

ICRIMB-2022

International Conference on

Role of ICT in Management and Business: Practices, Trends and Prospects (ICRIMB-2022)



March 25-26, 2022

### Organized by

Institute of Information Technology & Management

Janakpuri, Delhi

(AICTE Approved, Accredited Grade 'A' by National Assessment and Accreditation Council (NAAC) and Affiliated to GGSIP University, New Delhi)

### **ICRIMB 2022**

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#### **Institute of Information Technology & Management**

Approved by AICTE, Accredited Grade 'A' by NAAC Rated as Category 'A' by Joint Assessment Committee Guru Gobind Singh Indraprastha University, Delhi D-29 Institutional Area, D Block, Janakpuri, New Delhi-110058 Ph: 011-28525051, 28525882, Telefax: 011-28520239

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## Role of ICT in Management and Business: Practices, Trends and Prospects ICRIMB 2022

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#### **ABOUT IITM**

Institute of Information Technology and Management (IITM) was set up in 1999 under the aegis of Mata Leelawati Shikshan Sansthan (MLSS), a registered education society engaged in various philanthropic activities, with Shri. T.N. Chaturvedi - The well-known Educationist, Parliamentarian, Ex-Governor of Karnataka and CAG of India and Padma Vibhushan Awardee, as Founder President of both the Society and the Institute. The campus is located in serene pollution free salubrious surroundings in close proximity to Delhi Metro Rail. The Institute takes pride in having developed the faculty support and infrastructure imperative to effectively implement 'Outcome Based Education'- a technology-based, learner centric and result-oriented approach which enhances students' learning and performance capabilities. We are passionate about grooming the nation's youth to grow into good human beings and excellent professionals destined to become torch bearers of their respective domains. IITM conducts a plethora of short duration skill enhancement and syllabus enrichment workshops related to areas of management specializations and emerging technologies. We have a strong alumni network of over 3000 professionals working at various management levels in the leading corporate houses of the country.

#### **VISION**

"The Institute aims to be a Centre of Excellence, promoting value based quality education in the contemporary areas of advanced professional studies in Information Technology and Management."

#### **MISSION**

#### IITM endeavors

- 1. to promote learning environment that delivers employable students with strong analytical mind, thinking ability, entrepreneurial and organizational skills required in a dynamic professional environment,
- 2. to foster strategic alliance with industry for applied research, and
- 3. to inculcate ethical, social and moral values amongst students.



#### ABOUT DEPARTMENT OF MANAGEMENT STUDIES

Department of Management was established at Institute of Information Technology & Management, Janakpuri in 2003. Management department runs BBA, B.Com (H) and MBA programs.

Management department imparts relevant knowledge, attributes and skills necessary for a successful career in the corporate world. The programme not only focuses on domain-specific enterprises but also equips the students with leadership and entrepreneurial qualities which enable them to contribute positively to the society at large.

The Department has adopted best practices and student-centric pedagogy to enrich learning experience. Department has currently 21 faculty members with Ph.D. degree from prestigious Universities/Institutions. The innovative practices and facilities have been introduced with an objective to cater to quality enhancement, assurance and sustenance in various spheres of the working of department. Our BBA, B.Com (H) & MBA students have been performing consistently well over the years & securing good positions in University.

#### **VISION**

"Department of Management Studies aims to be a Centre of Excellence in Management Education, Research and Consultancy".

#### **MISSION**

The Department of Management Studies (DMS) strives

- 1. to deliver a rewarding experience to students through interactive, research-driven and experiential learning for remarkable professional achievement,
- 2. to provide an environment for education to equip students with knowledge and skills necessary to succeed in a diverse, global business environment and
- 3. to foster innovative, curricular and pedagogical activities aligned with IITM mission.



#### ABOUT DEPARTMENT OF COMPUTER SCIENCE

Bepartment of Computer Science was established at Institute of Information Technology & Management Janakpuri in 1999. Department of Computer Science has research orientation in various fields of Information Technology such as Artificial Intelligence, Data Mining, Speech Mining, Computer Network, Ad-hoc Network, Wireless Network, Image Processing, Big Data, Natural Language Processing, Machine Learning, Deep Learning, Software Engineering and Software Testing etc. Department has currently 9 faculty members with Ph.D. degree from prestigious Universities/Institutions. The Department has adopted best practices and undertaken various innovations to create a positive impact. The innovative practices and facilities have been introduced in the system with an objective to cater to quality enhancement, assurance and sustenance in the various spheres of the working of the department. Our BCA & MCA students have been performing consistently over the years securing top positions in University results.

#### **VISION**

"The Department of Information Technology aims to promote value based quality education to the students and impart skills and training in the field of Information Technology and allied areas to meet the industry demands."

#### MISSION

The overall mission of the Information Technology Department is to provide students with up-todate curriculum and pedagogy In information Technology and equip them with thinking skills, and prepare them to meet the growing demands for competent and trained professionals.

#### **PREFACE**

A Warm Welcome to all participants and delegates to International Conference on Role of ICT in Management and Business: Practices, Trends and Prospects (ICRIMB-2022) at Institute of Information Technology & Management, New Delhi, India held during March 25-26, 2022 in the hybrid mode. The theme of the conference is Role of ICT in Management and Business, its practices, trends and prospects in diverse aspects of managing a business and all the tracks are dedicated to the theme of the conference. The objective of this conference is to provide an international forum to interact, deliberate and stimulate the innovative minds to promote high quality research in the field of ICT and its role in creating efficient business practices and management of resources and anticipate its probability in the concerned areas.

The response to ICRIMB 2022 has been overwhelming. High quality papers have been submitted in ICRIMB 2022 from researchers across the globe and only after the double peer review process with the help of technical program committee members of the conference. We have finally accepted only good quality papers for oral presentation. We have received in total 105 submissions for a wide range of different tracks. The selected edited papers will be published in a book by Apple Academic Press.

The conference is technically supported and promoted by Apple Academic Press (AAP), Indian Society for Technical Education (ISTE), ICT Academy, Computer Society of India (CSI) and Guru Gobind Singh Indraprastha University (GGSIPU), New Delhi.

The Current edition of the conference aims to the activity of collaboration and idea exchange among delegates from India and abroad in the area of Information Communication Technology. Prof. (Dr.) K. K. Aggarwal, Chairman NBA, Prof. (Dr.) Marcin Paprzycki, SRI Polish Academy of Sciences, Poland, Prof. (Dr.) P. S. Grover, University of Delhi, India, Prof. (Dr.) Bhuvan Unhelkar, University of South Florida, Sarasota-Manatee Campus, USA, Prof. (Dr.) A.K. Saini, GGSIPU, Delhi, India, Prof. (Dr.) Vikas Kumar, Director of Research, University of the West U.K., Dr. Arpan Kumar Kar, IIT Delhi, India, Prof. (Dr.) Pao-Ann Hsiung, National Chung Cheng University, Taiwan, Prof. (Dr.) Amit Prakash Singh, GGSIPU, Delhi, India, Prof. (Dr.) Parvinder Singh, Professor CSE, DCRUS&T, Murthal, Haryana, India, Mr. Keith Sherringham, Senior VP-Citi Group, Sydney, Australia, Dr. Bharat Bhushan, Sharda University, Greater Noida, U.P., India, Dr. Kanta Prasad Sharma, Chandigarh University, Chandigarh, Punjab, India will be giving their keynote address in the conference and will share their thoughts in the areas of ICT and its role in effective business management practices.

We assure you that these eminent keynote speakers will certainly provide a direction for delegates to take forward their research practices with more authenticated panorama. We would also take the pleasure to recognize the efforts and valuable suggestions of our International and National Advisory Committee. Many eminent Academicians and Researchers in their respective areas have supported us to review and select sound and relevant papers from different tracks of conference.

This Souvenir is a detailed compilation of various presentations to be held in the conference. It aims to be coveted memoir to the esteemed event but this must not be considered as conference proceedings. It contains Messages from our Patrons, which are followed by details of various subcommittees under organization committee. Post that, track- wise ensemble of paper abstracts with author affiliations is provided. We sincerely hope that readers will find the souvenir useful and intuitive.

