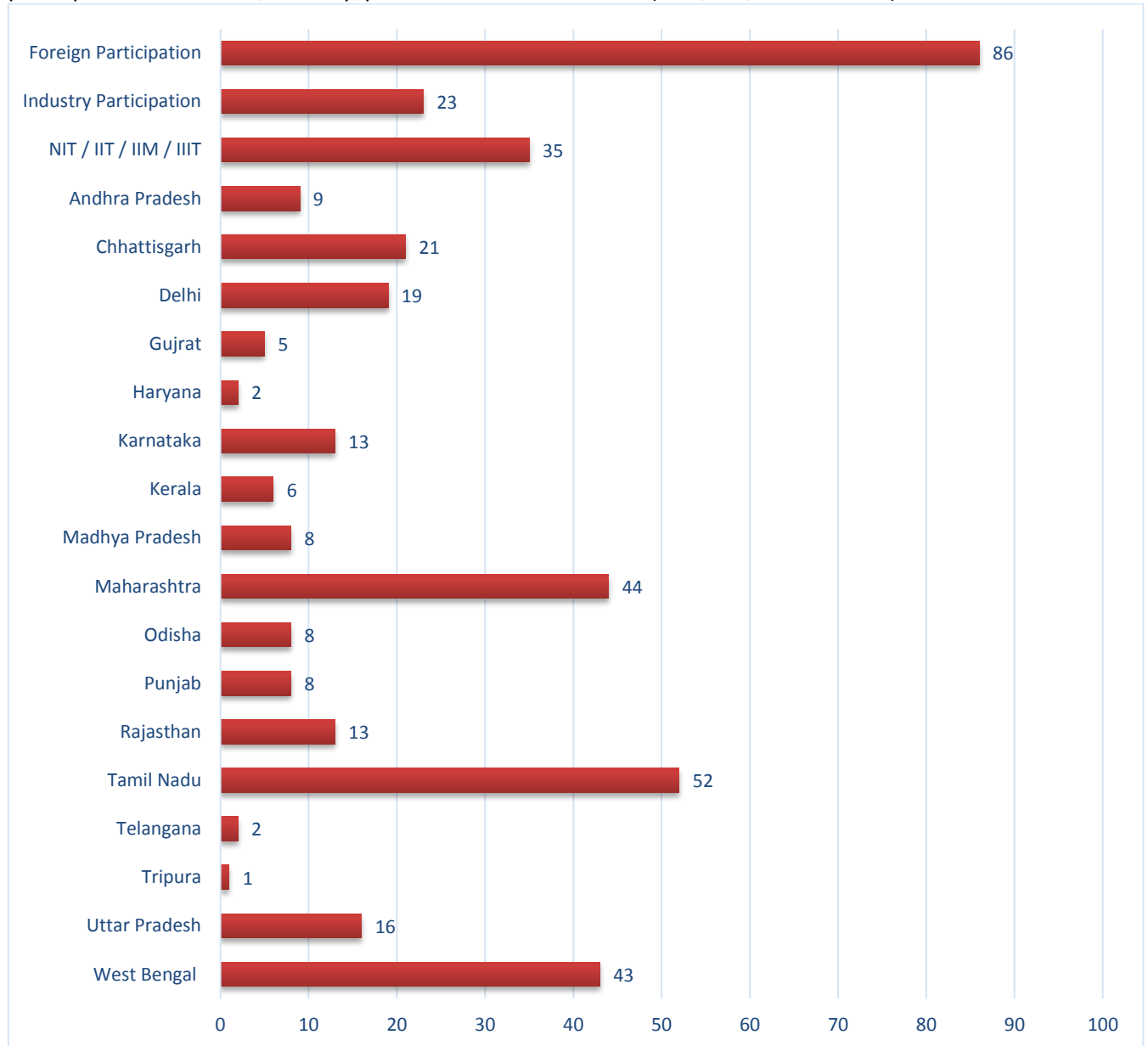


Glimpses of Guests, Delegates and Participants at ICDMAI 2019 on 20th January 2019

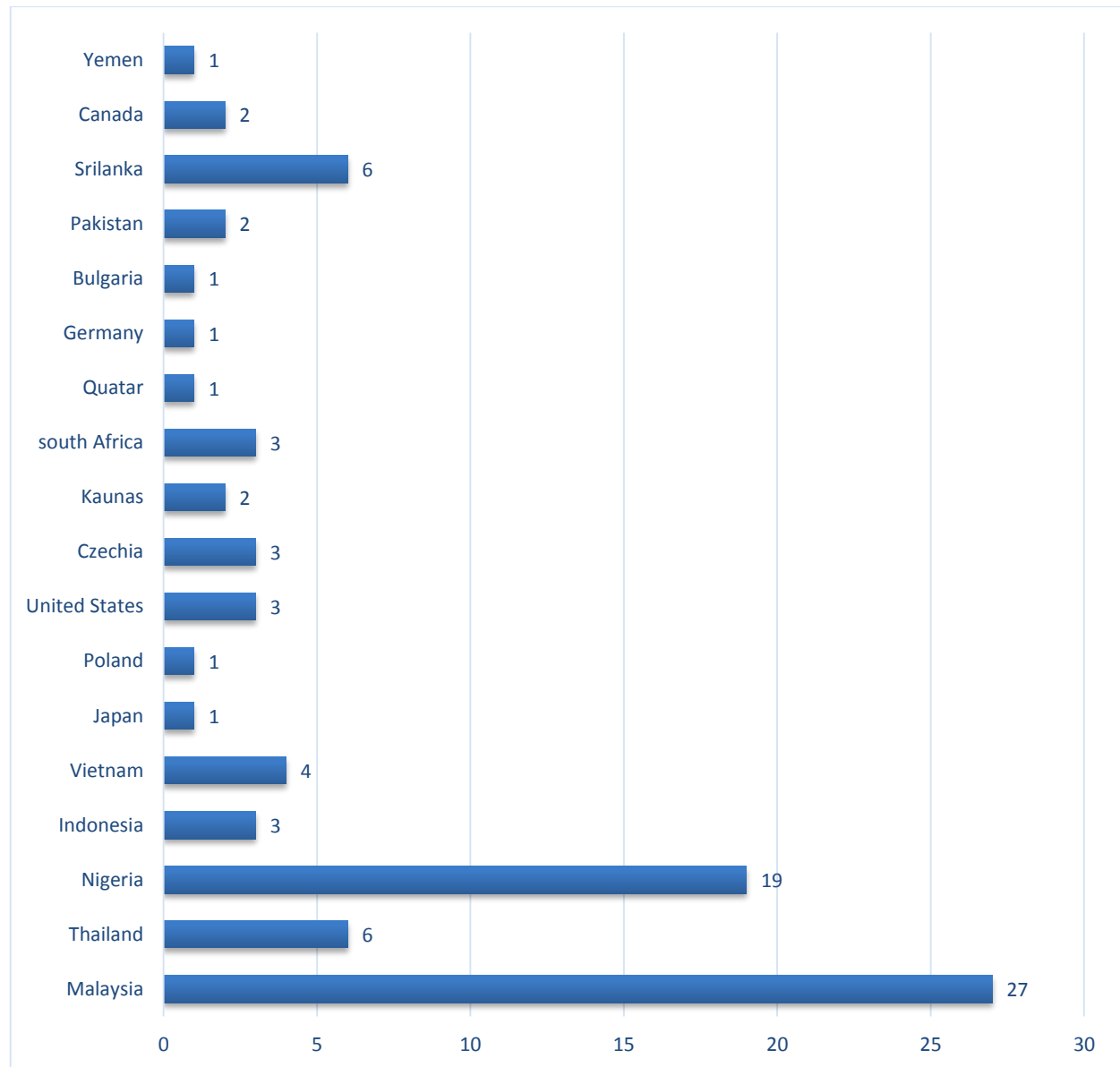
11. ICDMAI-2019 PAPER SUBMISSION METRICS

