### Dr. Ramesh Dharavath Associate Professor [Senior Member IEEE & ACM]

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Visting Researcher, University of Aberdeen, Scotland, United Kingdom Visting Research Associate, University of Economics and Human Sciences, Warsaw, Poland Visting Professor, University of Southampton, Southampton, United Kingdom

#### **Personal Profile:**

I am currently serving an Associate Professor in the Department of Computer Science and Engineering at the Indian Institute of Technology Dhanbad. My research areas include Distributed Computing, Distributed Databases, Modelling Big Data, Blockchain & Cloud Storage Security, Virtualization and Scheduling in Cloud environments, Community Detection in Social Networks, and validation of Machine Learning paradigms. I have more than 15+ years of teaching and research experience in computer science and engineering, including modern technologies such as Data Science, Blockchain, Machine Learning, Cloud Computing, and Software development. I contribute to teaching across the suite of undergraduate, postgraduate, and research computing programmes, and have the experience of providing high quality teaching and research. I follow IEEE principles of research ethics. My research vision is to learn, practice, and develop suitable applications in the newly emerged areas of AI, Blockchain, and Distributed Computing for the benefit of society. I have successfully supervised 8+ doctoral and 50+ post-graduation theses. My expertise made me perform and present promising results regarding high-ranked publications, funded projects, and patents.

#### **Significant Contributions:**

- I have established academic and research leadership in Blockchain Technology with application development, Distributed Computing (including Cloud Computing), and Big Data Modelling aligned with Machine Learning paradigms for Agricultural farming applications, which were funded by National and International organizations such as the Department of Science and Technology (Science and Engineering Research Board), Govt. of India, and the PMU Cybersecurity Center Saudi Arabia.
- My expertise made me establish research collaborations and exchange programs with Aberdeen University-UK, Leeds Becket University-UK, University of Southampton-UK, Nanyang Technological University - Singapore, Ulster University - UK, Ostfold University - Norway, Universiti Kebangsaan Malaysia, PMU Saudi Arabia, and other global universities and organizations throughout the globe. These collaborations facilitated the establishment of my knowledge for getting patent grants and delivering keynote talks at international conference venues.
- Using knowledge of various facets of teaching & research commitment to enhance the quality standards of academic programs by utilizing the latest technology, research & learning methods to assure students' success, confident to provide leadership & guidance to students and envision a future for any institute ensuring its reputation and academic standing.

"I equipped with analytical bent of mind, problem-solving skills & technical understanding of the stuff of the education field, constantly endeavoring towards delivering continuous results through dedication to nurture the creative potential of each student."

#### **Career History:**

2024 - (May-July)	Visiting Researcher, University of Aberdeen, Scotland, United Kingdom.
2023 - (May-July)	Visiting Professor, University of Southampton, Southampton, United Kingdom.
2022 - ( <b>Present</b> )	Associate Professor, Indian Institute of Technology (ISM) Dhanbad.
2019–2022	Sr. Assistant Professor, Indian Institute of Technology (ISM) Dhanbad.
2016–2019	Assistant Professor (Grade - I), Indian Institute of Technology (ISM) Dhanbad.
2011–2016	Assistant Professor (Grade - II), Indian Institute of Technology (ISM) Dhanbad.
2009–2011	Senior Lecturer, Swarna Bharathi Inst. of Technology, Khammam, India.
2005–2007	Lecturer, Dr. Paul Raj Engineering College, Bhadrachalam, Telangana, India.
2004–2005	(Database Developer), International Trade Links (South Africa, UAE, Mumbai).

#### 2022 - (Present): Associate Professor, Indian Institute of Technology (ISM), Dhanbad.

#### **Roles & Responsibilities:**

- To develop and establish new curriculum proposals and contribute to the broader design of the teaching programs for Cloud Computing, Blockchain, and Data Intensive Computing courses.
- (i) To research new topics such as Blockchain with Digital Twins and Blockchain in AI, maintain upto-date subject knowledge, devise and write new curriculum materials, and select various learning resources. (ii) To publish research results in articles and/or books which lead to an enhanced reputation in the subject area and enhance the research profile.
- To manage international activities and relationships for faculty and students. To lead new curriculum development and research in key areas such as Machine Learning, Blockchain, and Cloud Computing.
- To lead a group of professors for teaching large cohorts.

#### **Key Achievements:**

- Based on the research methodologies compiled, 03 Ph.D's were successfully completed with highimpact factor journals, including IEEE Transactions on Wireless Communications, ACM Transactions on Management Information Systems, IEEE Transactions on Industrial Informatics, and a good number of publications in Elsevier, Springer, etc.,
- (i) Funding grant approved for the project Solving the medicine price tampering supply chain struggle with blockchain: design of pharma drug model from PMU Cybersecurity Research Center, Prince Mohammad Bin Fahd University, Kingdom of Saudi Arabia. (ii) Received Int. participation grant award for the paper RBDA: Redactable-Blockchain based Secure Data Aggregation Scheme for IoT enabled Cloud Paradigm. by 20<sup>th</sup> International conference Committee PerCom 2022, Pisa, Italy (during March 21-25, 2022).

- The leadership in international led me to establish the collaboration with international universities such as PMU Saudi Arabia, Leeds Beckett University -UK, University of Southampton UK, and ALbany State University, Albany, USA for possible joint project submissions and faculty/student exchange programmes.
- Successfully delivered assessment and marking for large cohorts since 2016 (for courses on Object Oriented Programming, Cloud Computing, and Distributed & Parallel Computing).

#### 2019-2022: Sr. Assistant Professor, Indian Institute of Technology (ISM) Dhanbad.

#### **Roles & Responsibilities:**

- (i) To develop novel approaches in teaching and learning which are appropriate for the University and subject area and reflect developing practice elsewhere plan, design, and co-ordinate broad research activities and programmes. (ii) To develop methodologies and techniques appropriate to the type of research being pursued and that add to the knowledge/understanding appropriate to the discipline.
- To monitor and improve assessment practices for the faculty strategy.

#### **Key Achievements:**

- Based on the research paradigms developed, 03 Ph.D's were successfully produced with suitable publications in reputed international journals including IEEE Transactions on Services Computing, IEEE Transactions on Automation Science and Engineering, Journal of Industrial Information Integration, etc.,
- (i) Received International research grant award for the project Secure and dynamic privacy-preserving public auditing schemes for IOT enabled data in clouds from PMU Cybersecurity Research Center, Prince Mohammad Bin Fahd University, Kingdom of Saudi Arabia, April, 07 2021. (ii) Received Empowerment and Equity Opportunities for Excellence in Science Award for the project Machine Learning based Agriculture Advent for Farmer Activity Development in India: An Application Approach from Science and Engineering Research Board (SERB), Govt. of India.
- Designed Enterprise solution constructs for CMPF portal Coal Mines Provident Fund, Govt. of India.
- Marking and examining have been improved for many student cohorts. Research strategies for faculty have been formulated for the next ten years.

#### 2016-2019: Assistant Professor (Grade-I), Indian Institute of Technology (ISM) Dhanbad.

#### **Roles & Responsibilities:**

- To develop innovative research proposals and lead funding bids that develop and sustain research support in the specialist area; secure research funding for innovative projects.
- To establish research groups and supervise Ph.D. students.
- To develop programme proposals and contribute to the wider design of the teaching programme for courses such as Database Management Systems and Computer Organization.

#### **Key Achievements:**

- Based on the research paradigms developed, 02 Ph.D's were successfully produced with suitable publications in reputed international journals such as Elsevier, Springer, IoS Press, etc.,
- Received Empowerment and Equity Opportunities for Excellence in Science Award for the project Machine Learning based Agriculture Advent for Farmer Activity Development in India: An Ap-

**plication Approach** from Science and Engineering Research Board (SERB), Govt. of India. January 2019.

- Received **Best Researcher of the Year 2018** International award Idamas Learning Center, Malaysia. Under the agies of "Research Under Literal Access" August, 15 2018.
- Elected to the grade of **Senior Member, IEEE** United States of America. February, 16 2019.
- Received **"Outstanding Scientist in Computer Science 2018"** International award Venus International Foundation, India F. No. AAP-V/2018/O-ENNC2344, August, 11 2018.
- Received Early Career Research award for the project **Precision Agriculture Model to Increase Crop Productivity in India using Big Data** from Science and Engineering Research Board (SERB), Govt. of India. Grant Number: ECR/2017/001273, June 2017.

#### 2011-2016: Assistant Professor (Grade-II), Indian Institute of Technology (ISM) Dhanbad.

#### **Roles & Responsibilities:**

- To develop methodologies and techniques appropriate to the type of research being pursued and that add to the knowledge/understanding appropriate to the discipline.
- To introduce new courses such as Cloud Computing, Big Data Analytics and framing the syllabus for Advanced DBMS.

#### **Key Achievements:**

- Executed a project on An Atomic Transaction Scenario for Heterogeneous Distributed Databases A Synonym Application Approach for Reservation System. Sponsered by TEQIP-II(MHRD), Govt. of India.
- Received distinction for instituting proactive initiatives, implementing innovative methods of teaching, updating syllabus, and streamlining the conduct of examinations geared towards improving the quality of education.
- Published many papers in Elsevier, Springer, Inderscience and other reputed journal venues.