Prof. (Dr.) Sudhir Kumar Sharma ICRIMB 2022 General Chair IITM

#### **ACKNOWLEDGEMENT**

Organization of a conference is a pain staking efforts of many months by many individuals. We are thankful to our publication partner Apple Academic Press (AAP) for agreeing to publish the conference proceedings.

We are also grateful to Indian Society for Technical Education (ISTE), ICT Academy, Computer Society of India (CSI) and Guru Gobind Singh Indraprastha University (GGSIPU) for their generous technical support and promotions of conference.

We would like to articulate our sincere gratitude to Shri J.C. Sharma, Chairman, IITM, Mr. Shiva Sharma, Executive Director, IITM, Prof. (Dr.) Sudhir Kumar Sharma, General Chair, Dr. Gopal Singh Latwal, Organizing Chair, Dr. Deepika Arora, Dr. Vikas Bharara & Dr. Pankaj Varshney, Convener(s), Dr. Sunitha Ravi, Dr. Malavika Srivastava Co-convener(s), and all the members of Internal Organizing Committee, ICRIMB–2022.

We would like to express our sincere gratitude to our Chief Patron, Prof. (Dr.) K. K. Aggarwal, Chairman NBA, and all the keynote speaker, Prof. (Dr.) Marcin Paprzycki, Systems Research Institute, Polish Academy of Sciences, Poland, Prof. (Dr.) P. S. Grover, Former Director, University of Delhi, India, Prof. (Dr.) Bhuvan Unhelkar Information Technology, Muma College of Business, University of South Florida, Sarasota-Manatee Campus, Florida, USA, Prof. (Dr.) A.K. Saini, GGS Indraprastha University, Delhi, India, Prof. (Dr.) Vikas Kumar, Director of Research, University of the West U.K., Dr. Arpan Kumar Kar, IIT Delhi, India, Prof. (Dr.) Pao-Ann Hsiung, National Chung Cheng University, Taiwan, Prof. (Dr.) Amit Prakash Singh, Professor, USICT, GGSIPU, Delhi, India, Prof. (Dr.) Parvinder Singh, Professor CSE, DCRUS&T, Murthal, Haryana, India, Mr. Keith Sherringham, Senior VP-Citi Group, Sydney, New South Wales, Australia, Dr. Bharat Bhushan Sharda University, Greater Noida, U.P., India, Dr. Kanta Prasad Sharma, Chandigarh University, Chandigarh, Punjab, India

We would also like to express our sincere thanks to our faculty members, coordinators and students who have worked hard for making this conference a successful event.

Prof. (Dr.) Prerna Mahajan Director IITM

## MESSAGES

#### MESSAGE FROM CHAIRMAN

Shri J.C. Sharma Chairman IITM New Delhi, India



I am pleased to announce that Institute of Information Technology and Management is organizing an International Conference on Role of ICT in Management and Business: Practices, Trends and Prospects- ICRIMB on March 25-26, 2022. The conference has bagged technical and promotional support from Apple Academic Press (AAP), Indian Society for Technical Education (ISTE), ICT Academy, Computer Society of India, Warsaw Management University, Poland and Guru Gobind Singh Indraprastha University (GGSIPU).

The Institute has organized several National and two International Conferences on Emerging Trends in the past, with the valuable contribution of quality papers by eminent academicians, research scholars and budding professionals. Being a progressive institution, it has once again availed an opportunity of hosting an International Conference with the theme "Role of ICT in Management and Business: Practices, Trends and Prospects." The institute is trying to create a platform for Professionals, Academicians, Research Scholars and students to share and express their views on new developments in the field of Management. The theme of ICRIMB-2022 will unveil the current trends and prospects of Higher Education as well as the researchers will also be provided with a platform to ponder on the problems of this field and develop strategies to overcome them effectively with the usage of ICT.

"Nurturing Excellence" the Motto and Vision of our institute stimulates the thinking that it is essential to create an environment that helps in nurturing innovation and technological skills among the youth as they are the future of the nation. In this context, I believe that this conference will provide an enlightened platform replete with knowledge creation, skill enhancement, and the development of a new perspective on the Influence of ICT on Management & Business.

I wish for the huge success of the conference Good Luck.

#### J.C. Sharma

Chairman

Institute of Information Technology & Management, New Delhi, India

#### MESSAGE FROM EXECUTIVE DIRECTOR

Mr. Shiva Sharma Executive Director IITM New Delhi, India



It is my pleasure to announce that the Institute of Information Technology and Management is organizing an International Conference on Role of ICT in Management and Business: Practices, Trends and Prospects- ICRIMB on March 25-26, 2022. The conference is provided with technical and promotional support from Apple Academic Press (AAP), Indian Society for Technical Education (ISTE), ICT Academy, Computer Society of India, WSM 1995 and Guru Gobind Singh Indraprastha University (GGSIPU).

The Institute has organized many National and two International Conferences on Emerging Trends in the past, with the valuable contribution of quality papers by eminent academicians, research scholars, and budding professionals. The institute is again privileged to host an International Conference with the theme "International Conference on Role of ICT in Management and Business: Practices, Trends and Prospects". The institute is putting a step forward to provide a stage to Professionals, Academicians, Research Scholars and students to explore new opportunities to connect with each other and enable an effective knowledge sharing among them. The theme of ICRIMB-2022 is an amalgamation of two upcoming fields i.e. Information Communication Technology and Management making it even more important and suitable in the present scenario.

I wish for a grand success of this conference. All the best.

#### Mr. Shiva Sharma

**Executive Director** 

Institute of Information Technology & Management, New Delhi, India

#### MESSAGE FROM CHIEF PATRON

Prof. K. K. Aggarwal Founder Vice Chancellor GGSIP University, Chairman of NBA



It gives me immense pleasure that Institute of Information Technology & Management, Janakpuri, New Delhi is organizing an International Conference on Role of ICT in Management and Business: Practices, Trends and Prospects during March 25-26, 2022.

The central theme of the conference is "Management & Business". ICRIMB provides an opportunity for meeting of International and National Researchers, Academicians and specialists in the various research and development fields of ICT and Management. The conference offers a premise for global experts to gather and interact intensively on the topics of Technological Advancement for effective Business Outcome, Emerging ICT Trends in Management & Business, Technological Transformation of Management & Business, and so on. I am quite hopeful that this conference will be able to offer suitable solutions to various issues.

The success of this Conference is solely on the dedicated efforts of innumerable people who started working on the preparations for almost a year in many ways to make this Conference become a reality. Eventually I express my special thanks and appreciation to all.

I wish ICRIMB 2022 all the best for its success.

Prof. K.K. Aggarwal
Founder Vice Chancellor
GGSIP University,
Chairman of NBA

#### MESSAGE FROM GENERAL CHAIR

Prof. (Dr.) A.K. Saini Professor University School of Management Studies, Guru Gobind Singh Indraprastha University New Delhi



It gives me immense pleasure to welcome all the authors of International Conference on Role of ICT in Management and Business: Practices, Trends and Prospects (ICRIMB-2022) to be held at Institute of Information Technology and Management (IITM), Delhi, India on March 25-26, 2022. This Conference is likely to be one of the finest opportunities for academicians, research scholar and students from all over India and abroad to participate and to share their innovative ideas. I profoundly acknowledge that the organizers, conveners and other team members have spent all needful corpus of sweat and have appreciably networked with advisory committee and all other associated with the event.

I would like to extend my good wishes to all the participants. I believe the conference will surely prove conducive to all in equal length.

I wish a grand success to this International Conference on Role of ICT in Management & Business.

#### Prof. A.K. Saini

Professor University School of Management Studies, Guru Gobind Singh Indraprastha University, New Delhi

#### MESSAGE FROM DIRECTOR

Prof. (Dr.) Prerna Mahajan Director IITM, Janakpuri New Delhi, India



This International Conference on Role of ICT in Management and Business: Practices, Trends and Prospects (ICRIMB 2022) organized by Institute of Information Technology and Management, Janakpuri, Delhi is an attempt to focus the attention of all concerned professionals to discuss at length areas concerned with the Role of ICT in Management & Business: Trends, Problem and Prospects, to seek solutions wherever possible and identify areas where further research are needed. The conference invites contributions from experts on various topics with distinguished tracks on FinTech in Modern Finance, ICT and Marketing Management, Operation Management & Information System, Management and Sustainability in Business Practices, Human Resource Management, Entrepreneurship & Innovation and many more related topics. Role of ICT will continue to bring radical changes in almost every area including Management & Business. This conference is going to be an adequate platform for sharing and attaining immense knowledge and experiences on the influence of ICT in the area of Management.