11-A. Response to the Conference

Soon after the **Call for Paper** was announced and information was uploaded on the conference website on 15th March 2018, the conference started receiving overwhelming response from all the states of our country as well as from international community. This response is evident from the fact that total **418 research papers** were submitted to the conference. The graph below shows the statistics of number of participants from abroad, industry, premier institutions of India (NITs, IITs, IIMs and IIITs) and Indian states:



We also had very encouraging participation from global research community, which is depicted in the graph below:



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

418 Research papers have been submitted for ICDMAI 2019 and out of them only 87 papers ie. 20% papers are selected for oral presentation. The details of the paper selection and registration statistics are given below:-

Particulars	Information
Total paper received	418
Paper selected after double blind review	87 (20%)
Number of participants registered as listener	04
Number of participants registered for Pre-Conference Tutorials	22
Total Delegates registered for ICDMAI 2019	103
Total papers presented at the conference	87
Absenteeism	00
Number of Indian States from where papers were received	17

Participation of various Countries in ICDMAI 2019

1. Bulgaria
2. Canada
3. Czechia
4. Germany
5. India
6. Indonesia
7. Italy
8. Japan
9. Kaunas
10. Malaysia
11. Nigeria
12. Pakistan
13. Qatar
14. South Africa
15. Sri Lanka
16. Thailand
17. United States
18. Viet Nam
19. Yemen



Participation of International Universities in ICDMAI 2019

1. Dept. Information Management, NTUST Taiwan. Dept. Information Systems at UIN SUSKA Riau
2. Hassan Usman Katsina Polytechnic, Katsina
3. Faculty of Technical Science, Jan Wyzkowski University ul. Skalnikow 6 B, 59-101 Polkowice, Poland
4. Maejo University, Thailand
5. University of Regina, Canada
6. Universiti Tunku Abdul Rahman, Kampar Malaysia
7. College of Engineering, Rangsit University, Thailand
8. Satya Wacana Christian University, Thailand
9. Universiti Tunku Abdul Rahman, Thailand
10. Universiti Malaysia Sabah, Malaysia
11. Lincoln University College, Malaysia
12. University of Lagos, Nigeria
13. Covenant University, Nigeria
14. North-West University, Vaal Triangle Campus, South Africa
15. National Productivity Center, Calabar, Nigeria
16. Kaunas University of Technology, Kaunas
17. University of North Dakota, United States
18. University of Moratuwa, Srilanka
19. Qatar University
20. Indiana University Bloomington, United States
21. Faculty of Software and Information Science, Iwate Prefectural University, Takizawa
22. Technical University of Sofia, Bulgaria
23. IT4Innovations, VŠB - Technical University of Ostrava
24. Al Madinah International University, Malaysia
25. Universiti Teknologi PETRONAS, Malaysia
26. Technical University of Munich, Germany
27. Southern University, Baton Rouge, USA

Participation of Industries in ICDMAI 2019

- | | |
|---|--|
| 1. IBM | 2. Persistent Systems |
| 3. ankush impex pvt ltd | 4. ppltech |
| 5. CDAC, Pune | 6. Save Life Engineering India |
| 7. Chhattisgarh Council of Science and Technology, Raipur | 8. Tata Consultancy Services |
| 9. Cognizant | 10. Peerless Hospital and B.K. Roy Research Centre Ltd |
| 11. Faurecia Interior Systems, India | 12. ThingsMeet ,Pune |