#### 2009-2011: Senior Lecturer, Swarna Bharathi Institute of Technology, Khammam, India.

#### **Roles & Responsibilities:**

• To develop approaches in teaching and learning which are appropriate for the University and subject area and reflect developing practices.

#### **Key Achievements:**

- As an initial learner, established suitable area of research for pursuing Ph.D.
- Based on the knowledge gained from the Software industry, published some papers at various international conference venues.

#### 2005-2007: Lecturer, Dr. Paul Raj Engineering College, Bhadrachalam, Telangana, India.

#### **Roles & Responsibilities:**

• To prepare and deliver regular lectures for students; conduct tutorial sessions, seminars, and laboratory classes whilst encouraging debate and feedback amongst students.

• To prepare and mark student assignments, and exams provided one-on-one feedback on academic performance where necessary.

#### **Key Achievements:**

• This was the phase where I learned and practiced teaching part to reach the higher levels of higher education.

#### 2004-2005: Database Developer, International Trade Links (South Africa, UAE, Mumbai).

#### **Roles & Responsibilities:**

- To create and design new models for e-commerce applications.
- To install and upgrade the DBMS servers and to provide customer satisfaction.

#### **Key Achievements:**

• Designed and developed various database models for Airlines, Banking, and individual e-commerce organizations.

#### **Professional Academic Qualifications:**

2011-2015	Ph.D - [Computer Science and Engineering]
	Indian Institute of Technology (Indian School of Mines) Dhanbad, India.
2007-2009	M.Tech - [Computer Science and Engineering (Spl. Software Engineering)]
	Jawaharal Nehru Technological University Hyderabad, Telangana, India.
2000-2004	B.Tech - [Computer Science and Engineering]
	Kakatiya Institute of Technology and Science Warangal, Telangana, India.

#### **Professional Achievements & Awards:**

- [1] Received best paper award for the paper Redactable Blockchain-based EHR Enhancement Utilising Extended Chameleon Hashing and Additional Trapdoor Functionality at 5<sup>th</sup> International Conference on Data Analytics and Management (ICDAM-2024), 14-15 June 2024, London Metropolitan University, London, United Kingdom.
- [2] Received International research grant award for the project Solving the medicine price tampering supply chain struggle with blockchain: design of pharma drug model from PMU Cybersecurity Research Center, Prince Mohammad Bin Fahd University, Kingdom of Saudi Arabia, September 19, 2022.
- [3] Received Int. participation grant award for the paper RBDA: Redactable-Blockchain based Secure Data Aggregation Scheme for IoT enabled Cloud Paradigm. by 20<sup>th</sup> International conference Committee PerCom 2022, Pisa, Italy (during March 21-25, 2022).
- [4] Received best paper award for the paper DRP-DBAS: Dynamic Resource Provisioning for Deadline and Budget Aware Workflow Scheduling in IaaS Clouds. at 16<sup>th</sup> International Conference on Information Processing (ICInPro-2021), 23 October 2021, University Visvesvaraya College of Engineering, Bangalore University, Bangalore.

- [5] Received best paper award for the paper Ethereum MongoDB: Integrating Blockchain with Non-Relational Databases at 4<sup>th</sup> International Conference on Computational Intelligence & Data Engineering (ICCIDE-2021), 14 August 2021, VIT-AP University, Andhra Pradesh.
- [6] Elected to the grade of Senior Member, ACM United States of America. July, 29 2021.
- [7] Received International research grant award for the project Secure and dynamic privacy-preserving public auditing schemes for IOT enabled data in clouds from PMU Cybersecurity Research Center, Prince Mohammad Bin Fahd University, Kingdom of Saudi Arabia, April, 07 2021.
- [8] Received best paper award for the paper Correlated high average-utility itemset mining at 8<sup>th</sup> International conference on Frontiers of Intelligent computing: Theory and Applications (FICTA-2020), 04-05 January 2020, National Institute of Technology, Surathkal, Karantaka.
- [9] Received Empowerment and Equity Opportunities for Excellence in Science Award for the project Machine Learning based Agriculture Advent for Farmer Activity Development in India: An Application Approach from Science and Engineering Research Board (SERB), Govt. of India. January 2019.
- [10] Received **Best Researcher of the Year 2018** International award Idamas Learning Center, Malaysia. Under the agies of "Research Under Literal Access" August, 15 2018.
- [11] Elected to the grade of Senior Member, IEEE United States of America. February, 16 2019.
- [12] Received "Outstanding Scientist in Computer Science 2018" International award Venus International Foundation, India F. No. AAP-V/2018/O-ENNC2344, August, 11 2018
- [13] Received Early Career Research award for the project Precision Agriculture Model to Increase Crop Productivity in India using Big Data from Science and Engineering Research Board (SERB), Govt. of India. Grant Number: ECR/2017/001273, June 2017.
- [14] Received best paper award for the paper IDPC-XML: Integrated Data Provenance Capture in XML at International conference on Latest Advances in Machine Learning and DAta Science (LAMDA -2017), National Institute of Technology, Goa.
- [15] Received best paper award for the paper Accelerating Airline Delay Prediction based P-CUDA Computing Environment at International conference on Latest Advances in Machine Learning and DAta Science (LAMDA -2017), National Institute of Technology, Goa.
- [16] Received best paper award for the paper An Integrated Query Processing Approach for Transaction Protocols in Heterogeneous Distributed Database Environment from Interscience Research Network (IRNet), Bhubaneswar (INDIA), November 2011.

#### **Research Funding History:**

- Information Security Education and Awareness (ISEA) Phase III. Sponsored by Ministry of Electronics and Information Technology (MeitY), Govt. of India. (Co-Investigator). (2024-2029) [Cost: Rs. 2,01,60,000.00]. (On Going).
- [2] Solving the medicine price tampering supply chain struggle with blockchain: design of pharma drug model. Under Cybersecurity Center research grant. Sponsored by Prince Mohammad Bin Fahd University, Kingdom of Saudi Arabia. (As a sole PI). (2022-2024) [Cost: \$ 5000.00]. (Completed).
- [3] Secure and dynamic privacy-preserving public auditing schemes for IOT enabled data in clouds.

Under Cybersecurity Center research grant. Sponsored by Prince Mohammad Bin Fahd University, Kingdom of Saudi Arabia. (As a PI). (2021-2022) [Cost: \$6000.00]. (Completed).

- [4] Machine Learning based Agriculture Advent for Farmer Activity Development in India: An Application Approach. Under Empowerment and Equity Opportunities for Excellence in Science (EEQ) scheme. Sponsored by DST(SERB), Govt. of India. (As a sole PI).
  (2019-2022) [Cost: Rs. 20,46,500.00]. (Completed).
- [5] Precision Agricultural Model to Increase Crop Productivity in India using Big Data. Under Early Career Research (ECR) scheme. Sponsored by DST(SERB), Govt. of India. (As a sole PI). (2017-2020) [Cost: Rs. 18,04,221.00]. (Completed).
- [6] An Atomic Transaction Scenario for Heterogeneous Distributed Databases A Synonym Application Approach for Reservation System. Sponsered by TEQIP-II(MHRD), Govt. of India. (2014-2015) [Cost: Rs. 100000.00].(As a sole PI). (Completed).

#### **Consultancy Project Funding History:**

- [1] Ethereum and Smart Contracts DApps Development (Live lectures and content creation), Tata Consultancy Services, India. Project No. : EDP/6/35/2023-24 (21-02-2024) [Cost: Rs. 253700.00].
   (CI)
- [2] Content creation and live lectures on Ethereum and Smart Contracts DApps Development, Tata Consultancy Services, India. Project No. : EDP/7084/2023-24 (28-06-2023) [Cost: Rs. 322750.00].
   (CI)
- [3] Enterprise solution constructs for CMPF portal Coal Mines Provident Fund, Govt. of India. Project No. (R) : CONS/6034/2020-21 (18-01-2021) [Cost: Rs. 531000.00]. (Co-CI)

#### **Executive Development Programs History:**

- [1] Online Workshop: Conceptual Blockchain: An Application Portfolio , (21, September, 2023). (As a Coordinator).
- [2] **ST Webinar: Cloud and Network Security Mechanisms, Sponsored by ISEA Project Phase-II, MieTy, Govt. of India. (02-06, November, 2020).** (As a sole PI).
- [3] STC: Conceptual Big Data, No. CONS/3532/2017-18. (07-09, June, 2017). (As a sole PI).
- [4] STC: Data Storage and Processing Techniques in Cloud Environment, No. CONS/3214/2016-17. (01-03, June, 2016). (As a sole PI).

#### **Patents Granted & Filed:**

- Portable Solar Heater. (Indian IP Granted) Design Number & Date: 378678-001 (01-06-2023).
- [2] Method and Device for Preparing Beverage. (Indian IP Granted) Patent Number & Date: 202231039594 A (29-07-2022).
- [3] A system and a method for assessing mental ability of a user using an electroencephalogram. Patent Number & Date: 2021102774 (16-03-2022). (Australian IP - Granted).