Information provided in various papers and reproduced in the proceedings is aimed at benefiting the researchers and professionals. It is expected that the purpose would be served in a satisfactory manner through in-depth discussion and interaction among participants during the conference. I take this opportunity to extend my heartfelt appreciation and gratitude to all the authors, delegates, chief guest, conference chair and all others participating.

#### Prof. (Dr.) Prerna Mahajan

Director Institute of Information Technology & Management Janakpuri, New Delhi, India

#### MESSAGE FROM GENERAL CHAIR

Prof. (Dr.) Sudhir Kumar Sharma Professor IITM, Janakpuri New Delhi, India



ICRIMB-2022 is an engaging and very insightful international conference on The Role of ICT in Management & Business: Practices, Trends and Prospects, to be held on 25<sup>th</sup>-26<sup>th</sup> March, 2022.We have received many quality research papers from national and international academic institutions, which were reviewed by experts from the specialized domain. At the end, only high quality papers were qualified for presentation and publication purposes.

This conference is a wonderful opportunity for all the students to gain immense knowledge from experts in different fields, scholars to connect with eminent academicians and also to academicians to enable effective knowledge sharing and widening the scope of learning for all. There will be an exchange of ideas and thoughts which will be very beneficial for the broadening of one's horizons.

Finally, I would like to personally express my gratitude to all Committee members, Reviewers, and Student volunteers who made this conference possible. I would like to thank Apple Academic Press as a publication partner for overwhelming support for providing us with such a valuable platform in reaching out to eminent scholars and research fellows in widening areas of subject of Information Communication Technology. I also express my profound thanks to the Management for their constant support and encouragement for the successful conduct of this conference.

#### Prof. Sudhir Kumar Sharma

Professor & HoD-Computer Science Institute of Information Technology & Management Janakpuri, New Delhi

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#### International Conference on Role of ICT in Management and Business: Practices, Trends and Prospects (ICRIMB-2022), 25-26 March, 2022

Friday, 25<sup>th</sup> March, 2022 (Day 1)

#### **Program Schedule—Offline Mode**

Timing	Event
8:30am–9:00am	Registration
9:00am-9:05am 9:05am-9:10am 9:10am-9:15am	<ul> <li>Inaugural Session,</li> <li>Welcome Address</li> <li>Lamp Lighting &amp; Saraswati Vandana</li> <li>Welcome of Dignitaries</li> </ul>
9:15am-9:25am	Address by General Chair
9:25am-9:35am	<ul> <li>Prof.(Dr.)Sudhir Kumar Sharma, General Chair, IITM, Janakpuri, Delhi</li> <li>Address by Director</li> <li>Prof. (Dr.)Prerna Mahajan, Director, IITM Janakpuri, Delhi</li> </ul>
9:35am-10.05am	Address by Chief Guest     Prof. K. K. Aggarwal, Ex-VCG-GSSIPU, Chairman of NBA
10.05am-10:35am	Address by Keynote 1:     Dr. Arpan Kumar Kar     Associate Professor, Department of Management Studies & School of Artificial Intelligence, IIT Delhi, Delhi, India
10:35am-10:45am	Releasing of Souvenir
10:45am-10:50am	Vote of Thanks     Dr. Gopal Singh Latwal, IITM, Janakpuri, Delhi.
10:50am–11:20 am	Morning Tea & Refreshment

	Session II(Addresses by Keynote Speakers)	
11:20am-11:55am	Address by Keynote 2:	
	Prof. (Dr.) P. S. Grover	
	Former Director, University of Delhi, Delhi, India	
11:55am–12:30pm	Address by Keynote 3:	
1	Prof. (Dr.) Amit Prakash Singh	
	Professor, USICT, GGSIPU, Delhi	
12:30pm-01:00pm	Address by Keynote 4:  Dr. Bharat Bhushan	
	Sharda University, Greater Noida, U.P., India	
1:00pm-02:00pm	Lunch	
2.00000 04.00000	Parallel Sessions for paper presentation (Offline Mode)	
2:00pm-04:00pm	Venue: Room No. 103: Session 1 Venue: Room No. 104: Session 2	
4:00pm-4:15pm	Cultural Performances	
4:15 pm–4:45pm	Certificates Distribution & Vote of Thanks (Dr. Deepika Arora)	
4:45pm-5:15pm	Evening Tea & Refreshment	

Session No./Venue	Chairs/Co-Chairs	Paper to be Presented
Session 1 Room No.103	Dr. Deepika Arora Dr. Vikas Bharara Dr. Sunitha Ravi	19,20,43,27,40,49,50,48
Session 2 Room No.104	Dr. Pankaj Kumar Varshney Dr. Malavika Srivastava Dr. Bharat Bhushan	17,22, 34,36,13,55



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International Conference on Role of ICT in Management and Business: Practices, Trends and Prospects (ICRIMB-2022), 25-26 March, 2022 Saturday, 26<sup>th</sup> March, 2022 (Day 2)

#### **Program Schedule (Online Mode)**

Timing	Event	
9:30am-09:40am	Welcome Address by Organizing Chair	
	Dr. Gopal Singh Latwal	
9:40am-10:20 am	Address by Keynote 5:	
	Prof. (Dr.) Bhuvan Unhelkar	
	Information Technology, Muma College of Business, University of	
	South Florida, Sarasota-Manatee Campus, Florida, USA	
10:20am-10:50am	Address by Keynote 6:	
	Mr. Keith Sherringham	
	Company Director, Australia Computer Society, Australia	
10:50am-11:15am	Morning Tea & Refreshment	
11:15am-11:45am	Address by Keynote 7:	
	Prof. (Dr.) Parvinder Singh	
	DCRUST, Murthal, India	
11:45am-12:15pm	Address by Keynote 8:	
	Dr. Kanta Prasad Sharma	
	Chandigarh University, Chandigarh, Punjab, India	

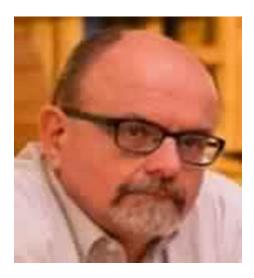
12:15pm-1:00 pm	Address by Keynote 9:     Prof. (Dr.) Vikas Kumar     Director of Research, University of the West U.K.
1:00pm–1:30 pm	• Address by Keynote 10:  Prof. (Dr.) Marcin Paprzycki  Systems Research Institute, Polish Academy of Sciences, Poland
1:00pm-2:00pm	Lunch
	Parallel Sessions for paper presentation (Online Mode)
2:00pm-3:30pm	Venue: Room No.103: Session 3 Venue: Room No. 104: Session 4
3:30 pm-4:00pm	Valedictory Session and Vote of Thanks (Ms. Neha Sharma)
4:00pm-4:30pm	Evening Tea & Refreshment

**Paper Presentation Schedule for Day 2** 

Session No./Venue	Chairs/Co-Chairs	Paper to be Presented
Session 4 Room No.103	Dr. Pankaj Kumar Varshney Dr. Malavika Srivastava Dr. Kanta Prasad Sharma	18, 57, 94, 85, 68, 63, 86, 84
Session 5 Room No.104	Dr. Deepika Arora Dr. Vikas Bharara Dr. Sunitha Ravi	3, 90, 76, 67, 87, 99, 75

Joining Link (MS Teams platform)		
Day 2 Saturday 26.03.2022	https://bit.ly/3tlC1A7	

## KEYNOTES



Prof. Marcin Paprzycki

Marcin Paprzycki is an Associate Professor at the Systems Research Institute, Polish Academy of Sciences. He has an MS from Adam Mickiewicz University in Pozna, Poland, a Ph.D from Southern Methodist University in Dallas, Texas, and a Doctor of Science from the Bulgarian Academy of Sciences. He is a senior member of IEEE, a senior member of ACM, a Senior Fulbright Lecturer, and an IEEE CS Distinguished Visitor. He has contributed to more than 450 publications and was invited to the program committees of over 500 international conferences. He is on the editorial boards of 15 journals.