Participation of Indian Institutes / Universities in ICDMAI 2019

- 1 A.K. Choudhury School of Information and Technology, University of Calcutta
- 2 Acharya Institute of Technology, Bangalore
- 3 Ajeenkya D Y Patil University, Pune
- 4 **Amity Business School, Amity University, Madhya Pradesh, Gwalior**
- 5 Amity University, Uttar Pradesh
- 6 Avinashilingam Institute for Home Science and Higher Education for Women University, TN
- 7 Bannari Amman Institute of Technology, Tamil Nadu
- 8 Bapatla Engineering College, Guntur
- 9 **Bennett University, Greater Noida**
- 10 Bharati Vidyapeeth's College of Engineering, New Delhi
- 11 **Birla Institute of Technology & Science, Pilani**
- 12 BSAEI, Faridabad
- 13 C. V. Raman College of Engineering, Bhubaneswar, Orissa, India
- 14 Calcutta Business School
- 15 **Christ Deemed to be University**
- 16 **Delhi Technological University, Delhi**
- 17 Department of Computer Science & Technology, Women's Polytechnic, Hapania
- 18 Department of Computer Science, Panihati Mahavidyalaya, Sodepur, Kolakata
- 19 Department of Computer Science, Punjabi University, Patiala, Punjab, India
- 20 Department of Computer Science, Surendranath College, Kolkata
- 21 Dr. Ambedkar Institute of Technology
- 22 Dr. M. G. R. Educational and Research Institute
- 23 Future Institute of Engineering and Management, Kolkata
- 24 G L Bajaj Greater Noida
- 25 G L Bajaj Institute of Management and Technology
- 26 GITAM, Visakhapattanam
- 27 Gogte Institute of Technology Belagavi
- 28 Guru kashi University
- 29 **IIT Bangalore, India**
- 30 **Indian Institute of Chemical Biology, Kolkata, West Bengal**
- 31 **Indian Institute of Management, Raipur**
- 32 **Indian Institute of Technology Kanpur India**
- 33 **Indian Institute of Technology, Banaras Hindu University**
- 34 Institute for Development and Research in Banking Technology
- 35 **International Institute of Information Technology (IIIT) Bangalore, India**
- 36 ITM Universe, Vadodara, Gujarat
- 37 ITM University, Gwalior
- 38 Jayoti Vidyapeeth Women's University, Jaipur
- 39 Jaypee Institute of Information Technology, Delhi
- 40 Jaypee University Anoopshahr

- 41 JIMS Engineering and Management Technical Campus
 42 JIS College of Engineering
 43 Kalinga Institute of Industrial Technology, Bhubaneswar
 44 KCESs Institute of Management & Research Jalgaon
 45 KL University, Vijayawada,A.P.
 46 Manav Rachna International University
 47 Mangalore University
 48 Manipal University Jaipur
 49 Marathwada Mitra Mandal's College of Engineering, Pune, India
 50 MIT College of Engineering
 51 MIT School Of Technology Management
 52 MIT World Peace University
 53 MJPRU Bareilly
 54 **MNNIT, Allahabad**
 55 MVSR engg College, HYD
 56 **National Institute of Electronics and Information Technology, Kolkata Centre**
 57 **National Institute of Technnology, Suratkal, Karnataka**
 58 **National Institute of Technology, Raipur**
 59 Nazrul Balika Vidyalaya, Guma, West Bengal
 60 NMAM Institute of Technology, Nitte
 61 Pondicherry Engineering College
 62 **PSG College of Technology, Coimbatore**
 63 R.M.K. College of Engineering and Technology
 64 RCC Institute of Information Technology
 65 PAHER Udaipur, Rajasthan, India
 66 RIMT university
 67 Samrat Ashok Technological Institute
 68 SB Patil Institute of Management, Savitribai Phule Pune University
 69 School of Business, Amrita Vishwa Vidyapeetham
 70 School of Computational Sciences, S. R. T. M. Univeristy, Nanded
 71 School of Computer Sciences KBC NMU Jalgaon
 72 **School of Mobile Computing & Communication, Jadavpur University, Kolkata**
 73 SCMS School of Engineering and Technology, Ernakulam, India
 74 SIES Graduate School of Technology
 75 Siksha O Anusandhan University
 76 Sinhgad College Of Engineering
 77 Sir Padampat Singhania University, Udaipur, Rajasthan
 78 SSGI(FET), Bhilai, CSVTU University, Chhattisgarh
 79 Sveri Pandharpur

- 80 The Calcutta Technical School, Kolkata
- 81 ToCh Institute of Science and Technology
- 82 **University of Calcutta**
- 83 University of Engineering & Management, Kolkata
- 84 University of Kalyani
- 85 Vels Institute of Science, Technology & Advanced Studies (VISTAS)
- 86 Vidya Pratishthan's Institute of Information Technology, Baramati
- 87 Vidyalankar Institute of Technology
- 88 Vimal Jyothi Engineering College
- 89 Vishwakarma Institute of Technology Pune
- 90 Vivekanand Education Society's Institute of Technology
- 91 Vivekananda Mission Mahavidyalaya, Vidyasagar University

11-D. Paper Presentation Session Summary

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 and Session Coordinators for all the sessions of paper presentations in four parallel tracks on 19th and 20th January 2019 is shared below:

Session Chair Details							
Venue --> Second Floor				Room No. D 01	Room No. PBL 02	Room No. D 08	Room No. PBL 01
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: Ms. Supraja	Session Co-ordinator: Dr. Divya	Session Co-ordinator: Dr. Adrianna	Session Co-ordinator: Ms. Mukil
19-01-2019	11:30 - 13:00	90	Session 1	Session Chair: Dr. Himadri	Session Chair: Dr. Juergen Seitz	Session Chair: Dr. Krishna Mohan Rao	Session Chair: Dr. G. Suseendran
	14:40 - 16:40	120	Session 2	Session Chair: Dr. Krishna Mohan Rao Session Co-Chair: Dr. Deore	Session Chair: Dr. Vivek Deshpande	Session Chair: Dr. Saptarsi Goswami Session Co-Chair: Mr. Amol Dhondse	Session Chair: Dr. Malini Patil
20-01-2019	10:00 - 11:30	90	Session 3	Session Chair: Dr. Juergen Seitz	Session Chair: Mr. Amol Dhondse	Session Chair: Dr. Vivek Deshpande	Session Chair: Dr. Hanaa Hachimi
	11:40 - 13:10	90	Session 4	Session Chair: Dr. Anand Nayyar		Session Chair: Dr. Himadri	

The selected papers were divided in four tracks which were presented in 04 sessions. Each session were of 90 mins and was chaired by an expert designated as a Session Chair. The evaluation parameters to evaluate the paper presentation were - Depth of Literature survey, Material Methods Used, Experimental Result,

Conclusion Drawn and Relevance to the Industry/Society. Time allotted was 10 mins for presentation and 05 mins for Question & Answer. The details of the track wise paper presentations are given below:-