- [4] Smart electricity saving system for home. (Australian IP Granted). Patent Number & Date: 2021100118 (31-03-2021).
- [5] A Device for removing lacunas of existing image using in-painting techniques. (Indian IP) CBR Number & Date: 201931051249 A (11-12-2019). (Granted)

#### **Recent Professional Activities:**

- [1] Organized a workshop on Conceptual blockchain: An application Portfolio (CBC-2023), Indian Institute of Technology (ISM), Dhanbad, 21 September, 2023.
- [2] Established an association with the **Tata Consultancy Services (TCS)**, as an academic SME for **Ethereum and Smart Contracts (Blockchain Course)** (20 June 2023).
- [3] Established a collaboration with the **University of Economics and Human Sciences**, Warsaw, Poland, as a visiting academician and researcher (15 June 2023).
- [4] Guest Editor (Special Issue) on "Artificial Intelligence/Machine Learning in Wireless Communications and Networking" Journal of Telecom, MDPI, (ISSN 2673-4001), 15 March 2023.
- [5] Guest Editor (Special Issue) on "AI Powered Human-centric Computing with Cloud and Edge" Journal of Computers, Materials & Continua, Tech Science Press, (ISSN:1546-2218), 01 March 2023.
- [6] Organizing Chair (Special Session on Blockchain) at 2<sup>nd</sup> Int. Conference on Emerging Techniques in Computational Intelligence, ICETCI 2022: Mahindra University, Hyderabad, India, 25-27 August, 2022.
- [7] Publication Chair of 4<sup>th</sup> ISEA Virtual Int. Conference on Security and Privacy 2021 (ISEA-ISAP 2021):
  Indian Institute of Technology (Indian School of Mines), Dhanbad, 27-30 October 2021.
- [8] Organizer (Special Session on Communications and Networking) at 22<sup>nd</sup> Int. conference on High Performance Computing and Communications, HPCC-2020: Shangri-La's Fijian Yanuka Island, Coral coast, Fiji, 14-16 December, 2020.
- [9] Coordinator AMDOCS Innovation Lab 2019: Indian Institute of Technology (ISM), Dhanbad, 6 April, 2019.
- [10] Organized HACKFEST'18: Indian Institute of Technology (ISM), Dhanbad, 23-25 March, 2018.
- [11] Organizing Co-Chair of 4<sup>th</sup> Int. Conference on Recent Advances on Information Technology (RAIT-2018), Indian Institute of Technology (ISM), Dhanbad, 15-17 March 2018.
- [12] **Organized Intel® Nervana™ AI Academy Student Workshop**, Under Student development program by **INTEL Artificial Intelligence**, 6<sup>th</sup>, September, 2017.
- [13] **Organizing Co-Chair of 3**<sup>*rd*</sup> **International Conference** on Recent Advances on Information Technology (RAIT-2016), **Indian Institute of Technology (ISM)**, **Dhanbad**, 15-17 March, 2016.
- [14] Program Committee member and Reviewer of International Conference on Computing Communication and Automation (ICCCA-2016), Galgotia University, 29-30 April 2016.
- [15] Technical session co-chair of World Congress on Information and Communication Technology (WICT-12), Indian Institute of Information Technology (IIIT-M), Oct. 30 2012-Nov. 2, India.
- [16] Technical session co-chair of 1<sup>st</sup> Int. Conference Recent Advances on Information Technology (RAIT-2012), RAIT-2012, IIT(ISM), Dhanbad.

# Supervision (Ph.D)

### Awarded & Submitted:

Year	Name	Area of Study
2023- Cont.	Amit Kr. Upadhyay:	Modelling Exascale Computing Paradigms - (On Going).
2017- 2023	Debdadata Naik:	Study and Design of Computational Strategies for Social Network Analysis. (Awarded: May 2024). (Works @ University of Eco- nomics and Human Sciences, Warsaw, Poland).
2018- 2023	Rahul Mishra:	Developing Security Paradigms for Secure and Efficient Data Stor- age in Cloud Environment. (Awarded: May 2023). (Works @ National Institute of Advanced Manufacturing Technology, Ranchi).
2017- 2022	Rashmi Priya:	Study and Optimization of Big Data Processing Models for Crop Productivity in India. ( Awarded: June 2022). ( <b>Postdoctoral</b> @ <b>Columbia</b> , USA).
2017- 2022	Naela Rizvi:	Study and Provisioning Resource Management Modalities in Cloud Environment. (Awarded: April 2022) (Works @ Techno Main Salt Lake).
2015- 2023	Shashi Raj:	Study and Development of Spark-based Frequent Itemset Mining Algorithms. (Awarded: July 2023). (Works @ Bakhtiyarpur College of Engg., Govt. College, Patna).
2016- 2023	G Madhukar Rao:	Study and Visualization of Big Data using Machine Learning Al- gorithms. (Awarded: July 2023). (Works @ KL University, Hy- derabad).
2015- 2021	Krishan Kr. Sethi:	Study and Development of Pattern Mining Techniques for Stan- dalone and Distributed Environment. (Awarded: Sep 2021) (Works @ National Institute of Technology, Patna).
2015- 2021	Thakur Santosh:	Study of Knowledge Capturing and Analysis of Big Data. (Awarded: June 2021). (Works @ Mahindra University, Hyderabad).

## **Supervision (Post Graduate - Thesis)**

#### [2024-2025]:

- [1] Abhishek Prasad Dad 23MT0015. "Cross-chain Inter-operable Blockchain." On Going.
- [2] Uma Shankar Prasad 23MT0429. "Modelling Distributed Applications." On Going.

#### [2023-2024]:

- [1] Manojit Dinda 22MT0210. "Cross-chain Compatibility in Healthcare using Relay as a Service for EHR sharing."
- [2] Sai Sampath Kolla 22MT0347. "Hybrid Grey Wolf Algorithmic Approach for Optimizing Workflow Scheduling in IaaS Clouds."

#### [2022-2023]:

- Ankit Kachhi 18JE0127. "Digital Certificates and Marksheet verification System using Blockchain Technology."
- [2] Arudra Vamshikrishna 21MT0073. "Federated learning enabled blockchain strategy for securing healthcare data."

#### [2021-2022]:

- [1] Chitresh Kasushik 20MT0130. "Perception model for lateral control of autonomous vehicles."
- [2] Sikandar Kumar 20MT0399. "Supply chain management in blockchain."
- [3] Tanu Gupta 20MT0425. "Gene Determination Algorithm: a blockchain-based case study of crypto kitties."

#### [2020-2021]:

- [1] Sneha Sarkar 19MT0383. "Blockchain based COVID-19 vaccine supply chain management."
- [2] Rajeev Kumar 19MT0304. "Implementation of blockchain based Pharmaceutical supply chain management system."
- [3] Rohan Sai M 16JE002272. "Classification of COVID-19 using chest X-RAY."

#### [2019-2020]:

- Naveen Babu Gorojanam 18MT0074. "Enhanced link prediction using sentiment attribute and community detection."
- [2] Jayaramu H K 18MT0418. "Optimization of cropping pattern using CSA."
- [3] Vinay Kumar 18MT0217. "Ensemble based multiclass classification for Cancer Data."
- [4] Yatesh Kumar Singh 18MT0031. "Taxi demand prediction using combining text and time series data."
- [5] Suryadeep Singh 17MT002014. "Optimisation on Grassmann manifold using faster conjugate gradient."
- [6] Akhil bhatia 17KT000226. "Recommendation of MOOCs using sentiment analysis."
- [7] Nidhi Jaiswal 17KT000130. "Weighted similarity based link prediction in social networks."
- [8] Rohith Kumar 17KT000294. "Evaluating big data in healthcare using Machine Learning."

#### [2018-2019]:

- [1] Shailesh Kumar 17MT002258. "Score based Predictive modelling for health datasets."
- [2] Pooja Ayanile 17MT002215. "3D bin packing strategy for heterogeneous bins."
- [3] Dharavath Vinod Kumar 17MT002272. "Middleware solution for NoSQL column family databases."
- [4] Shalini Tripathi 17MT002266. "Ourlier detection in spatio-temporal data using advanced hehavioural clustering."
- [5] Ekaansh Khosla 14JE000069. "Using seasonal ARIMA to forecast fruits and vegetables."
- [6] Aniket Gajanan Ninawe 14JE000545. "Machine Learning approach for water solid interaction."
- [7] Ritik Kumar Agrahari 14JE000517. "Facial feature segmentaion in the wild."
- [8] Rishav Raj 14JE000040. "Machine learning strategies for yield prediction."

#### [2017-2018]:

- [1] Abhishek Kumar 16MT001322. "Ranger random forest based data classification."
- [2] Himanshu Khurana 16MT001233. "Class balancing based logistic regression approach for personalized cancer diagnosis using gene variation data."
- [3] Kajal Kumari 16MT001321. "Parallel CNN based big data prediction and visualization for traffic monitoring."
- [4] Naval Singh Arora 16MT001232. "GraphX based link prediction for social communication using triangle counting: a big data scenario."
- [5] Rahul Kumar 16MT000922. "NSL model based prediction approach: a review of amazon products."
- [6] Sweta Dey 16MT001425. "HFQ-LB: Heuristic and fair-queuing based VM load balancing approach for cloud data centers."
- [7] Yogendra Singh 16MT000855. "An ensemble method based predictive model for analyzing disease datasets."
- [8] Anindita Mazumdar 15KT000042. "High utility itesmset mining and pruning candidates for multi source data."