#### TITLE OF TALK: Synthetic Data and AI-inspired eCommerce Growth



Prof. (Dr.) P.S. Grover

Data has appeared as the 'New-Oil' in this internet-age and Artificial Intelligence is becoming dominant application technology in countless fields, may be education, business, health, climate, food industry, hospitality sector, military and so on. All this require data. Gathering, processing and harnessing realistic data is quite expensive and time-consuming. Due to this, efforts are made to 'manufacture' data. Data are artificially generated in a digital setting, rather than collected/measured in the real environments. Such data are referred to as Synthetic Data (SD). These data reflect the characteristics of real-life data, either statistically or mathematically. Research demonstrates that SD can be good, or may be even better alternative, for designing and training AI models, compared to those based on actual observations/measurements of processes, objects, events, people, etc.

AI models and predictions are creating and enhancing business applications day-in and day-out. Numerous eCommerce companies, such as Amazon, Flipcart, are extensively using AI-ML based Recommender Systems to better understand client demand, behavior and provide enhanced shopping/spending experience. Some of the other major uses are sales forecast & growth, turnover management, fraud detection, fake-reviews filtering, and so on. These systems are designed using AI, along with Machine Learning/Deep Learning algorithms. Such studies are based on availability of relevant Data. In the absence of real-life data, SD are being utilized widely for forecasting and make predictions. Studies suggest (Gaertner Report, June 2021) that by 2030, Synthetic Data will dominate real-data in AI-based models and applications of eCommerce.

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We will discuss about synthetic data, artificial intelligence and machine learning applications in eCommerce and growth strategies.

#### **TITLE OF THE TALK: Explainable Artificial Intelligence (XAI)**



Prof. (Dr.) Bhuvan Unhelkar

AI-based systems work on vast amounts of structured and unstructured data to identify patterns and trends within that data. The ensuing analytics generates insights for decision makers. The systems, however, do not and cannot provide explanations as to why a certain recommendation is made. Users want to move away from this black-box model due to lack of explainability. In fact, all AI systems stakeholders, including developers and vendors of AI solutions, want visible fairness and accuracy that would increase trust and use of these systems. Explainable AI (XAI) goes deep within the AI system to identify the reasoning behind recommendations, verify the data, and make algorithms and results transparent. Such explainability reduces biases in AI-based decisions, supports legal compliance, and promotes ethical decisions. This keynote address highlights the need for, importance of, and approaches to making AI systems explainable

## TITLE OF THE TALK: The Role of Industry 4.0 Technologies in Building Supply Chain Resilience in the post-pandemic World



Prof. (Dr.) Vikas Kumar

The ongoing COVID-19 pandemic has affected more than 180 countries around the globe and caused severe disruptions for businesses. Lockdowns and COVID related restrictions in many countries have led to panic buying and severe shortages of food, medicines, personal protective equipment, raw materials, basic goods, etc. As a result, while a small number of businesses have benefited from this sudden spike in demand, many businesses have collapsed, and many are at the brink of collapse unless they would be rescued by governments or private investors. Countries that have taken strict measures such as full lockdown are struggling to balance their demand and supply as in-country and crossborder supply has been severely affected. Although stock-outs are much more common early in the crisis due to panic buying, supply chain issues still plague the businesses vertically. Where the panic has subsided, it's evident that shopping is seeing a reduction in overall personal visits as well as a substantial digital shift. The COVID-19 pandemic has hence exposed several vulnerabilities in the supply chain system. The slow reaction of retailers to replenish items exposed the limitations of costefficient and streamlined supply chains to be agile and adapt to unforeseen shocks. Most retailers in the modern world believe in 'lean sourcing', just-in-time (JIT) logistics, standardized components and reductions in the supply base that have tended to neglect the systemic risks caused by exogenous shocks or disruptions to supply chains. Industry 4.0 technologies have created a lot of buzz in recent years due to their potential to transform the manufacturing sector. It has become a necessity for organisations to build sufficient flexibility in their supply chains to protect against future disruptions. During the pandemic, these technological innovations have shown their potential in reducing risks in supply chains, reducing waste and making supply chains resilient. These digital technologies present companies in the post COVID world with exciting opportunities to boost their productivity and reduce their costs. Organisations can thus achieve this capability through technology-led, leveraging platforms that support applied analytics, artificial intelligence and machine learning. This pandemic has hence offered an opportunity to drive real change in the supply chain system by improving supply chain resilience in the mid to long term. This keynote using evidence from the UK food sector, therefore, shows how businesses are dealing with the current unprecedented situation and how digital technologies can help businesses to build supply chains resilience in the post-pandemic world.

## TITLE OF THE TALK: Evolution of Artificial Intelligence and its Adverse Impacts



Dr. Arpan Kumar Kar

Artificial Intelligence is triggering a major change across industries. The evolution of AI has witnessed interesting trends that need deeper deliberation of capabilities and diffusion. The digital transformation and emergence of SMAC has resulted in greater adoption, although in a less well governed way. While due to the major benefits promised, it is witnessing fast adoption, there are challenges in the organization and governance post adoption of AI. These challenges has critical implications from a policy perspective as multiple stakeholders get impacted. In this talk, we would deliberate upon some of these governance challenges. Addressing these challenges have become an important agenda in editorial guidelines in current high quality information systems research.

## TITLE OF THE TALK: Convergence of Internet of Things (IoT) and Artificial Intelligence



Prof. (Dr.) Amit Prakash Singh

The advancement of Artificial Intelligence (AI) and Internet of Things (IoT) leads to convergence to explore the advantage of both the technologies. The AI provides the techniques to implement various intelligent techniques while IoT framework provides the mechanism to capture the data through sensors and data loggers. IoT framework helps to enrich the data repository, which help AI technique to provide better classification and predictive techniques.

The Artificial Intelligence is works as a brain of the system, while Internet of Things devices works as a digital nervous system. The Internet of Thing is created when data capturing devices connected with internet such as wearable gadgets, sensors, air conditioner, digital assistants, refrigerators, and other equipment are linked to internet.

The AI techniques provide better algorithms for training the system and develop the model, which is popularly useful in app. The advancement of Machine Learning and Deep Learning techniques, system required large data for training purposes. The development of IoT framework helps to collect data on real time environment.

The convergence of AI and IoT gives the development of AIoT. The AIoT provides data analytics, which is then optimize a system and generate improved performance and business insight, as well as generating data that can help the system learn and make better decisions.

The development of AIoT provides the development of new research opportunities like prediction of disease at early stages with the help of IoT framework and data analytics opportunity of AI techniques.

The convergence of AI and IoT also helps to deploy sensors at optimized level, which saves the energy.

## TITLE OF THE TALK: Resolving Security Issues in IoT using Blockchain



**Prof.** (Dr.) Parvinder Singh

After the successful emergence of Internet of Things (IoT), there have been applications which aim to use IoT in their fields. However, huge advancement and commercialization in IoT has exposed several security vulnerabilities of the IoT systems. There are various security and privacy challenges in centralized IoT systems which need to be addressed while designing an effective IoT architecture. Since, the data which is stored on centralized servers can be tampered and deleted; therefore, it lacks traceability and accountability. Also, presence of large amount of data can lead to inefficient handling of end to end communication. Moreover, there is a possibility of single point of failure of the system. The distributed ledger technology named as "Blockchain" can solve the above mentioned security and privacy problems by proposing a secure and distributed environment for IoT.

There are 3 IoT reference models available in the literature and there exists security concerns related to these models. We will provide a brief discuss on security requirements in an IoT system. In addition, we will provide taxonomy of various attacks which are possible in an IoT system.

Furthermore we will provide a brief introduction of blockchain technology and emphasize how blockchain will be able to handle the security and privacy threats in the IoT systems. The security attacks on IoT can be broadly classified into 4 categories i.e. (a) Physical Attacks (b) Network Attacks (c) Software Attacks and (d) Data Attacks. We aim to investigate the security attacks and propose how blockchain technology will help in providing an alternative to the above mentioned challenges. In conclusion we will provide taxonomy on the applications of IoT on which we can apply blockchain platform to address security and privacy concern problems. We will try to cover the IoT devices which can be used on blockchain platform.