Track I: DATA MANAGEMENT & SMART INFORMATICS		
Session Venue: Lincoln University College No. 2, Jalan Stadium, SS 7/15, Kelana Jaya, 47301 Petaling Jaya		
SESSION 1 - Day 2: 19 January 2019 Time: 11:30 – 13.00 (90 Mins)		
61	Akshi Kumar, Anand Nayyar, Shubhangi Upasani and Arushi Arora	Empirical Study of Soft Clustering Technique for Determining Click Through Rate in Online Advertising
106	Akhil Khare, Sanjeev Yadav, Kavita Yogen	ASK Approach: A Pre-Migration Approach for Legacy Application Migration to Cloud
137	Kanak Saxena and Umesh Banodha	A Fuzzy Logic Based Cardiovascular Disease Risk Level Prediction System in Correlation to Diabetes and Smoking
158	Ruchita Nale, Ruchi Chandrakar and Monalisa Biswal	An Integrated Fault Classification Approach for Microgrid System
160	Neerja Aswale and Kavya Mukul	Role of Data Analytics in Human Resource Management for Prediction of Attrition Using Job Satisfaction
163	Smiti Kashyap, Kanika Singh Tomar and Vikas Garg	A Study of Business Performance Management in Special Reference to Automobile Industry
187	Dipti Pawade, Avani Sakhapara, Aishwarya Badgujar, Divya Adepur and Melvita Andrade	Secure Online Voting System using Biometric Authentication with Blockchain
SESSION 2 - Day 2: 19 January 2019 Time: 14:40 – 16.40 (120 Mins)		
222	Kalyan Baital and Amlan Chakrabarti	An approach: Applicability of Existing Heterogeneous Multicore Real-Time Task Scheduling in Commercially Available Heterogeneous Multicore Systems
225	Kitti Naonueng, Opas Chutatape and Rong Phoophuangpaioj	Analysis of the Detectability of Harmful Postures for Patient with Hip Prosthesis Based on a Single Accelerometer in Mobile Phone
230	Rehan Akbar, Asif Khan and Kiran Adnan	Software Development Process Evolution in Malaysian Companies
238	Rayner Alfred	Automated Scheduling of Hostel Room Allocation using Genetic Algorithm
243	Himanshu Govil, Subhanil Guha, Prabhat Diwan, Neetu Gill, Anindita Dey	Evaluation of ASTER TIR data based lithological indices in parts of Madhya Pradesh and Chhattisgarh State, India
244	Himanshu Govil, Subhanil Guha, Prabhat Diwan, Neetu Gill, Anindita Dey	Analysing linear relationships of LST with NDVI and MNDISI using various resolution levels of Landsat 8 OLI and TIRS data
254	S. Elavarasi, G. Suseendran	Automatic Robot Processing using Speech Recognition System

286	G. Suseendran, E. Chandrasekaran, D. Akila and A. Sasi Kumar	Banking and FinTech (Financial Technology) embraced with IoT Device
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Track II: BIG DATA MANAGEMENT

Session Venue: Lincoln University College No. 2, Jalan Stadium, SS 7/15, Kelana Jaya, 47301 Petaling Jaya

SESSION 1 - Day 2: 19 January 2019 Time: 11:30 – 13.00 (90 Mins)

28	Sk Kamaruddin, Vadlamani Ravi	GRNN++: A Parallel and Distributed version of GRNN under Apache Spark for Big Data Regression
63	Fiaz Majeed and Rana Azhar Ul Haq	An Entropy Based Technique for Conferences Ranking
87	D.Karthika Renuka and Sri Vinitha V	MapReduce mRMR – Random Forests based Email Spam Classification in Distributed Environment
103	Sathaya Thanjunpong and Thatphong Awirothananon	The impact of sustainable development report disclosure on tax planning in Thailand
104	Ahmad Alzahrani and Samira Sadaoui	Clustering and Labeling Auction Fraud Data

SESSION 2 - Day 2: 19 January 2019 Time: 14:40 – 16.40 (120 Mins)

152	Prema Arumugam, Booba Rajasekar and Renuga Devi	Mending Image Data using Data Analytics Storage Methods
159	Nirmal Gupta and Mukesh Rohil	Big Data Security Challenges and Preventive Solutions
223	Kiran Adnan, Rehan Akbar, Khor Siak Wang and Adnan Bin Amanat Ali	Role and Challenges of Unstructured Big data in Healthcare
245	Devendran A and Arunkumar K	zipzapdata - A framework for 'personal data preservation'
369	Isaac Odun-Ayo, Rowland Goddy-Worlu, Emanuel Grant and Temidayo Abayomi-Zannu	A Systematic Mapping Study of Cloud Large Scale Foundation - Big Data, IoT and Real Time Analytics
380	Sonia Bhattacharya and Himadri Bhattacharyya Chakrabarty	Studies on Radar Imageries of Thundercloud by Image Processing Technique

Track III: ARTIFICIAL INTELLIGENCE AND DATA ANALYTICS

Session Venue: Lincoln University College No. 2, Jalan Stadium, SS 7/15, Kelana Jaya, 47301 Petaling Jaya

SESSION 1 - Day 2: 19 January 2019 Time: 11:30 – 13.00 (90 Mins)

27	Gurjot Singh Mahi, Amandeep Verma	PURAN – Word Prediction System for Punjabi Language News
84	Binod Shaw, Jyoti Ranjan Nayak and Raj Kumar Sahu	Implementation of hDE-HTS Optimized T2FPID Controller in Solar-thermal System
92	Anil Kumar Sahu, Dr G R Sinha and Sapna Soni	Design of Sigma-Delta Converter using 65nm CMOS Technology for Nerves Organization in Brain Machine Interface