#### [2016-2017]:

- [1] Parth Sinha 15MT000429. "Big data storage paradigms."
- [2] Sandeep Kumar 15MT000483. "Towards middle layer based transaction support for column family No-SQL databases."
- [3] Himangshu Biswas 15MT000469. "Feature extraction classification using MapReduce based multiclass support cector machine on hadoop cluster."
- [4] Aakrithi Srivastava 15MT000280. "Dynamic data virtualization based VM's scheduling for distributed data centers."
- [5] Samuel Nyakotey 15IM000005. "MapReduce based integration of health hubs: A healthcare design approach."
- [6] Urvashi Tomar 15MT000321. "Harnessing cloud data security based IBE, IBS, IBPRE, IDBPSE on CDH schemes with ACKIBE ."

#### [2015-2016]:

- [1] Rahul Mishra 14MT000396. "Secure data storage in cloud: an e-stream cipher-based secure and dynamic updation policy."
- [2] Rashmi Priya sharma 14MT000368. "HHDSCC: Harnessing healthcare data security in cloud using ciphertext policy attribute based encryption."
- [3] Lokendra Saini 14MT000038. "Predictive analysis based machine learning."
- [4] Pranshu Suraj 14MT000031. "Supporting join based expectation maximization in NoSQL using MapReduce for healthcare management."

#### [2014-2015]:

- [1] Nayak Nikunj K B 2013MT0218. "Dynamic data deduplication in loud environment."
- [2] Abhishek Kr. Singh 2013MT0276. "Entity resolution for large datasets."
- [3] Mahesh Kumar 2013MT0068. "Task Scheduling in Cloud computing environment."
- [4] Mahesh Kumar 2013MT0068. "Task scheduling in cloud computing environment."

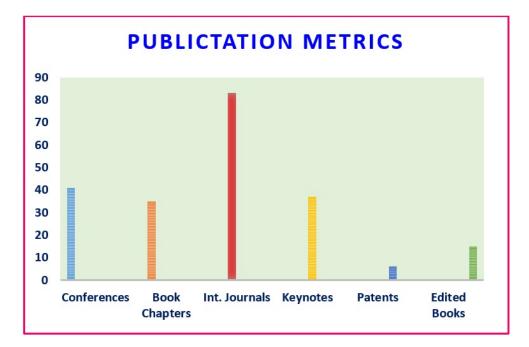
#### [2013-2014]:

- [1] Pankaj Kumar 2012MT0229. "Query optimizatioin in heterogeneous distributed databases."
- [2] Avinash K Sinha 2012MT0070. "Fragment allocation scenario in a distributed database environment."
- [3] Alok Kumar Pani 2012MT0224. "A load balancing and estimation scenario for heterogeneous distributed computing."

#### [2012-2013]:

- [1] Vikas Kumar 2011MT0125. "An incremental fragmentation scenario for heterogeneous distributed transactions."
- [2] Amit Kr Jain 2011MT0006. "A transaction model to provide atomicity for heterogeneous distributed databases."

## **Publications:**



#### Int. Journals [published/Accepted]:

- J1. Dharavath Ramesh., Naela. R., Srinivasa Rao P. C., Sundararajan. E., Koushik. M., Srivastava. G., & Lianyong Qi. (2024). Improved Chemical Reaction Optimization with Fitness based Quasi-reflection Method for Scheduling in Hybrid Cloud-Fog Environment. IEEE Transactions on Network and Service Management. Vol. 21, Issue 1, February 2024. IEEE.
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- BC30 Sethi, K. K., & Ramesh D. (2016). Delay Scheduling with Reduced Workload on JobTracker in Hadoop. In Innovations in Bio-Inspired Computing and Applications, Volume 424 of Advances in Intelligent Systems and Computing (pp.371-381). Springer International Publishing. DOI:10.1007/978-3-319-28031-8\_32.
- BC31 Dharavath, R., & Singh, A. K. (2016). Entity Resolution-Based Jaccard Similarity Coefficient for Heterogeneous Distributed Databases. In Advances in Intelligent Systems and Computing, Volume, 379, ISSN: 2194-5357, (pp. 497-507). Springer India. DOI:10.1007/978-81-322-2517-1\_48.
- BC32 Ramesh D., Gupta, H., Singh, K., & Kumar, C. (2015). Hash Based Incremental Optimistic Concurrency Control Algorithm in Distributed Databases. In Intelligent Distributed Computing Volume 321 of the series Advances in Intelligent Systems and computing pp 139-150. Springer International Publishing, Switzerland. DOI: 10.1007/978-3-319-11227-5 13.

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- BC35 Dharavath Ramesh, Chiranjeev Kumar, Amit Kumar Jain, Atomicity and Snapshot Isolation on Column Oriented Databases: a Transaction Approach, published by LAP Lambert Academic Publishing, 2013, Germany, ISBN: 978-3-659-37511-8, pp.1-50
- BC36 Chiranjeev Kumar, Haider Banka & Dharavath Ramesh "Recent Advances in Information Technology", (Proceedings of the 3<sup>rd</sup> IEEE Int. Conference RAIT-2016, March 03-05, 2016, Vol. I & II, IIT(ISM), Dhanbad, India), 2016, ISBN: 978-1-4799-8578-4.

#### **Peer Reviewed Conferences [Published/Accepted]:**

- C1. Manojit D., Dharavath Ramesh., and Chi Hieu Li. (2024). Redactable Blockchain-based EHR Enhancement Utilising Extended Chameleon Hashing and Additional Trapdoor Functionality. In 5<sup>th</sup> th Int. Conference on Data Analytics and Management (ICDAM-2024), June 14-15, London Metropolitan University, London, United Kingdom by Springer Proceedings. [Accepted].
- C2. Srikanth. B., Dharavath Ramesh., and Debadatta Naik. (2024). ML-based Roof Convergence Safety in Underground Coal Mines: An Ideological Approach. In Int. Conference on Communication Safe, Smart and Sustainable Mining (3SM-2023). December, 16-18, 2023. Springer. [Accepted].
- C3. Dharavath Ramesh and Munesh C. Trivedi. (2022). MySQL Collaboration by Approving and Tracking Updates with Dependencies: A Versioning Approach. In 22<sup>nd</sup> Int. Conf. on Computational Science and Its Applications in collaboration with the University of Malaga, Spain.[CORE 2022 A\* conference]. LNCS Springer Conference Proceedings. (pp. 380-395). Springer, Cham. https://doi.org/10.1007/978-3-031-10548-7\_28.
- C4. Shashi Raj and Dharavath Ramesh. (2022). Applying partition method to adopt Spark-based Eclat algorithm for large transactional datasets. In 4<sup>th</sup> Int. Conf. on Communication and Computational Technologies (ICCCT-2022). Springer Conference Proceedings. DOI: https://doi.org/10.1007/978-981-19-3951-8\_11.
- *C*5. Rahul. M., Dharavath Ramesh., & Nazeeruddin. Mohd. (2022). RBDA: Redactable Blockchain based Secure Data Aggregation Scheme for IoT Enabled Cloud Paradigm. In 20<sup>th</sup> Int. Conf. on Pervasive Computing and Communications (PerCom 2022) associated with Int. Workshop on Internet of Things Pervasive Real-World Deployments (IOT-PROD-2022), Pisa, Italy. [CORE 2022 A\* conference]. Pp. 409-414. IEEE Conference Proceedings. DOI: 10.1109/PerComWorkshops53856.2022.9767416.
- *C*6. T. Gupta., Dharavath Ramesh., & Rahul Mishra. (2022). Gene Determination Algorithm: A Blockchainbased Case Study of Crypto Kitties. In 7<sup>th</sup> Int. Conf. for Convergence in Technology (I2CT 2022). Pp. 1-4. IEEE Conference Proceedings. DOI: 10.1109/I2CT54291.2022.9825042.
- *C*7. Madhukar Rao & **Dharavath Ramesh**. (2022). A novel approach for visualizing medical big data using variational autoencoders. In 3<sup>*rd*</sup> Int. Conf. on Data Science, Machine Learning & Applications (ICDSMLA-2021). Springer Conference Proceedings. (Accepted & In Publication).
- *C*8. Sonal Jain & **Ramesh, D**. (2021). AI based hybrid CNN-LSTM model for crop disease prediction: An ML advent for rice crop. In 12<sup>*th*</sup> Int. Conf. on Computing Communication and Networking Technologies

(ICCCNT 2021). IEEE Conference Proceedings. DOI: 10.1109/ICCCNT51525.2021.9579587.