### TITLE OF THE TALK: A Perspective on Technology Transformation



Mr. Keith Sherringham

From its global leading ICT companies, through call centres, space travel, and the energy sector; the Indian economy has benefited from the ongoing transformation around technology. The Internet, Mobile Computing, Cloud Computing, Social-Media, Big Data, Artificial Intelligence, and the Internet of Things are all converging to form a core platform off which society operates. The Indian economy can yield transformational returns from the business opportunities around the design, development, testing, operations and services, assurance, consumption, and derived value adding products and services from this core platform. Whether it is education, agriculture, government, healthcare, community organisations, or businesses; there are emerging demands for services like benchmark testing of artificial intelligence alongside automated knowledge worker services such as Tax as a Service or Audit as a Service or Project Management as a Service. Some considerations for economic transformation around technology are discussed further in the context of the Indian economy.

# TITLE OF THE TALK: Understanding the role of Cryptography in Blockchain Technology



Dr. Bharat Bhushan

Blockchain is a distributed, decentralized public ledger that has gained massive momentum recently. Currently, security services such as privacy, confidentiality, resource provenance, access control, authentication and integrity assurance are managed by centralized controllers that is prone to huge range of attacks. Many such challenges with centralization can be solved by blockchain as it helps to create an attack resistant, digital data storage as well as sharing platform by employing linked block structures for data verification and trusted consensus mechanism for data synchronization. Blockchain has the potential to be applied to various internet interactive systems such as identity management, supply chain management and Internet of Things (IoT). The goals of this talk is to provide some insights into the blockchain security threats, to highlight the security and privacy necessities for current applications, to outline their challenges and give an insight on how these challenges can be resolved by the blockchain technology.

## TITLE OF THE TALK: Navigation Technology Dimension for Modern Era



Dr. Kanta Prasad Sharma

Real-Time navigation is a type of virtual-reality application in which the visitor can move freely without obstacles other than those that a real space would have, and the navigation through the 3D space is fluid because interaction with the virtual environment is in real-time, i.e., perceived without delays between input and system response. So that a 3D model can function in these applications, it should be particularly precise in rendering details and contextually "light", that is, with a restricted number of polygons so that the weight of the geometry does not negatively influence the navigational fluidity. Dedicated software systems are used for these applications. Until a few years ago, these were only used in the videogame sector.

Navigation Technology adopts a Map Matching approach for navigation and tracking application of the computer science domain. This research work investigates; curve geometry influences the vehicle drivers in curves based on tracking data. The real-time location accurate mapping-based GPS trajectories on the road network or digital map are important issues for observing real-time position. Today information fusion based on various data sources like sensor-based is regularly increased for IoT-based applications. So, Map Matching algorithms for real-time location tracking system, putting special emphasis on path analysis, tracking points monitoring with GPS and IRNSS signals structure, and quality analysis on L2, L5 frequency band. The objective of this research work is to propose a novel map matching algorithm for real-time location tracking, real path analysis, vehicle trajectory computation, and satellite signals analysis on road networks. This work also introduces a mathematical analysis process for the current navigation signals process on the signal waveforms. In this research work, we propose a novel mapping algorithm based on meta-information to describe relative moving objects and determine an accurate path between candidate locations and tracking positions on the road networks.

### Index

	Content	Page No.
Messages ICRIMB-2022 ICRIMB-2022 Keynotes	Steering Committee Schedule	ix xvi xxiv xxviii
Chapter No.	Title	
1	Blockchain Technology and Fintech Solutions: Integration with Digital Financial Inclusion  Himanshu Agarwal and Rashid	1
2	Role & Implications of Fintech in Digital Uprising of Indian Fiscal Services With Reference to Market Structure and Public Vikas Bharara	2
3	Digital Payment Methods: An Empirical Analysis during COVID- 19 Preeti Ahlawat, Ritika Juneja, Jagdeep Singla, Vinay Nandal	3
4	Perception towards AI in Gopal Singh Latwal and Pooja Ahlawat	4
5	Employee Engagement Challenges during Remote Working Sunitha Ravi and Deepika Arora	5
6	HR Innovative & Sustainable Approaches in Industrial Revolution 4.0 <i>Neha Sharma</i>	6
7	Role of Technology Business Incubators in Building New Ventures in Kerala <i>Ajay James, Muhammed Arif, Haritha K Chandrasenan</i>	7
8	Analysing the Energy Consumers Sentiments w.r.t Union Budget 2022, Using Twitter Data  Ankita Srivastava, Neel Patel, Anshika Gupta	8
9	Cognizance for Diamond Buyers – The Exploratory Data Analysis on Diamond Features  Vrunda Gadesha and Shefali Naik	9
10	Can Dreams Offer Insights to Creative Problem-Solving Techniques?  – A Magician for Dreams  Arushi Bathla, Simran Gahlot, Shikha Shokken	10
11	Psychological well-being before and during the COVID-19 pandemic: A longitudinal Sample study of Creative Writers and Directors  Monica Sawhney, Mohan Kumar, Preeti, Divya Malhan	11
12	Usage of Computer Paradigms in Decision Making Process Romika Yadav, Usha Yadav, Sheetal Soni	12
13	Significance of Knowledge Management for Organizational Effectiveness in ICT Era Himanshu Agarwal and Mohit Yadav	13

14	A Review of the Business Model Canvas in an Uncertain Environment Swapna Datta Khan	14
15	Role of ICT in Management and Business: Practices, Trends and Prospects  Taruna Chopra	15

## Blockchain Technology and Fintech Solutions: Integration with Digital Financial Inclusion

Himanshu Agarwal<sup>1</sup>, Rashid<sup>2</sup>

<sup>1</sup>Associate Professor, Faculty of Commerce and Business Administration, D N (PG) College, Meerut drhimag@gmail.com<sup>1</sup>

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**Abstract:** India is emerging as new Financial Superpower in the Asian region. India is known as Young County. 40 percent of Indian population is of 18-25 age group. The most crucial challenge for India is providing relevant employment to the unemployed population. Another hurdle is that maximum number of population is unbanked. Rising unemployment increases the size of unbanked population and unbanked population increases unemployed population. Since the Narendra Modi government came into the power, aggressive efforts have been initiated through various methods to financially include the most of unbanked population.

If India can receive results through Digital India movement, Jan Dhan Yojana and other schemes, we can create a good base of Financial Inclusion of unbanked population. The slow speed of Financial Inclusion in India is due to scattered and widely population base. To boost the speed of financial inclusion of Indian unbanked population, blockchain technology and fintech Solutions can prove a catalytic medium.

The main focus of this research paper is to survey unbanked rural population with a wide application of Blockchain Technology and Fintech solutions. Hindi paper challenges of remote and scattered areas with the knowledge of Technology is discussed. And, the possibility and results of Blockchain Technology and Fintech solutions in the diversification of financial inclusion is evaluated.

**Conclusion:** To achieve the goal of complete financial inclusion in India, the government here needs to work on out-of-the-box ideas. If some important points are worked out, then the difficulties of financial inclusion can be overcome. some of which are as follows: Credibility of Business Correspondents, Include some more Financial Services in BC Buckets, Introduce Consumer Need able Financial Products, Strong Connectivity Through Cellular or Satellite, ATM with audio/video and color based operating function, Blockchain Based Credit System, Separate Banking Window for Financially illiterate

## Role & Implications of Fintech in Digital Uprising of Indian Fiscal Services with Reference to Market Structure and Public

Vikas Bharara

Associate Professor, Department of Commerce, Institute of Information Technology & Management, Janakpuri, GGSIP University, New Delhi, India vikas.bharara@iitmipu.ac.in

**Abstract.** Financial intermediaries rise due to frictions and forces in economy like information irregularities and economies of scale respectively. To silhouette the market anatomy these frictions and forces are necessitate. In the world of finance where technological advances are not novel, significant enhancements in systems connectivity; power & cost creation and recently fashioned & functional data are rewards of digital innovation. All these enhancements have not only taken the edge off of transaction costs but also beget novel business models and players. There is no apprehension that technology has augmented information exchange and abridged operational costs, there can be disarticulation of financial services production. Professional have untied financial services due to which customers discover and congregate their desired suites of products. Even in this digital era, archetypal economic forces endure to be pertinent. In numerous facets of financial services like client solicitation; endowment; adherence tasks and capital, economies of scale are contemporary. Consumer exploration and congregation costs are still significant in spite of technological advancement. It leads to the encouragement not only for re- accelerating but as well as deliberate rewards to mammoth numerous product providers. Digitization of financial services induces to dispose vital strategy matters concerning competition, governing limits and certifying equal opportunities. Prospective upshots about competition, attentiveness and market conformation embrace a "barbell" outcome poised of a limited outsized contributors and voluminous niche players. To govern commutation among steadiness & reliability, competition & efficacy, and customer fortification & secrecy, the administrators should synchronize through financial byelaw, competition, and industry governing bodies.