107	R R Janghel, Archana Verma and Yogesh Kumar Rathore	Performance comparison of Machine Learning Techniques for Epilepsy classification and detection in EEG Signal
108	Er. Varinderjit Kaur and Dr. Ashish Oberoi	Novel Approach for Plant Disease Detection Based on Textural Feature Analysis
109	Gurkarandesh Kaur and Dr. Ashish Oberoi	Novel Approach for Tumor Detection Based on Naïve Bayes Classification
138	Surendra Shetty and Sarika Hegde	Classification of Instruments in Carnatic Music for Content Based Information Retrieval
SESSION 2 - Day 2: 19 January 2019 Time: 14:40 – 16.40 (120 Mins)		
155	Neelam Chandollikar, Pushkar Joglekar, Shivjeet Bhosale, Deepali Peddawad, Rajesh Jalnekar and Swati Shilaskar	Semi Automated Ontology Learning to Provide Domain Specific Knowledge Search in Marathi Language
162	Ragini Krishna and Prashanth C.M.	Identifying influential users on Social Network: An Insight
164	Rachna Jain, Dr. Anand Nayyar and Shivam Bachhety	Factex: A Practical Approach to Crime Detection
185	S.P.Rajamohana, K.Umamaheswari, K.Karunya, R.Deepika	Performance Analysis of Classification Algorithms for Breast Cancer Prediction
232	Garima Makkar	Real-Time Footfall Prediction using Weather Data: A Case on Retail Analytics
234	Pallavi Saha, Sankhadeep Chatterjee, Santanu Roy and Soumya Sen	Normal Pressure Hydrocephalus detection using Active Contour coupled Ensemble based classifier
237	Vineet Yadav, Alok Bhatt, Vishnu Bharadwaj and Ayush Rawal	Question-Answer system on episodic data using RNN (Recurrent Neural Networks)
255	Diganta Misra, Suneet K. Gupta, Sachi Nandan Mohanty and Mohit Agarwal	Convuluted Cosmos: Classifying Galaxy Images using Deep Learning

Track IV: ADVANCES IN NETWORK TECHNOLOGIES

Session Venue: Lincoln University College No. 2, Jalan Stadium, SS 7/15, Kelana Jaya, 47301 Petaling Jaya

SESSION 1 - Day 2: 19 January 2019 Time: 11:30 – 13.00 (90 Mins)

7	Rachna Jain, Indu Kashyap	Energy based improved MPR Selection in OLSR routing protocol
26	Lolita Singh, Nitul Dutta	A Novel approach for better QoS in Cognitive Radio Adhoc Networks using CAT Optimization
212	Reena Pagare and Dr. Akhil Khare	Topic Detection and Trendy Community Detection (T-ToCODE) framework for Information Diffusion in Social Network

235	Prasanta Mandal, Manoj Kumar Rana, Punyasha Chatterjee and Arpita Debnath	Implementation of NEMO Basic Support Protocol in ns-3
236	Niranjani G and Umamaheswari K	Modified DFA minimization with Artificial Bee Colony Optimization in Vehicular Routing problem with Time Windows
SESSION 2 - Day 2: 19 January 2019 Time: 14:40 – 16.40 (120 Mins)		
251	Govind Gupta and Vrajesh Chawra	Coverage-aware recharge scheduling scheme for wireless charging Vehicles in the Wireless Rechargeable Sensor Networks
357	Ambrose Azeta, Victor I Azeta, Sanjay Misra and Ananya M	A Transition from Web-of-Things to Speech-of-Intelligent-Things in Education
360	Nureni Azeez, Bada Taiwo Mayowa, Sanjay Misra, Adewole Adewumi and Dr.Ravin Ahuja	Intrusion detection and prevention systems
362	Sonali John, Varun Menon and Dr. Anand Nayyar	Simulation based Performance Analysis of Location Based Opportunistic Routing Protocols in Underwater Sensor Networks having Communication Voids
365	Dr Booba Rajasekar, Dr Renuga Devi R and Dr Prema Arumugam	Nature Inspired Computing Algorithm for Path Finding in Grid Environment
368	Sonam Sharma	Dynamic Hashtag Interactions and Recommendations: An Implementation using Apache Spark Streaming & GraphX

Track I: DATA MANAGEMENT & SMART INFORMATICS

Session Venue: Lincoln University College No. 2, Jalan Stadium, SS 7/15, Kelana Jaya, 47301 Petaling Jaya

SESSION 3 - Day 3: 20 January 2019 Time: 10:00 – 11.30 (90 Mins)

353	Senthil D and Suseendran G	Sequence Mining Based Support Vector Machine with Decision Tree Approach for Efficient Time Series Data Classification
356	Nureni Azeez, Sanjay Misra, Joseph Ade, Adewole Adewumi, Ravin Ahuja, Charles van der Vyver	Identifying Phishing through Web Content and addressed Bar-Based Features
358	Adewole Adewumi, Sanjay Misra, Adebola Taiwo and Dr.Ravin Ahuja	A Unified Framework for Outfit Design and Advice
361	Vijaya Babu Yeddu	Contextual Relevance of ICT-Call Modules and its Role in Promoting Employability Skills among Engineering Students - A Study
363	Triparna Poddar, Jhila Mukherjee, Bhaswati Ganguli, Madhuchanda Kar and Amlan Chakrabarti	A Clinically Applicable Automated Risk Classification model for Pulmonary Nodules

371	Sidath Munasinghe, Akila Bandara, Yashodha Hettiarachchi, Kusal	A Generalized Ensemble Machine Learning Approach for Landslide Susceptibility Modeling
374	Mahesh Tripathi and Himanshu Govil	Comparative evaluation of AVIRIS-NG and Hyperion hyperspectral image for mineral identification
387	Aditya Das, Rishab Bhattacharyya and Prमित Ghosh	Real-Time Scheduling Approach for IoT based Home Automation System
SESSION 4 - Day 3: 20 January 2019 Time: 11:45 – 1.15 (90 Mins)		
393	Vít Ptošek, Lukáš Rapant, Jan Martinovič	Floating car data map-matching utilizing Dijkstra algorithm
394	Jyoti Gautam, Nitima Malsa, Vikas Singhal and Komal Malsa	Calculating AQI using Secondary Pollutants for Smart Air Management System
398	Thyagaraj M and Suseendran G	Enhanced Prediction of Heart Disease using Particle Swarm Optimization and Rough Sets with Transductive Support Vector Machines Classifier
399	Varun Goel, Vishal Jangir and Venkatesh Gauri Shankar	DataCan: Robust approach for Genome Cancer Data Analysis
400	Venkatesh Gauri Shankar, Dilip Singh Sisodia and Preeti Chandrakar	DataAutism: An Early Detection Framework of Autism in Infants using Data Science
401	Bali Devi, Venkatesh Gauri Shankar and Sumit Srivastava	AnaBus: A Proposed Sampling Retrieval Model for Business and Historical Data Analytics