- *C*9. Rahul Mishra., **Ramesh, D**., & Damodar R, E. (2020). Deletable Blockchain Based Secure EHR Storage Scheme in Multi-Cloud Environment. In 22<sup>*nd*</sup> Int. Conf. on High Performance Computing and Communications (HPCC 2020). IEEE Conference Proceedings. DOI: 10.1109/HPCC-SmartCity-DSS50907.2020.00142.
- C10. Sonal Jain & Ramesh, D. (2020). Machine learning convergence for weather based crop selection. In 2<sup>nd</sup> IEEE International Conference on Electrical, Electronics and Computer Sciences (SEEECS 2020). IEEE Conference Proceedings. DOI: 10.1109/SCEECS48394.2020.75.
- C11. Ramesh, D., & Ekaansh Khosla. (2020). Seasonal ARIMA to Forecast Fruits and Vegetable Agricultural Prices. In 5<sup>th</sup> IEEE International Symposium on Smart Electronic Systems (iSES). IEEE Conference Proceedings. DOI: 10.1109/iSES47678.2019.00023.
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- *C*13. K K Sethi, **Dharavath Ramesh**, Aman Rathore and Shantanu Sarin. (2019). HUIM-SMP: High utility itemset mining based stock market analogy\*. 10<sup>th</sup> International Conference on Computing, communications and Network Technologies (ICCCNT-2019). IEEE. DOI: 10.1109/ICCCNT45670.2019.8944752.
- C14. Rashmi Priya, Ramesh, D., & Ekaansh Khosla. (2018). Crop Prediction on the Region Belts of India: A Naïve Bayes MapReduce Precision Agricultural Model. In 2018 International Conference on Advances in Computing, Communications and Informatics (ICACCI) (pp. 99-104). IEEE Conference Proceedings. DOI: 10.1109/ICACCI.2018.8554653.
- C15. Rishabh T., & Ramesh, D. (2018). Ensemble Similarity based Collaborative Filtering Feedback: A Recommender System Scenario. In 2018 Int. Conference on Advances in Computing, Communications and Informatics (ICACCI) (pp. 2398-2402). IEEE Conference Proceedings. DOI: 10.1109/ICACCI.2018.8554653.
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- C18. Ramesh, D., & Dey, S. (2018, March). SCLBA-CC: Slot Based Carton Load Balancing Approach for Cloud Environment. In 2018 International Conference on Current Trends towards Converging Technologies (ICCTCT) (pp. 1-5). IEEE Conference Proceedings. DOI: 10.1109/ICCTCT.2018.8550841.
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- C21. Chak, P., Behera, R. K., Naik, D., Rath, S. K., & Ramesh, D. (2018, March). Content matching problem in large scale network using weighted b-matching algorithm. In 2018 4<sup>th</sup> International Conference on Recent Advances in Information Technology (RAIT) (pp. 1-6). IEEE. DOI: 10.1109/RAIT.2018.8389077.

- C22. Diwakar Tripathi, D., Edla, D. R., Kuppili, V., Bablani, A., & Dharavath, R. (2018). Credit Scoring Model based on Weighted Voting and Cluster based Feature Selection. Procedia Computer Science, 132, pp. 22-31, Elsevier. DOI: 10.1016/j.procs.2018.05.055.
- C23. Khosla, E., Ramesh, D., Sharma, R. P., & Nyakotey, S. (2018). RNNs-RT: Flood based Prediction of Human and Animal deaths in Bihar using Recurrent Neural Networks and Regression Techniques. Procedia Computer Science, 132, 486-497, Elsevier. DOI: 10.1016/j.procs.2018.05.001.
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- C25. Ramesh, D., Patidar, N., Kumar, G., & Vunnam, T. (2016, April). Evolution and analysis of distributed file systems in cloud storage: Analytical survey. In Computing, Communication and Automation (ICCCA), 2016 International Conference on (pp. 753-758). IEEE Conference Proceedings. DOI: 10.1109/CCAA.2016.7813828.
- C26. Ramesh, D., Mishra, R., & Nayak, B. S. (2016, March). Cha-Cha 20: Stream Cipher Based Encryption for Cloud Data Centre. In Proceedings of the Second International Conference on Information and Communication Technology for Competitive Strategies (p. 40). ACM. ISBN: 978-1-4503-3962-9. DOI: 10.1145/2905055.2905098.
- C27. Ramesh, D., Sinha, A.,& Singh, S. (2016, March). Data modelling for discrete time series data using Cassandra and MongoDB. In Recent Advances in Information Technology (RAIT), 2016 3<sup>rd</sup> International Conference on (pp. 598-601). IEEE. IEEE Conference Proceedings. DOI: 10.1109/RAIT.2016.7507966.
- C28. Ramesh, D., & Priya, R. (2016, January). Multi-authority scheme based CP-ABE with attribute revocation for cloud data storage. In Microelectronics, Computing and Communications (MicroCom), 2016 International Conference on (pp. 1-4). IEEE Conference Proceedings. DOI: 10.1109/MicroCom.2016.7522518.
- *C*29. Ramesh, D., Suraj, P., & Saini, L. (2016, January). Big data analytics in healthcare: A survey approach. In Microelectronics, Computing and Communications (MicroCom), 2016 International Conference on (pp. 1-6). IEEE Conference Proceedings. DOI: 10.1109/MicroCom.2016.7522520.
- *C*30. Domodar Reddy Edla, **Dharavath Ramesh**, Sridhar K (2016). Application of Neural Networks for Routing in Mobile Wireless Sensor Network: A Case Study. In National conference on Enhancing Information Technology Education (EITE) at National Institute of Technology, Goa. Published by TaTa Mc-Graw Hill.
- *C*31. Ramesh, D., & Kumar, C. (2013, December). A Scalable Matching Approach Based Density Function for Heterogeneous Database Integration. In Advanced Computing, Networking and Security (AD-CONS), 2013 2<sup>nd</sup> International Conference on (pp. 117-123). IEEE Computer Society. DOI: 10.1109/AD-CONS.2013.15.
- C32. Dharavath Ramesh and Chiranjeev Kumar, An Entity Resolution Approach for Integrating Heterogeneous Distributed Probabilistic Data, published in the Proceedings of 2<sup>nd</sup> International Conference on Computing, Communication and Sensor Network(CCSN 2013), held at Dharmatala, Kolkata, India, November 22-24, ISBN: 81-85824- 46-0. Vol.4 Issue -1 2013 by International Association of Science, Technology and Management, pp. 119-125.
- C33. Ramesh, D., Jain, A., & Kumar, C. (2012, December). Implementation of atomicity and snapshot isolation for multi-row transactions on column oriented distributed databases using rdbms. In Communications, devices and intelligent systems, 2012 International Conference (pp. 298-301). IEEE Conference Proceedings. DOI: 10.1109/CODIS.2012.6422197.
- *C*34. **Dharavath Ramesh** & Chiranjeev Kumar, "An algorithmic model scenario for fragment allocation to handle transaction conflicts in Heterogeneous distributed databases," Published in International Journal of

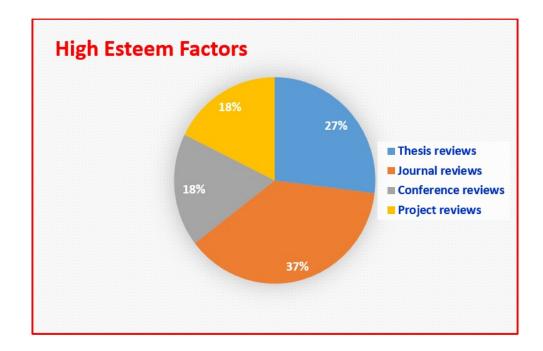
Computer Applications (IJCA) Special Issue on International Conference on Computing, Communication and Sensor Networks (CCSN 2012), held at PIET, Rourkela - India, November 22-23, 2012, ISSN (0975-8887) CCSN2012 – Number 4, pp.34-39.

- C35. Dharavath Ramesh & Chiranjeev Kumar, An incremental protocol approach for secure collaboration between Byzantine processes in Heterogeneous distributed processing systems, Abstract published on 3rd World conference on Information Technology (WCIT - 2012), held at University of Barcelona, Barcelona, Spain, November 14-16,2012.
- C36. Ramesh, D., Kumar, K. C., & Ramji, B. (2012, October). Design of a transaction recovery instance based on bi-directional ring election algorithm for crashed coordinator in distributed database systems. In Information and Communication Technologies (WICT), 2012 World Congress on (pp. 721-726). IEEE Conference Proceedings. DOI: 10.1109/WICT.2012.6409169.
- C37. Ramesh, D., & Kumar, C. (2012). An optimal novel Byzantine agreement protocol (ONBAP) for heterogeneous distributed database processing systems. Procedia Technology, 6, 57-66. Elsevier. DOI: 10.1016/j.protcy.2012.10.008.
- C38. Ramesh Dharavath, S. Sri Harsha & R. Suresh, "Recovery of Heterogeneous Aggregation transaction failures between Byzantine Processes Using Shared Memory Object Invocation", Published in the Proceedings of 3<sup>rd</sup> International Conference on IT and Business Intelligence (ITBI-2011), held at Hyderabad (INDIA), November 25-27, 2011. ISBN: 978-93-81583-11-1, pp. 352-357.
- C39. Ramesh Dharavath "Does a Symmetric Protocol Suffice for Heterogeneous Commit", Published in the Proceedings of 3<sup>rd</sup> International Conference on IT and Business Intelligence (ITBI-2011), held at Hyderabad (INDIA), November 25-27, 2011. ISBN: 978-93-81583-11-1, pp. 346-351.
- C40. Ramesh Dharavath, R. Saritha & V. Swetha Reddy, "An Integrated Query Processing Approach for Transaction Protocols in Heterogeneous Distributed Database Environment", Published in the Proceedings of 2<sup>nd</sup> International conference on Computer Science and Engineering (ICCSE–2011) held at, Hyderabad by Interscience Research Network (IRNet), Bhubaneswar (INDIA), November 13-14, 2011. ISBN: 978-93-81693-01-8, pp. 26-31.
- C41. Ramesh Dharavath, V. Swetha Reddy, "P2P Secure Collaboration between Byzantine Processes in Heterogeneous Distributed Processing Systems", Published in the Proceedings of 2<sup>nd</sup> National Conference on Computing, Communication and Sensor Network (CCSN-2011) held at Purushotham Institute of Engineering and Technology, Rourkela (INDIA), October 29-30, 2011, pp. 1-6. ISBN: 81-85824-46-0.
- C42. **Dharavath Ramesh**, "Measuring the Performance of heterogeneous Distributed Mining Platform with Cache coherence problem in Symmetric Memory", Published in the Proceedings of the  $2^{nd}$  National Conference on "Data mining : Emerging Technologies held at Vignan's Lara Institute of Institute of Science and Technology, Guntur, Andhra Pradesh, 16-17 December 2011, pp. 7-13.