Conclusion: Fintech is not only conveying cost-effective significant modifications in financial services production but also supporting of financial industrial structure. For augmenting competence and competition, connectivity and assessment perfections are playing a vital role. Un-bundling of various financial products and services have been witnessed in most of the cases. Simultaneously, financial intermediaries are contented as there necessitate is herd due financial abrasions and intensity. A barbell outcome is nurturing in financial market, in which outsized multi-product financial intermediaries subsist in conjunction with more focused position intermediaries. To adapt fintechs presented attitude towards competition strategy is not fitting. As far as barbell market attractiveness has been concerned, not only client actions but also their expertise will be depending factors to determine switching costs. Minimal requirement of capital, moderate licensing necessities and further guidelines are relevant market drives. Reserve Bank of India as well as financial sector administrators is required to assist financial service providers and data preservation authorities.

#### Digital Payment Methods: An Empirical Analysis during COVID-19

Preeti Ahlawat<sup>1</sup>, Ritika Juneja<sup>2</sup>, Jagdeep Singla<sup>3</sup>,Vinay Nandal<sup>4</sup>

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**Abstract:** The study aims to investigate the impact of the COVID-19 pandemic on the digital payment system. The present study is exploratory and descriptive in nature. Researchers collected data from 114 respondents using a self-structured questionnaire via google forms. Descriptive statistics like means, percentages, frequencies, standard deviations, etc. have been used to explain and summarise the characteristics of the data obtained from the participants. Parametric tests like t-test and ANOVA have been performed to check the hypothesis. Microsoft Excel and SPSS have been used to analyze the data.

The findings show a paradigm shift from traditional payment systems to digital payment systems. The study reveals that 54.4 %respondents used traditional payment systems before the corona virus pandemic, and only 45.6% respondents used digital payment systems. But during the COVID-19 pandemic usage rate of digital payment systems increased and 91.2% of respondents used digital payment systems, which shows that the COVID-19 pandemic changed the payment method of the people. According to the study, digital payment systems are expected to rise in the future. The government should help non-users of digital payment systems, as going digital is the Indian government's primary goal. The government should work with banks, NGOs, and celebrities to organize various programs to raise awareness about digital payment systems. Digital literacy camps should be available to people of all ages.

There has been no study that shows the impact of COVID-19 on the digital payment system, investigated the public awareness and perception about digital payments in COVID-19 pandemic times.

Conclusion: In this study, the researcher analyzed the awareness and perception of digital payment methods. From this study, we conclude that majority of the respondents are aware of the digital payment system. Some respondents do not use digital payment systems because of digital illiteracy and security concerns. Most of the respondents initially heard about digital payment systems from the internet. Somehow, they were forced to use digital payment systems due to complete lockdown conditions and fear of getting infected. The result shows that a digital payment system makes an individual's life easier and more comfortable. Adopting a digital payment system saves the time and efforts of the individuals and decreases the risk of getting infected with COVID. There is a paradigm shift to digital payment systems from traditional payment systems. The result shows that 54.4 % of respondents used traditional payment systems earlier and only 45.6% used digital payment systems. Opinion of the non-user of digital payment system changed due to COVID-19 and they start to use digital payment system. During the Covid-19 pandemic, only 8.8% of respondents used the traditional payment system. The majority of the respondents (91.2%) use digital payment systems, which shows that the COVID-19 pandemic changes the payment method of the people.

### Perception towards AI in HR

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Abstract: Human Resource Management is a crucial part of any organization and it's important for proper recruitment and retention of employees and Artificial intelligence is a form of human intelligence in machines. The aim of this Research Paper is to know about the perception toward the use of AI in HR. It aims to understand the thinking of employees and employers toward the adoption of Artificial Intelligence in Human Resource Management and how it is affecting the functioning of the HR Department. This study was conducted by collecting data from 60 people who work in the private sector of Delhi & NCR region. SPSS is used for Data Analysis. This Study reveals that there is no significant difference in perception of employee and employer toward the implementation of AI in HR plus there is no significant difference in perception on the basis of gender too. Further it was found that it's easier for IT firms to adopt AI in HR as compared to the Non-IT Firms. So, the conclusion of the study is that 61.7% people are in favour of using E-HRM in place of Traditional HRM with the positive perception toward use of AI in Human Resource Management.

Conclusion: This study surveyed the perception toward the use of AI in Human Resource Management. Through this survey, it was concluded based on the observations that there is no significant difference between the preference of Top Management and Middle Level Management toward use of AI in Human Resource Management. Both female and male show positive preference toward the use of AI in Human Resource Management and there is no significant difference found in perception toward use of AI in HRM on the basis of gender. It was found that the IT job sector finds it at ease to adopt AI in their job sector as compared to the Non-IT firms. This study concludes that AI has many advantage in field of HRM and employee even employer both are in favour of the use of AI in Human Resource Management and believe that AI will ultimately help in the improvement of Human Resource Management in Future.

#### **Employee Engagement Challenges during Remote Working**

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Abstract: Employee engagement has become a hot topic in recent years among consulting firms and in the popular business press. Employee engagement is a measurable degree of an employee's emotional attachment towards the organization, colleagues and job which profoundly influences their willingness to perform at work. In the present situation during the COVID-19 pandemic, employee engagement has become one of the prominent primacies for managers and practitioners in organizations due to lockdown. When the economy is under the weather, any of us is fortunate to have a job, managers dwell on about whether or not employees are contributing to the organizational goals and objectives, employee's engagement, and training and development activities, the intention of the managers is to face these current challenges which are created due to COVID-19 pandemic. The physical workplace is converted into a virtual workplace, now the managers are planning how to engage the employees efficiently. This study is pursued to examine the employee engagement challenges during remote working.

**Conclusion:** From the study pursued and the analysis done we concluded that there are numerous challenges faced by the both the employees and the managers in employee engagement during remote working, the most significant challenges that are faced are.

- Communication challenge, as employees are not empowered and motivated to perform at work, they communication with the employer as well as the team member is less as compared to physical setting.
- Technology glitches, there are cases where the technology is not dependable whether it is instability in internet connection, unexpected power cut, use of improper platform for meetings which have time restrictions and thus meetings get affected and the flow of work breaks.
- Work-life balance, traditional offices had fixed working hours whereas in virtual office setting the working are sometimes not defined and the employees and the managers have to work overtime which results in lesser time for themselves their family and leads to poor work life balance.
- Lack of agility, the managers have to respond quickly to each employee in a virtual setting as compared to the physical setting and thus it is not feasible for the manager to respond quickly to each employee and frequent delays occur due to which the employees lose their motivation and interest and thus their engagement level is affected.
- Engagement activities, due to the pandemic remote work has become the new normal and various engagement activities cannot take place in a virtual setting as compared to the physical setting thus the employees feel alienated and isolated which results in poor employee engagement.

Uncertainty, the pandemic has brought a lot of uncertainty with respect to job opportunities and the measures to sustain organizational goals, the employees are stressed about their job safety and securities and the managers struggle to align all the factors.