Track II: BIG DATA MANAGEMENT

Session Venue: Lincoln University College No. 2, Jalan Stadium, SS 7/15, Kelana Jaya, 47301 Petaling Jaya

SESSION 3 - Day 3: 20 January 2019 Time: 10:00 – 11.30 (90 Mins)

389	Tejaswini Kar and Priyadarshi Kanungo	Abrupt Scene Change Detection using block based Local Directional Pattern
391	Devendran Alagarsamy and Arun Kumar Krishnan	A Framework for Web Archiving and Guaranteed Retrieval
407	Wael Mohamed Shafer Yafooz, Sk Ahammad Fahad and Mithun Ahamed	Business Intelligence through Big Data Analytics, Data Mining and Machine Learning
e03	Ali Abdulbaqi, Yazeed Alkatheeri, Osama Isaac, Mohammed Nusari, Balaganesh Duraisamy, Gamal S. A. Khalifa	The Effect of Big Data on the Quality of Decision-Making in Abu Dhabi Government Organisations
e04	Ali Abdulbaqi, Adel Haddad, Osama Isaac, Ibrahim Alrajawy, Ahmed Al-Shbami, Divya Midhunchakkaravarthy	The Impact of Technology Readiness on the Big Data Adoption among UAE Organizations
SESSION 4 -Day 3: 20 January 2019 Time: 11:45 – 1.15 (90 Mins)		
None		

Track III: ARTIFICIAL INTELLIGENCE AND DATA ANALYTICS

Session Venue: Lincoln University College No. 2, Jalan Stadium, SS 7/15, Kelana Jaya, 47301 Petaling Jaya

SESSION 3 - Day 3: 20 January 2019 Time: 10:00 – 11.30 (90 Mins)

352	Malini Patil and Neha Sharma	Sports Data Analytics : A Case Study of Off-field Behavior of Players using Statistical Approach
355	S.Amudha and I.Elizabeth Shanthi	Phrase Based Information Retrieval Analysis in Various Search Engines Using Machine Learning Algorithms
359	<u>Patrick Assibong, Ikedianchi Ayodele Power Wogu, Muiyiwa Adeniyi Sholarin and Sanjay Misra</u>	The Politics of Artificial Intelligence Behaviour and Human Rights Violation Issues in 2016 US Presidential Elections: An Appraisal
373	Tanuja Fegade and Bhausahab Pawar	Crop Prediction Using Artificial Neural Network and Support Vector Machine
378	Sourav Malakar, Saptarsi Goswami, Amlan Chakrabarti and Basabi Chakraborty	A Hybrid and Adaptive Approach for Classification of Indian Stock Market Related Tweets
379	Amol Dhondse, Siddhivinayak Kulkarni, Kunal Khadilkar, Indrajeet Kane, Sumit Chavan, Rahul Barhate	Generative Adversarial Networks as an Advancement in 2D to 3D Reconstruction Techniques
381	Sapna Khatri, Devendra Kumar Pandey, Daniel Penkar, Anil Vashisht and Jaiprakash Ramani	Impact of Artificial Intelligence on Human Resources

SESSION 4 - Day 3: 20 January 2019 Time: 11:45 – 1.15 (90 Mins)

383	Chenna Keshava B S and Sumukha P K	Role of Activation functions and order of input sequences in Question-Answering
390	Sabyasachi Roy Choudhury, Varun Shanbhag, Ashish Prabhune, Harsh Jain	GestTalk — RealTime Gesture to Speech Conversion Glove
397	<u>Indrajit Mandal and Ankit Dwivedi</u>	Deep Learning Algorithms for Accurate Prediction of Image Description for E-Commerce Industry
408	Uma N. Dulhare and Areej Mohammed Khaled	Taj-Shanvi framework for image fusion using Guided Filters
383	Chenna Keshava B S and Sumukha P K	Role of Activation functions and order of input sequences in Question-Answering
390	Sabyasachi Roy Choudhury, Varun Shanbhag, Ashish Prabhune, Harsh Jain	GestTalk — RealTime Gesture to Speech Conversion Glove
397	<u>Indrajit Mandal and Ankit Dwivedi</u>	Deep Learning Algorithms for Accurate Prediction of Image Description for E-Commerce Industry
408	Uma N. Dulhare and Areej Mohammed Khaled	Taj-Shanvi framework for image fusion using Guided Filters

Track IV: ADVANCES IN NETWORK TECHNOLOGIES		
Session Venue: Lincoln University College No. 2, Jalan Stadium, SS 7/15, Kelana Jaya, 47301 Petaling Jaya		
SESSION 3 - Day 3: 20 January 2019 Time: 10:00 – 11.30 (90 Mins)		
376	Dr. Anand Nayyar and Bandana Mahapatra	Effective Classification & Handling of Incoming Data Packets in Mobile Adhoc Networks (MANETs) using Random Forest Ensemble Technique (RF/ET)
382	Harish Kumar Shakya, Bhaskar Biswas, Kuldeep Singh, Nazeer Shaikand Ganesh Ram Sinha	Community Structure Identification in Social Networks Inspired By Parliamentary Political Competitions
410	Shiladitya Bhattacharjee, Divya Midhunchakkaravarthy, Midhunchakkaravarthy Janarthananand Lukman Bin Ab.Rahim	An Integrated Technique to Ensure Confidentiality and Integrity in Data Transmission through the Strongest and Authentic Hotspot Selection Mechanism
412	Vivek Deshpande, Vladimir Poulkov	ML Model to Improve QoS for selection of healthy channel in Wireless Sensor Network
413	Kailash Tamde, G. Krishna Mohan	Performance Analysis of the Mobile WSN for Efficient localization
SESSION 4 - Day 3: 20 January 2019 Time: 11:45 – 1.15 (90 Mins)		
None		