### **High Esteem Factors:**

#### Ph.D./ M.S Thesis Reviewed:

- M Asha Kiran (405118007): Lightweight and Secure Signcryption Schemes for Cloud-Assisted IoT. (May 2024) - Department of Computer Applications, National Institute of Technology, Tiruchirapalli, Tamilanadu, India.
- [2] V S S K R Naganjaneyulu Gudapati (155074EC15P02): Development of Smart Strategies and Devices for Technical Analysis in various Market Paradigms. (January 2024) - Department of Electronics and Communication Engineering, National Institute of Technology, Surathkal, Manglore, Karnataka, India.



- [3] **Ravi Sankar Puppala (719067):** Triboelectric Nanogenerator Device Development Analysis and Prediction for Energy Harvesting. (January 2024) - Department of Electronics and Communication Engineering, National Institute of Technology, Warangal, Telangana, India.
- [4] V. Nagarjuna (Reg.No CS1414): An Improved Healthcare Data Transmission in Cloud using Connected Dominating Set-based Algorithm. (December 2023) - Department of Computer Science and Engineering, Hindustan Institute of Technology and Science, Padur, Chennai, Tamilnadu India.
- [5] Manjunatha (155102CS15FV07): Real time Big data analytics for public safety in Smart city. (September 2023) Department of Computer Science and Engineering, National Institute of Technology, Surathkal, Manglore, Karnataka, India.
- [6] Siranjeevi R (406117004): A Study on Insider Attacks Prevention using ECC and PUF based Authentication Protocols. (January 2023) - Department of Computer Science and Engineering, National Institute of Technology, Tiruchirappalli, Tamilnadu, India.
- [7] Salvi Sanket Sarang (177045IT001): Framework for efficient modulation techniques for visible light communication under indoor environment based IoT applications. (December 2022) - Department of Computer Science and Engineering, National Institute of Technology, Surathkal, Manglore, Karnataka, India.
- [8] R M Noorullah (183030058): Hybrid Topic Models for Twitter-Based Data Clustering with Multiviewpoints Cosine-Based Similarity Metrics. (December 2022) - Department of Computer Science and Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, Andhrapradesh, India.
- [9] N. Aravind Kumar (01121841PP): Securing User Databases from SQL Injection Attacks using Enhanced Machine Learning Algorithms. (November 2022) - Department of Computer Science and Engineering, Osmania University, Hyderabad, Telangana, India.
- [10] Gadde Ramesh (CN032200228): BotRansack to detect the IRC, HTTP and P2P botnets based on association between host behaviors and network behaviors using Machine Learning. (November 2022) Department of Computer Science and Engineering, Osmania University, Hyderabad, Telangana, India.
- [11] Pradeep Kanchan (155055MA15F05): Improved Nature Inspired Algorithms For Optimization Problems In Wireless Sensor Networks. (May 2022) - Department of Computer Science and Engineering, National Institute of Technology, Surathkal, Manglore, Karnataka, India.

- [12] Manepalli Ratna Sri (2004101004)-MS (Research): IMAGE CLASSIFICATION USING DEEP NEU-RAL NETWORKS - Applications in Biometrics and Medical Diagnostics. (August 2022) - Department of Computer Science and Engineering, Indian Institute of Technology, Indore, Madhya Pradesh, India.
- [13] **Kundrapu Sivani (20MCMB21) Master's Thesis:** Multi Agent Reinforcement Learning Framework For IoT Mircoservice Deployment For Edge Cloud. (July 2022) - Department of Information Technology, Univesity of Hyderabad, Hyderabad, Telangana, India.
- [14] Swathi Ajjarapu (20MCMB20) Master's Thesis: Blockchain based Certificateless Privacy Preserving Public Auditing for Cloud Storage Systems. (July 2022) - Department of Information Technology, Univesity of Hyderabad, Hyderabad, Telangana, India.
- [15] P. Satya Gouri Aruna Sri (2004101004): Consensus Mechanisms for Sharing Healthcare Data using Blockchain Technology. (July 2022) - Department of Computer Science and Engineering, Andhra University, Visakhapatnam, Andhra Pradesh, India.
- [16] Shankar Nayak Bhukya (101900086): An Effective Risk Analysis in Requirement Engineering using modified Goal Risk Model. (Feb 2020) - Department of Computer Science and Engineering, Osmania University, Hyderabad, Telangana, India.

### **Keynotes & Invited Talks:**

 Amalgamation of Machine Learning and Blockchain: A Conceptual learning mechanism - "National workshop on Blockchain and Machine Learning Applications" (29 Feb-02 March 2024), by Department of Computer Science and Engineering, Sambalpur University Institute of Information Technology, Sambalpur, Odisha, March 01, 2024.

Adversarial and Conceptual Machine Learning - One Week National Faculty Development Program on "Essential Mathematics for Data Science & Machine Learning" (05-09, February 2024), by Department of AI and ML, Chaitanya Bharathi Institute of Technology, Hyderabad, India, February 07, 2024.

- [2] Conceptual Machine Learning: An application Paradigm Faculty Development Program on "Data Science and Data Analytics using Python/R Programming" (21-25, August 2023), by Electronics and ICT Academy, IIT Roorkee, ABES Engineering College, Ghaziabad, India, August 24, 2023.
- [3] Blockchain Integration with Cloud Databases International FDP (20th June 2023 22nd June 2023) on "Research Directions in Computer Science AI - A Multidisciplinary and Practical Perspective", Woxsen University, Hyderabad, Telangana, India, June 21, 2023.
- [4] Big Data Analytics with Cyber Security Challenges and Solutions One Week Faculty Development Program on Machine on Learning in Big Data Applications and Security Challenges, MLR Institute of Technology (MLRIT), Hyderabad, Telangana, India, March 25, 2023.
- [5] How to Write a Quality Research Paper Under the regular seminar series of "Innovative Learning", Mizan-Tepi University, Department of Information Technology, Ethiopia, 8, April 2023.
- [6] Optimal Allocation of Surface Water and Groundwater Resources for Crop Production VII International Conference on "Sustainable Energy Environmental Challenges", IIT-BHU, Varanasi, 16-18, December 2022.
- [7] Redactable Blockchain based Enabling Secure Public Auditing for Cloud Storage ATAL FDP on "Blockchain in Smart City: Emerging Technologies for the Next Decade and Beyond", NIT, Raipur, India, 23, September 2022.
- [8] Secure Decentralized Public Auditing for Cloud Storage: A Redactable Blockchain Approach Electronics and ICT Academy sponsered FDP on Emergence of Blockchain and its Applications, SRM University, Chennai, India, 04, August 2022.
- [9] Optimization Strategies and Particle Swarm Optimization in Agriculture DST-SERB sponsored high end workshop "KARYASHALA" on "Statistical and Machine Learning Techniques for Agricultural Systems Modeling and Forecasting using R, ICAR- Indian Institute of Rice Research Hyderabad, Telangana, India, 18-30, July 2022.
- [10] Introduction to Bitcoin: Blockchain Architecture Electronics and ICT Academy sponsered FDP on Emergence of Blockchain Technology and Cryptocurrencies, National Institute of Technology, Warangal, Telangana, India, 02-11, May 2022.
- [11] SALP Swarm Optimization for Data Analytics ATAL Academy Sponsered Online FDP on "Bio-Inspired Computing for Data Analytics", Department of Information Technology, Lakireddy Bali Reddy College of Engineering (Autonomous), Hyderabad, India, 08-12 February, 2022.
- [12] Conceptual Deep Learning AICTE-ISTE sponsered refresher Program on "Recent Advancements in Deep Learning", Anurag Engineering College, Kodad, Telengana, India, 07-12 February, 2022.
- [13] Computational intelligence for social network analysis ATAL Faculty Development Program on "Computational Intelligence", National Institute of Technology, Agartala, Tripura, 03-07 January, 2022.