#### HR Innovative & Sustainable Approaches in Industrial Revolution 4.0

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**Abstract:** The world of business is changing now, Industry 4.0 is not just investing in latest tools and technology to improve services but it is all about revolutionizing the entire system of business operation and growth. Businesses to survive and prosper now have to be ready and keen to invest in Industry 4.0. Industry 4.0 is distorting the shape of relationship between workforce and technology. The influence of such transformation modifies the way people perform and businesses work to create value for their stakeholders and reinvent the future of work. Owing to unceasing automation of simple processes and methods, the number of workplaces with an increase level of complexity will rise, which ultimately results in the necessity of improved level of skill and education of the workforce. HR 4.0 is the upcoming framework for redefining people's strategies to work in the organization. This paper explores the innovative and sustainable HR practices in this Industrial Revolution 4.0 and outlines the challenges and opportunities for HR professionals in this new emerging era. HR leaders must upgrade and strengthen themselves with specialized skills and competencies like grievance handling in matter of collaborating man and appliances, emotional intelligence, digital techniques like sentimental analysis, mindfulness and must emphasize on the technical aspect like establishing a digital culture within the organization.

**Conclusion**: Industry Revolution 4.0 is generating innovative work techniques subsequently substituting of manual sewing machine with new machine which is getting more work done in less time, leveraging productivity instead of taking away jobs. Likewise, rapid digitization will eliminate mundane and repetitive work; however it will give rise to more innovative tasks for the employees. Henceforth it will provide better opportunities to employees for self-growth and development. The jobs of HR professionals won't get obsolete instead their roles and job profiles will get modified leaning more towards being a strategic partner/change agent/counsellor/mediator in the organization. Higher educational institutes and organizations must collaborate in offering practical training and exposure in HRM. HR professionals are now required to upgrade their expertise with the innovative tools and techniques in HR in order to contribute fairly in the system. Industry 4.0 necessitates emphasizing on transformational innovation and highly specialized knowledge. Leaders are required to emphasize on HR proficiencies and play the role of strategist architect by offering a guiding framework to unlock the best for the organization. Furthermore, they need to focus on inclusive leadership and embrace the latest innovative technology rapidly. Moreover, to enhance creativity and have strategic alliance, HR professionals in IR 4.0 must develop a strong and broad knowledge base while managing generation Z workforce as they are highly technology driven. They must leverage themselves with specific specialized skills and competencies like grievance handling in matter of collaborating man and machine, emotional intelligence, digital tools like sentimental analysis, mindfulness and must focus on the technical aspect like establishing a digital culture within the organization.

### Role of Technology Business Incubators in Building New Ventures in Kerala

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**Abstract:** The purpose of this research is to understand the role of Technology Business Incubators (TBI) in building new ventures in Kerala. As a part of the research, we contacted various Technology Business Incubators all over Kerala. The research interview conducted with TBI managers, Incubators, and different startups helped us to understand the important challenges faced by the upcoming ventures in Kerala. Furthermore, the study also reveals the advantages and disadvantages of pre-incubated and post-incubated startups. A small comparison of the situations of TBI's in Kerala with TBI's at the Global level helped to understand the most suitable possibilities for resolving the problems identified. Based on this study it has been found that there is a positive impact of Technology Business Incubators on startup success.

Conclusion: The study reveals that the Technology Business Incubators in Kerala play a major role in building new ventures. Most of the startups were satisfied with the facilities provided by their Incubators and funding schemes of the Government. Almost 90 Percentage of the problems faced by the startups before it's Incubation were solved by the process of Incubation at the Technology Business Incubators. The study also states that it is better to improve the infrastructure facilities for startups mainly focused on hardware, also it would be better to bring more funding from outside investors to bring new innovations through the Incubators.

### Analysing the Energy Consumers Sentiments w.r.t Union Budget 2022, Using Twitter Data

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**Abstract:** Through researches it is empirically proven that consumers gets engaged with brands on social media. However, the facts about their creative behavior is not abundantly known, as the topic, is still in its infancy and development. As a result, this study aims to explore and understand the relationship of consumer behavior with a particular focus on tweets to the Indian energy sector and Union Budget 2022. In any economy energy plays a vital role and is a significant utility in India too, this industry is changing faster than ever. This study is based on how Indian consumers react, as well as the ability to share knowledge of the Twitter community. This study continues with a qualitative assessment of customer reaction to the 2022 energy budget. This study provides current, relevant, and integrated insights into the behaviour of online users, focusing on the energy sector, as well as the progress of online consumer behavior research, impact analysis, and research and social media.

**Conclusion:** Indian market is highly price sensitive for cooking gas, petrol, diesel, CNG and electricity prices as they use them in their everyday life and they need to take their wallet out to pay for these form of energies.

While the government's strong commitment has increased the role of renewable energy, we still have a long way to go to create clean energy in the country. People need to be aware of other energy sources that they can use as long-term like solar energy. The results in this study are due to the fact that Indians have a strong influence on the price of fossil fuels, but did not participate in discussions on energy budgets that focused significantly on energy transition.

The government will play an important role in creating a favorable environment for the mobilization of private enterprises and resources needed to accelerate India's energy transformation. The 2022 budget will also be useful in sending a signal to the market that the government is meeting Net Zero's local targets. (Mandal, 2022)

Our estimates must be interpreted with caution. The quantification of the role of consumer behaviors in the energy transition needs to be further documented. It should be noted that the purpose here was not to study the social acceptability of the proposed changes but to highlight their importance. (Marianne Pedinotti-Castelle,2021). Nevertheless, at a certain point, the country will have to develop a long-term vision for its domestic energy market development and engaging with Energy suppliers and consumers.

# Cognizance for Diamond Buyers - The Exploratory Data Analysis on Diamond Features

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**Abstract:** Diamond pricing involves a complex mechanism influenced by multiple factors. To verify the pricing of diamond is always being crucial task. The buyer of a diamond, is not aware about the technical terms like color, clarity, cut, table or depth of the diamonds. This project aims to perform Exploratory Data Analysis to find out which parameters are important for diamond pricing and what the supporting parameters are which does not affect the pricing of the diamonds, but it adds verity and beauty to diamond.

**Conclusion:** Investing in Diamonds needs precise decision making. This project stats the clarity that pricing of the diamonds are depends on 'Carat', 'x (length)', 'y (width)' and z (depth). It also derived that pricing is not depends on 'Cut', 'Color', 'clarity', 'table' and 'total depth'. There is a measure provided my Gem Society that the costly (12000 USD - 18000 USD) diamonds are made with more than 3.0 caret which is rejected with the hypothesis testing.

## Can Dreams Offer Insights to Creative Problem-Solving Techniques? – A Magician for Dreams

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Abstract: Can our dreams provide us with useful guidance for developing and self-discovering innovative problem-solving techniques? Based on dreams, this study seeks to establish new creative problem-solving strategies. Participants' dream diaries from various creative sectors were nurtured to produce significant ideas in their dreams that operate as customized creative techniques for issue resolution. It was discovered using grounded theory that dreams-based techniques include combination, breaking, symbolism, opposition, substitution, amplification, emotionalization, adoption, emptiness, limitation, procrastination, reframing, and outsourcing. These techniques illustrate several thought processes for various difficulties in today's increasingly complicated, turbulent, and dynamic corporate environment. It may also be researched how dreams or the subconscious mind produce the needed themes for the relevant incubating difficulties.

**Conclusion:** In conclusion, many unanswered concerns concerning the process of problem resolving in dreams, the quality and soundness of dream responses compared to wakeful ones, and the development of methodologies in these dreams remain unanswered. However, it is obvious that dream-interested individuals may incubate issues in their dreams, interpret useful responses, and obtain personal satisfaction, and these answers in the form of dreams contain specific creative strategies that promote problem resolution, as stated.

## Psychological well-being before and during the COVID-19 pandemic: A longitudinal Sample study of Creative Writers and Directors

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**Abstract:** The COVID-19 has not only affected the lives of people in the physical sense but affecting mentally due to lockdown and also businesses have been affected and these economic crises are affecting the people at a psychological level. The present study investigated whether COVID-19 has adversely affected the Psychological wellbeing (PWB) of creative people or their PWB is intact as it was before COVID-19.

In this study, the PWB of writers and directors were analyzed, who are professionals, by using Ryff's 18-item scale and by taking a sample of 110 creative people who live in India. We have conducted a study on the creative people when COVID-19 cases were not present in India in January 2020 and again conducted the study on the same sample during June 2020.

The analysis shows that creative people have moderate PWB but at a higher level under both the conditions of before and during COVID-19 but this moderate PWB has been increased during the COVID situation (87.65454545) in comparison to before the COVID situation (86.11818182).

The PWB of creative people has been increased during COVID- 19 in comparison to before the COVID situation.