Pictures of Delegates presenting their Research Paper in ICDMAI 2019



3RD INTERNATIONAL CONFERENCE ON DATA MANAGEMENT, ANALYTICS AND INNOVATION 2019



Paper Presentation by the Delegates at ICDMAI 2019

3RD INTERNATIONAL CONFERENCE ON DATA MANAGEMENT, ANALYTICS AND INNOVATION 2019



Paper Presentation by the Delegates at ICDMAI 2019

Track wise **Best Papers Awards** were announced during the valedictory function:-

Track 1: Data Management and Smart Informatics

1st Position: Paper-id: 400, Venkatesh Gauri Shankar, Dilip Singh Sisodia and Preeti C.

2nd Position: Paper-id: 393, Vít Ptošek, Lukáš Rapant, Jan Martinovič

3rd Position: Paper-id: 137, Kanak Saxena and Umesh Banodha

Track 2: Big Data Management

1st Position: Paper-id: 389, Tejaswini Kar and Priyadarshi Kanungo

2nd Position: Paper-id: 87, D.Karthika Renuka and Sri Vinitha V

3rd Position: Paper-id: 223, Kiran Adnan, Rehan Akbar, Khor Siak Wang and Adnan Bin

Track 3: Artificial Intelligence and Data Analytics

1st Position: Paper-id: 397, Indrajit Mandal and Ankit Dwivedi

2nd Position: Paper-id: 255, Diganta Misra, Suneet K. Gupta, Sachi Nandan Mohanty, Mohit A.

3rd Position: Paper-id: 390, Sabyasachi Roy Choudhury, Varun Shanbhag, Ashish P., Harsh Jain

Track 4: Advances in Network Technologies

1st Position: Paper-id: 376, Dr. Anand Nayyar and Bandana Mahapatra

2nd Position: Paper-id: 251, Govind Gupta and Vrajesh Chawra

3rd Position: Paper-id: 365, Dr Booba Rajasekar, Dr Renuga Devi R and Dr Prema

Special Award by Springer was given to following Authors:

Track 1	400	Venkatesh Gauri Shankar, Dilip Singh Sisodia and Preeti C.	DataAutism: An Early Detection Framework of Autism in Infants using Data Science
Track 2	389	Tejaswini Kar and Priyadarshi Kanungo	Abrupt Scene Change Detection using block based Local Directional Pattern
Track 3	397	Indrajit Mandal and Ankit Dwivedi	Deep Learning Algorithms for Accurate Prediction of Image Description for E-Commerce Industry
Track 4	376	Dr. Anand Nayyar and Bandana Mahapatra	Effective Classification & Handling of Incoming Data Packets in Mobile Adhoc Networks (MANETs) using Random Forest Ensemble Technique (RF/ET)

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

Takeaways from the International Conference for the host institute (Lincoln University College)

Students:

The students and research scholars got the exposure to various national and international guests and speakers. Some of the student volunteers also got the opportunity to have one-to-one (face-to-face) interaction with all the invited speakers of the conference.

Faculty Members:

Faculty got the opportunity to exchange their knowledge, thoughts, innovations and research experiences in the broad field of Data Management, Analytics and Innovation on the common platform with the renowned academic experts from India and abroad. Thought provoking discussions and interactions with the keynote speakers of international repute and the delegates from different parts of the country by IICMR faculty, had already sown the seeds which will start sprouting in due course by way of academic and research collaborations, faculty exchange, invited talks, panel discussion events, etc. The research paper presented by the faculty members were published in the conference Abstract Book with ISBN No. as well as CD and will be soon published in the world's most read digital resource, SPRINGER.

Lincoln University College, Malaysia:

The conference organized by the Institute has further strengthened the overall brand image across globe. The Institute could successfully make a mark of its Excellence and has become a talk of the town for holding this prestigious event

Annexure A

Conference Brochure



ICDMAI 2019

Conference Brochure

(CALL FOR PAPER)



3rd International Conference on Data Management, Analytics and Innovation (ICDMAI 2019)

18-20 January 2019

Venue : Lincoln University College, Malaysia

Jointly Organized by:





ICDMAI 2019

We feel honoured to introduce to you and invite you for the 3rd International Conference on Data Management, Analytics and Innovation (ICDMAI-2019) from 18-20 January 2019 in Kuala Lumpur, Malaysia. The conference is jointly organized by Society for Data Science (S4DS) and Lincoln University, Malaysia. ICDMAI is a flagship event of Society for Data Science (S4DS), which is a non-profit professional association to create a collaborative platform for bringing together technical experts across Industry, Academia, Government Labs and Professional Bodies to promote Innovation around Data Science. The conference will be hosted by Lincoln University, Malaysia, which is a vibrant and diverse academic center with focus on teaching and learning and helps to realize innovative knowledge. Lincoln brings together world-renowned faculty and students from all over the nation and the world.

The ICDMAI envisions its role towards data management as well as analytics and its enhancement through collaboration, innovative methodologies and connections throughout the globe. In this direction, the mission is to deliver and co-ordinate, enact and disseminate research and resources that enhance the impact and growth of education pertaining to the theme of the conference. The primary goal of the conference is to promote research and developmental activities in Computer Science, Information Technology, Computational Engineering, and Communication. Another goal is to promote scientific information interchange between researchers, developers, engineers, students, and practitioners working in India and abroad. The conference will be held every year to make it an ideal platform for people to share views and experiences in Information, Telecommunication, Computing Techniques and related areas.

GENERAL CHAIRS

Dr. P. K. Sinha

Vice Chancellor and Director, Dr S P Mukherjee International Institute of Information Technology, Naya Raipur (IIIT-NR), Chhattisgarh.