- [14] Research scope of IoT in Healthcare and Human-Computer Interaction ATAL Faculty Development Program on "Internet of Things and Human Computer Interaction", National Institute of Technology, Goa, 25-29 October, 2021.
- [15] Blockchain Paradigms for Securing Cloud Storage National Workshop on "Computational Intelligence and Blockchain Technology (CIBT-2021)", National Institute of Technology, Raipur, 4-8 October, 2021.
- [16] Formalizing Cloud Storage With Blockchain ATAL Academy sponsored FDP on "The impact of Quantum Computing on Cryptography and Blockchain Technology", GITAM (Deemed to be university), Hyderabad, India, September 13-17, 2021.
- [17] Cloud Resource Management: Scheduling and Challenges AICTE & ISTE sponsored FDP on Recent Trends in Cloud Computing, DRIMS Enginnering College, Cuttack, Odisha, India, September 06-12, 2021.
- [18] ML and Optimization Strategies for Agriculture: Challenges and Issues FDP on Machine Learning & Data Science for Engineering Applications, National Institute of Technology, Warangal, Telangana, India, Aug 23-Sep 2, 2021.
- [19] Artificial Neural Networks: Concepts and Challenges FDP on Machine Learning & Data Science for Engineering Applications, National Institute of Technology, Warangal, Telangana, India, Aug 10-12, 2021.
- [20] Conceptual Machine Learning Strategies: An Application Approach STTP on Machine Learning Recent Trends and Applications, Srinivasa Ramanujan Institute of Technology, Anantapuram, Andhra Pradesh, India, June 21-26, 2021.
- [21] Conceptual Modalities in Blockchain Technology Online Webinar on Blockchain, Sri Indu Institute of Engineering & Technology, Hyderabad, Telangana, India, June 11, 2021.
- [22] Blockchain-as-a-Service: A Cybersecurity Solution One Week ATAL Sponsered FDP on Blockchain, Kakatiya Institute of Technological Sciences (KITS), Warangal, Telangana, India, January 26, 2021.
- [23] Blockchain for Cybersecurity: A Solution approach One Week ATAL Sponsered FDP on Cybersecurity, Osmania University, Hyderabad, Telangana, India, January 20, 2021.
- [24] Next Generation Twin Technologies: An Application Approach in Healthcare One Week STTP on Recent Trends in IOT, Anurag Engineering College, Kodad, Telangana, India, November 25, 2020.
- [25] Regression and Correlation Methods: Business Forecasting and Planning Faculty Short Training Program on Machine Learning and Deep Learning Techniques for Artificial Intelligence Problems using Python, VNR Vignana Jyothi Institute of Engineering and Technology, Hyderabad, India, November 18, 2020.
- [26] Cloud Security Mechanisms: A Blockchain Conceptual Approach Faculty Training Program on Blockchain Teechnology and Crypto Currency, Sanjeevani College of Engineering, Kopagaon, India, November 7, 2020.
- [27] ML and IOT emergence for Healthcare Short Term Training Program on Internet of Things in Healthcare Application, Dr. N.G.P Institute of Technology, Coimbatore, India, October 21, 2020.
- [28] Security Mechanisms in Cloud Faculty Development Program on Cloud Computing, Vagdevi College of Engineering, Warangal, India, September 08, 2020.
- [29] Cloud Storage: A Design Approach National Webinar on Cloud Storage, Vagdevi College of Engineering, Warangal, India, August 01, 2020.
- [30] Cyber Security Paradigms: Webinar on Digital Cyber, K.B. Women's college, Hazaribag, May 17, 2020.
- [31] Data Mining: Concepts and Techniques: 10th lecture of the Gurunanak Dev Lecture series on Data Mining & Applications, Gurunanak College, Dhanbad Campus, January 21, 2020.

- [32] Data Intesive Computing: Methods and Applications: Short Term Training program on Internet of Things, BIT Mesra, Patna Campus, May, 2019.
- [33] Big Data Analytics: Methods and Applications: National workshop on Big Data Analytics and Machine Learning, Dr. B.R Ambedkar Institute and Technology, Andaman and Nikobar Islands, April, 2019.
- [34] Big Data Mining Paradigms: National workshop on Big Data Analytics, Central University of South Bihar, March, 2019.
- [35] Big Data Mining: 4th Annual Research Meet, Chennai, August 2018.
- [36] Big Data Processing System for Smart Grid: SVIT, Hyderabad, December, 2017.
- [37] Big Data Modelling: SREC, Coimbatore, November, 2017.
- [38] Modelling Statistical Big Data: University of Malaysia, September, 2017.
- [39] Computational Big Data: Bharath University, March, 2017.
- [40] Conceptual Big Data: IPACAT-2017, VIT University, April-2017.
- [41] Cloud Computing An Initiative: Gurunanak Engnineering College, Dhanbad, 2014.
- [42] Distributed Databases An Application Lead: Purushotham Institute of Engineering and Technology Rourkela, 2012.

### **Program/Advisory Committee Member:**

#### 2024

- [1] ISCON-2024: 7<sup>th</sup> IEEE International Conference on "Information Systems and Computer Networks", 06-07, September 2024. GLA University, Mathura, India.
- [2] ITISE 2024: 10<sup>th</sup> International Conference on "Time Series and Forecasting", 15<sup>th</sup>-17<sup>th</sup>, July 2024.
  Gran Canaria, Spain.
- [3] ISSC 2024: International Conference on "Information Society and Smart City", 15<sup>th</sup>-16<sup>th</sup>, June 2024. Shanghai, China.
- [4] ICISS 2024: International Conference on "Intelligence Systems and Security", 20<sup>th</sup>-22<sup>nd</sup>, December 2024. Indian Institute of Engineering Science and Technology, Botanical Garden Area, Howrah, West Bengal 711103, India.

#### **2023**

- ICMISC 2023: International Conference on "Recent Trends in Machine Learning, IOT, Smart Cities & Applications", 16<sup>th</sup>-17<sup>th</sup>, September 2023. CMR Institute of Technology, Hyderabad, India.
- [2] PReMI 2023: 10<sup>th</sup> International Conference on "Pattern Recognition and Machine Intelligence", 12<sup>th</sup>-15<sup>th</sup>, December 2023. ISI Kolkata, West Bengal, India.
- [3] ITISE 2023: 9<sup>th</sup> International Conference on "Time Series and Forecasting", 12<sup>th</sup>-14<sup>th</sup>, July 2023. Gran Canaria, Spain.

#### **2022**

 icSoftComp 2022: 4<sup>th</sup> International Conference on "Soft Computing and its Engineering Applications", 9<sup>th</sup>-10<sup>th</sup>, December 2022. Charotar University of Science and Technology (CHARUSAT), Gujarat, India.

- [2] ITISE 2022: International Conference on "Time Series and Forecasting- ITISE", 27<sup>th</sup>-30<sup>th</sup>, June 2022. Gran Canaria (Meloneras), Spain.
- [3] iCOMPUTER 2022: International Conference on "intelligent COMPUting TEchnologies and Research (iCOMPUTER-2022)", 5<sup>th</sup>-7<sup>th</sup>, December 2022. National Institute of Technology, Puducherry, India.
- [4] ICRAIE 2022: 7<sup>th</sup> International Conference on "Recent Advnces and Innovtions in Engineering-ICRAIE", 1<sup>st</sup>-3<sup>rd</sup>, December 2022. National Institute of Technology, Surathkal, Karnataka, India.
- [5] CINE-2022: International Conference on "Computational Intelligence and Networks (CINE)", 9<sup>th</sup>-10<sup>th</sup> October, 2022. KIIT Deemed to be University, Bhubaneswar, India.
- [6] ICCINS-2022: 1<sup>*st*</sup> International Conference on "Computational Intelligence and Network Security (IC-CINS)", 3<sup>*rd*</sup>-4<sup>*th*</sup> March, 2022. National Institute of Technology, Raipur, India.

#### **2021**

- [1] ITISE-2021: International Conference on Time Series and Forecasting- ITISE 2021, 19<sup>th</sup>-21<sup>th</sup> July, 2021. Gran Canaria (Meloneras), Spain.
- [2] BIHI-2021: 2021 International Conference on Biomedical Informatics and Health Informatics (BIHI 2021), Hangzhou, July 23-25, 2021, China.
- [3] ICCIIS-2021: International Conference on Computational Intelligence and Innovative Systems ICCIIS-2021, 19<sup>th</sup>-21<sup>th</sup> July, 2021. Dr. Sudhir Chandra Sur Institute of Technology Sports Complex, Kolkata, India.
- [4] ISCON-2021: 5<sup>*th*</sup> International Conference on Information Systems & Computer Networks (ISCON-2021), GLA University, Mathura, Uttarpradesh, October, 2021, India.
- [5] ICCIML-2021: 1<sup>st</sup> International Conference on Computational Intelligence in Machine Learning (IC-CIML 2021), Bengaluru, 1-2 June, 2021, India.

#### 2020

- [1] BLOCKCHAIN 2020: 3<sup>*rd*</sup> IEEE International Conference on Blockchain (Blockchain 2020), Rhodes Island, Greece, 02-06 December, 2020, Greece.
- [2] ICACT 2020: International Conference on Advanced Computing Technologies (ICACT 2020), CMR Engineering College, Telangana, Hyderabad, 12-13 December, 2020, India.
- [3] ICCS 2020: 5<sup>th</sup> International Conference on Computing Sciences (ICCS 2020), Lovely Professional University, Punjab, Jalandhar, 10-11 April, 2020, India.
- [4] ICDSAA-20: 3<sup>rd</sup> International Conference on Data Science Application and Analytics (ICDSAA 2020), Meerut Institute of Engineering & Technology, Uttar Pradesh, 4-5 April, 2020, India.
- [5] IndoData 2020: International Conference on Intelligent Data & Communication (IndoData 2020), CMR Institute of Engineering & Technology, Hyderabad, 2020, India.