Conclusion: The overall psychological well-being of creative people (Writers, Directors, and both Writers and Directors) has not been decreased and even slightly increased during the COVID-19 compared to before the COVID-19 situation. However, their (Writers, Directors and those who works in writing and direction both) comparative analysis shows that writers PWB has been slightly decreased during COVID-19. Still, the directors and those who work as both writers and directors, their PWB have been increased during COVID-19, in comparison to before COVID-19 situation.

The practical implication of the study suggests that one should try to adopt any creative aspect in their life for maintaining moderate or high psychological well-being because any creative aspect can be valuable for maintaining overall sound mental health.

In our study, we have taken only limited aspects of creativity and so taken the creative people, i.e., Writers & Directors, only as the sample for the study and not taken other professional creative people like singers, painters, designers (interior, fashion), etc. So, in the future, other creative professionals can be taken to analyze their PWB related to COVID-19. There can be other confounding variables like personality traits, mindfulness, etc., which can also affect the PWB of creative people. In future studies, these variables affect can also be taken into consideration. In our sample mostly were males, and so in the future, an equal ratio of males and females can be taken for the study to do the comparative analysis of psychological well-being of creative people by considering the aspects of professionals like designers, singers, dancers, painters, etc. and so the effect of COVID-19 on their PWB can be studied.

#### **Usage of Computer Paradigms in Decision Making Process**

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**Abstract:** Currently computer based application apparently increased rapidly. It helps to generate new applications within the intended period of time. It is supposed that computer paradigms are playing a major role in today working environment. Many applications are only base on the computer working environment, so they will provide very fast results and accurate data. Taking decisions is an important task for the people who are engaged with the working environment they can use statistical software to analyse the things to make decisions. In this paper, we discussed the decision making process in the various fields, where computer intrusion is required to do the work. Computer paradigms provide an accurate, efficient and timely decision about a particular task. It will help in the variety of fields viz. marketing, sales, data recovery, and authentication in the data processing.

**Conclusion:** We conclude that this paper gives an advantage of the computer which is a very important device for today's surroundings. People used computers for their online work for the ease of applications so that they can access it at their homes, offices and anywhere. This paper also provides an effective decision process that is taken from the computer paradigms which help to take correct decisions within a short period of time.

### Significance of Knowledge Management for Organizational Effectiveness in ICT Era

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**Abstract:** Globalization has compelled businesses, especially higher education institutions, to increase their competitiveness. Knowledge management has recently gained widespread acceptability as a means of improving organizational performance. Every organization's success relies on knowledge management, which comprises the utilization of technology to assist in the creation, storage, and transfer of knowledge. Sharing knowledge became easier after the emergence of technology, which in turn assists people to recreate or get any sort of information and share ideas. Knowledge management projects benefit greatly from ICTs. In today's business environment, using technical tools has made knowledge management projects easier. To maximize the value of knowledge management, it must be accessible to all. Computers, phones, email, databases, data mining, search engines, video conferencing, and other ICTs facilitate knowledge sharing. ICTs have a crucial role in knowledge management (KM) projects that contribute to organizational effectiveness, which is the major goal of this research paper. An awareness of the role of ICTs in knowledge management is a step towards achieving organizational success. ICT, knowledge management procedures, and organizational efficiency are all linked in an integrated paradigm that conceptualizes how ICT and KM work together. Therefore, the researcher in this paper tries to find the significance of knowledge management for organizational effectiveness. The study has a hypothesis that knowledge management is significant for organizational effectiveness in the ICT era, to test the hypothesis, 400 teachers and students from different colleges in Meerut District were surveyed on a 5-point Likert scale, 25-response questionnaire. Furthermore, chi-square was used to test the hypothesis. The hypothesis was accepted and approved that knowledge management is significant for organizational effectiveness in the ICT era.

Conclusion: Higher education institutions have changed significantly in the previous decade, and they have begun to employ 21st-century management methods such as knowledge management. Individual researchers and academics, as well as administrators, may easily see the advantages of using KM concepts. The preceding discussion and survey results indicate that the results are interesting; Chi-square analysis was performed to calculate the gathered score. The estimated chi-square value was smaller than the table value, proving the hypothesis that "Knowledge Management is significant for organizational success in the ICT Era." Respondents in the sample area reported that knowledge management is very helpful for organizations in their daily activities in terms of productivity, market accessibility, and profitability, which includes increased functionality, increased profit margins, and the ability to improve their services. However, there were a lot of ways for higher education institutions to get even more benefits by using more ICT in their knowledge management.

#### A Review of the Business Model Canvas in an Uncertain Environment

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Abstract: The Business Model Canvas is a visual management template that enables the understanding of the creation of value with optimized resources in a structured manner. A visual chart is displayed, depicting the organization's value proposition, customer segments, assisting organizations and finances. Initially developed in 2005 by Alexander Osterwalder, the Business Model Canvas, available in a web-based software format, has been applied to very many sectors and has evolved therein to suit business situations such as the Lean Startup. The SARS Covid-19 virus and its repeating waves have impacted business at almost every functional area. Home-nesting consumers have moved towards online channels, distributors prefer the digital and hands-free versions of supply chain, supply chain disruptions were commonplace, transactions were completely cashless and regulatory decisions aligned with the Covid protocol as the organizations faced a severe manpower shortage and liquidity crunch. The research delves into how in such uncertain times the nine boxes in the Business Model Canvas (Customer Segments, Value Propositions, Channels, Customer Relationships, Revenue Streams, Key Resources, Key Activities, Key Partnerships, And Cost Structure) could be reviewed to lend much-needed sustainability and credibility to organizations, as they focus on delivering value to the customer. The findings of the research are based on scholarly articles in the form of research output, business news, and company reports.

**Conclusions:** The initial part of the research explored the applications of a set of innovations to the BMC, in its generality, imparting necessary resilience during a pandemic (and other such black swan events). Prior to positioning any innovation, the organization must: observe "Status Quo" and the routinized system. It may be noted that Value Creation and Value Capture are always at the center of any business model, especially the BMC. The organization should identify its anti-consumers. Trans- disciplinary research and a SWOT would enable us to ascertain the drivers of changes, apart from a PESTLE analysis of the environment.

The social changes would affect the KP and the CS, thus affecting marketing competency, as also the technologically driven change that affecting VP and customer driven changes affecting CS, Ch. Besides, the revision in any SBM such as the BMC must consider a holistic view of the organizational process as a contributor to environmental and social value as well as economic value.

#### Role of ICT in Management and Business: Practices, Trends and Prospects

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**Abstract:** Information and Communication Technology (ICT) is an integral part of business management now-a-day. It is inevitable for the smooth running of business irrespective of size and complexity all over the world. Business are managing their resources by using ICT Support that is helping them to Perform their tasks .This study focused on the role of ICT in Management and Business .The Descriptive survey approach was adopted for this study which involved the use of questionnaires to obtain data which was analysed quantitatively. The respondents are the employees who are working in a different Companies Completed the Survey .The study concluded that ICT is used in businesses for communication, record keeping and also to improve productivity. The study also concluded that limited financial resources, limited data management capacity, breaking down and malfunctioning of computer, poor awareness of ICT application and fund to invest more on ICT device and cost of training IT personnel and cost of repairs in terms internet service are factors that prevent ICT usage in businesses. Finally, the study also concluded that the use of ICT helps reduce cost, improve productivity, improves business performance, improves profitability of businesses, reduces corruption by helping keep accurate records and also makes transaction easy. The study thus recommended the use of ICT in all businesses to help improve upon productivity.

**Conclusion:** MOOCs have the prospective to increase knowledge and skills and they are indeed supplementing education. Despite various advantage of MOOCs. MOOCs are open and cost effective; as they are based on self-paced learning and lacks direct supervision.

Respondents pursue course to obtain more knowledge. Lack of time and motivation leads to quitting the MOOCs. Assessment of learning, peer assessment, creating a learning environment is the major issues in MOOCs. Majority of respondents are satisfied with the course contents, learning environments, and evaluation and teaching methods.

This study will help instructors, teachers to understand the area where significant steps to be taken for the improving the satisfaction level of learners". This study is confined to Delhi only and four areas of satisfaction is explored. This study can be further researched for other aspect of satisfactions.

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