Dr. Vincenzo Piuri

Professor, Università degli Studi di Milano, Italy, IEEE Fellow

STEERING COMMITTEE CHAIRS

Prof. Amlan Chakrabarti

Dean, Faculty of Engineering, University of Calcutta, Director and Professor, A.K.Choudhury School of Information Technology

Prof. Neha Sharma

Professor, VIIT, Baramati, Pune. Secretary, Society for Data Science

ORGANIZING CHAIR

Dr. Sandeep Poddar

Research Director, Lincoln University College, Malaysia



INTERNATIONAL LIASON CHAIRS

Prof. Juergen Seitz,

Head of Business Information Systems Department, Baden-Wuerttemberg Cooperative State University, Heidenheim, Germany

Prof. 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

Dr. Sruti Das Choudhury, University of Nebraska Lincoln



INDUSTRY LIASON CHAIRS

Dr. Inderjeet Singh Barara

Technology Evangelist, Solution Architect and a Mentor

TECHNICAL PROGRAM CHAIRS

Neha Sharma

Professor, VIIT, Baramati, Pune. Secretary, Society for Data Science

Amlan Chakrabarti

Dean, Faculty of Engineering, UoC, Director and Professor, A.K.Choudhury School of Information Technology

Valentina Emilia Balas

Professor, Department of Automatics and Applied Software faculty of Engineering, University of Arad, Romania

TUTORIAL AND WORKSHOP CHAIR

Prof. Saptarsi Goswami A.K.Choudhury School of IT, University of Calcutta

Prof. D. H. Manjaiah, Professor, Department of Computer Science, Mangalore University

TRACKS & TOPICS



Third International Conference on Data Management, Analytics and Innovation (ICDMAI – 2019) solicit papers in the areas of Computer Science, Information Technology, Computational Engineering, Electronics and Telecommunication, Electrical, Computer Application and all the relevant disciplines to 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 papers will be included in the proceedings indexed in Scopus. Following are the topics of interest but not limited to:-

Track I – DATA MANAGEMENT & SMART INFORMATICS

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

**Track II – BIG DATA MANAGEMENT**

1. Algorithm for Big Data
2. Big Data Fundamentals
3. Infrastructures for Big Data
4. Big Data Management and Frameworks
5. Big Data Search
6. Security and Search in the era of Big Data
7. Applications of Big Data Big Data Analytics, Metrics, Platforms
8. Business Performance Management using Big Data Technique

**Track III – ARTIFICIAL INTELLIGENCE AND DATA ANALYTICS**

1. Artificial Intelligence and Machine Learning
2. Evolutionary Computation Techniques
3. Mobile Robotics
4. Speech Recognition & Synthesis
5. Facial Detection for Security and Tracking
6. Heuristic and Genetic Algorithms for Scheduling problems
7. Pattern Recognition, Image and Video processing
8. Bio Informatics
9. Assistive and Calm Technology
10. Augmented Cognition
11. Ubiquitous and Pervasive Applications

**Track IV – ADVANCES IN NETWORK TECHNOLOGIES**

1. Data Models and Applications of Social Networks and Social Media
2. Mobile Software Architectures, Systems, Platforms, Services, and Regulatory Issues
3. Mobile Network Traffic Engineering, Performance, and Optimization
4. Cloud Computing Architectures and Cloud Solution Design Patterns
5. Cloud Configuration, Performance, and Capacity Management
6. Fog Computing
7. Green Computing and ICT
8. 4G and Long Term Evolution (LTE)
9. Computer Networks and Security

**Important Dates:**

- Call for Paper Begins - 15/03/2018
- Last Date for Paper Submission - 30/08/2018
- Author Notification - 25/10/2018
- Early Bird Registration - 26/10/2018 - 31/10/2018
- Camera Ready Copy and Copyright Submission - 10/11/2018
- Conference Dates - 18-20 Jan 2019





REGISTRATION

Every accepted article / research paper should be registered by at least one author to attend the conference. The acceptance list of article / research paper will be announced on the website and the authors will be intimated regarding the acceptance through e-mail. The details about registration fee are given below:

Registration fees for Paper Presenters :

Category	Early Bird Registration till 31 Oct 2018			Registration Fee From 1-15 Nov 2018			Onsite Registration Fee (Only for Co-Author)		
	Indian (INR)	Others (US \$)	Malaysian (RM)	Indian (INR)	Others (US \$)	Malaysian (RM)	Indian (INR)	Others (US \$)	Malaysian (RM)
STUDENTS									
S4DS Member	5000	150	650	5500	250	850	6000	350	925
Other	5550	200	850	6000	350	925	7000	450	1000
RESEARCH SCHOLAR									
S4DS Member	6000	250	925	7000	350	1000	8000	500	1225
Other	7000	350	1000	8000	500	1225	9000	600	1375
ACADEMICIAN									
S4DS Member	7000	350	1000	8000	450	1225	10000	650	1525
Other	9000	450	1375	10000	550	1525	12000	750	1825
INDUSTRY									
S4DS Member	8000	450	1225	10000	500	1525	12000	800	1825
Other	10000	500	1525	12000	650	1825	14000	950	2100

1. Only registered delegates can attend the conference.
2. In order to include the selected paper in Conference Proceedings, at least one author has to register and present his/her paper at the conference.
3. If multiple authors of selected papers wish to attend, they are requested to register separately & will not be entertained as accompanying persons.
4. Student delegates are requested to attach a letter from the HOD/Dean/Principal/Research Guide verifying their full-time student status.
5. PG Students and PhD Scholars will be considered under Research Scholar Category.
6. Registration fees include, breakfast, Lunch, evening tea/coffee for all three days, one day gala dinner, conference kit, & conference proceedings.
7. Registered candidates cannot claim for refund on their absence in the conference.

To know more on paper submission guidelines & format please click on (www.icdmai.org).
For queries please feel free to contact us on below contact details or write to us at nvsharma@rediffmail.com

Look forward for your high quality submissions and meeting you at ICDMAI 2019.

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Annexure B**TECHNICAL PROGRAMME COMMITTEE**

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JANUARY 18-20 2019

INTERNATIONAL CONFERENCE ON DATA MANAGEMENT, ANALYTICS & INNOVATION

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JUERGEN SEITZ



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KRANTI ATHALYE



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