#### **2019**

[1] DISCOVER'19: IEEE International Conference on Distributed Computing, VLSI, Electrical Circuits and Robotics, Manipal Institute of Technology, Surathkal, Mangalore, August 11 - 12, 2019, India.

#### **2018**

[1] ICIIT 2018: 3<sup>*rd*</sup> International Conference on Intelligent Information Technologies, Anna University, Chennai, 11-14 December 2018, India.

- [2] TEAMC 2018: International Conference on Towards Extensible and Adaptable Methods in Computing-TEAMC 2018, 26-28 March 2018, Netaji Subhas Institute of Technology (NSIT), New Delhi.
- [3] ICACA 2018: 1<sup>*st*</sup> International Conference on Advances in Computing and Applications, 26-27 February 2018, National Institute of Technology, Uttrakhand, India.
- [4] ICD-BDCS 2018: 9<sup>th</sup> Annual International Conference on ICT: Big Data, Cloud and Security, 27-28 August 2018, Singapore.

#### **2017**

- [1] ICIIT 2017: 2<sup>*nd*</sup> International Conference on Intelligent Information Technologies, Anna University, 6-8 September 2017, India.
- [2] ICGCIoT 2017: 2<sup>*nd*</sup> International Conference on Green Computing and Internet of Things, 16-18 November 2017, Galgotia College of Engineering and Technology (GCET), Greater Noida, New Delhi.
- [3] LAMDA 2017: 1<sup>st</sup> International Conference on Latest Advances in Machine Learning and Data Science, 25-27 October 2017, National Institute of Technology, Goa, India.
- [4] ICEEMS 2017: 1<sup>st</sup> International Conference on Electrical, Electronics, Materials and Applied Science, 22-23 December 2017, Swami Vivekananda Institute of Technology (SVIT), Secunderabad, Telangana, India.

#### 2016

- [1] ICCCA 2016: IEEE International Conference on Computing Communication and Automation (ICCCA-2016), Galgotia University, 29-30 April, 2016.
- [2] BDAW 2016: International conference on Big Data and Advanced Wireless technologies, 10-11 November 2016, American university, Bulgaria.
- [3] RAIT 2016: 3<sup>*rd*</sup> IEEE International conference on Recenet Advances in Information Technology, 3-5 March 2016, Indian School of Mines, Dhanbad, India.

#### **2015**

 ICCCA 2015: IEEE International conference on Computing, Communication & Automation, 15-16 May 2015, Galgotia University, India.

#### **2014**

- ICACCI 2014: 3<sup>rd</sup> IEEE International conference on Advances in Computing, Communication, and Informatics, 24-27 September 2014, Galgotia College of Engineering Technology (GCET), Greater Noida, India.
- [2] ICCCT 2014: 5<sup>th</sup> International conference on Computer and Coommunication Technology, 26-28 September 2014, Motilal Nehru National Institue of Technology (MNNIT), Allahabad, India.

#### **2013**

- [1] ADCONS 2013: 2<sup>*nd*</sup> International Conference on Advanced Computing, Networking and Security, 15-17 December 2013, National Institute of Technology Surathkal, Karnataka, India
- [2] CCSN 2014: 3<sup>rd</sup> International Conference on Computing, Communication and Sensor Network, 12-14 December 2014, International Association of Science, Purushottam Institute of Engineering and Technology, Rourkela, Odisha,India.
- [3] CCSN 2013: 2<sup>*nd*</sup> International Conference on Computing, Communication and Sensor Network, 23-24 November 2013, International Association of Science, Dharmatala, Kolkatha, India.

[4] ICACCI 2013: 2<sup>*nd*</sup> International Conference on Advances in Computing Communications and Informatics, 22-25 August 2013, Sri Jayachamarajendra College Of Engineering (SJCE), Mysore, India.

#### 2012

- [1] CCSN 2012: 1<sup>*st*</sup> International Conference on Computing, Communication and Sensor Network, 22-23 November 2012, Purushottam Institute of Engineering and Technology, Rourkela, Odisha, India.
- [2] NCCCS 2012: National conference on computing and communication systems, November 21 -22 2012, Dr. B.C. Roy Engineering College, Durgapur, India.

### Courses Taught/Teaching/Laboratories Established:

Courses:	• Ethereum and Smart Contracts - DApps Development (Collaboration with Tata Consultancy Services)
	Cloud Computing
	Distributed Systems
	• Parallel and Distributed Computing
	Computer Programming
	Object Oriented Programming
	• Database Management Systems
	Advanced DBMS
	Computer Organization
	High-Performance Computer Architecture
	Soft Computing
	Advanced Operating Systems
	• Big Data Analytics
Laboratories:	Object Oriented Programming
	Computer Programming
	Computer Organization
	Cloud Computing
	Database Management Systems
	Advanced DBMS
<b>Project Laboratory:</b>	• Validation of ML Paradigms
	Blockchain Implementation
	• Data Intensive Computing, Big Data Processing
	• Validation of Data Mining Patterns

## **Administrative Activities:**

- [1] Faculty Coordinator of CSE Society Indian Institute of Technology (ISM) June 2020 Till date.
- [2] Member of Departmental Purchase and Audit Committee January, 2024 Till date.
- [3] In-Charge of Software Lab June, 2022 January, 2024.
- [4] DAC Secretary April, 2022 January, 2024.
- [5] Member of Departmental Faculty Screening Committee December, 2021 January, 2024.
- [6] Faculty In-charge of International activities April, 2021 January, 2024.
- [7] Member of Departmental Under Graduate Committee September, 2019 August, 2022.
- [8] Faculty Coordinator Final year Dual Degree (CSE) June, 2017 June, 2022.
- [9] Placement In-charge and Coordinator of CSE June, 2016 June, 2020.
- [10] Faculty Sponsor of ACM IIT(ISM) Student Chapter –June, 2016- May, 2020.
- [11] Faculty Co-Sponsor of ACM IIT(ISM) Student Chapter June, 2015 May, 2016.
- [12] Placement In-charge Website Management June, 2018 June, 2020.
- [13] Core member of Departmental purchase committee June, 2015 March 2018.
- [14] Coordinator for IIIF –Delhi (3yr. M.Tech CSE) June, 2018 March 2019.
- [15] Served as Hostel Warden during June, 2014 May, 2017.
- [16] Member of Departmental Board of Courses Studies (BOCS) (2012, 2014, 2017).
- [17] Faculty Coordinator PRATIBIMB-2013.
- [18] Core Committee Member of Annual Sports (2012, 2013, 2014, 2016, 2017, 2018, 2019).

## **Academic Visits (National/International):**

- [1] The University of Aberdeen, Aberdeen, Scotland, United Kingdom. May-June, 2024.
- [2] The University of Southampton, Southampton, United Kingdom. May-July, 2023.
- [3] ICAR- Indian Institute of Rice Research, Hyderabad, Telangana, India. February (2-5), 2023.
- [4] Indian Institute of Technology (BHU), Varanasi, Utterpradesh, India. Dec 2022.
- [5] ICAR- Indian Institute of Rice Research, Hyderabad, Telangana, India. July 2022.
- [6] National Institute of Technology, Farmagudi, Goa, India. December 2021.
- [7] National Institute of Technology, Surathkal, Karnataka, India. March 2020.
- [8] National Institute of Technology, Farmagudi, Goa, India. March 2020.
- [9] National Institute of Technology, Agartala, Tripura, India. September 2019.
- [10] Dr. B R Ambetkar Institute of Technology, Portblair, Andaman and Nicobar Islands. April 2019.
- [11] National Institute of Technology, Warangal, Telengana, India. December 2018.

- [12] Agriculture University (PJTSAU), Hyderabad, India. November 2018.
- [13] National Institute of Technology, Farmagudi, Goa, India. October 2018.
- [14] University of Malaysia, Malaysia, 2017.
- [15] University of Barcelona, Spain, 2012

## **Reviewer (Int. Journals):**

- [1] IEEE Transactions on Information Forensics & Security IEEE.
- [2] IEEE Transactions on Automation Science and Engineering IEEE.
- [3] IEEE Transactions on Parallel and Distributed Systems IEEE.
- [4] ACM Transactions on Multimedia Computing, Communications, and Applications ACM.
- [5] IEEE Access IEEE.
- [6] IEEE Transactions on Cloud Computing IEEE.
- [7] IEEE Transactions on emerging topics in computing IEEE.
- [8] Transactions on GIS Wiley.
- [9] IEEE Computational Intelligence Magazine IEEE Computational Intelligence Society
- [10] Journal of Data and Knowledge Engineering Elsevier.
- [11] Computers in Biology and Medicine Elsevier.
- [12] Journal of Systems and Software Elsevier.
- [13] Journal of Network and Computer Applications Elsevier.
- [14] Engineers Australia Technical Journals Engineers Australia.
- [15] Journal of Environment, Development and Sustainability, Springer.
- [16] Int. Journal of System Assurance Engineering and Management, Springer.
- [17] Concurrency Computation Practice and Experience, Wiley.
- [18] Int. Journal of Communication Systems, Wiley.
- [19] Journal of Biomedical Engineering, Springer.
- [20] Journal of Informatics in Medicine Unlocked, Elsevier.
- [21] Journal of Health Information Science and Systems, Springer.
- [22] Journal of Medical and Biological Engineering, Springer.
- [23] Complex & Intelligent Systems, Springer.
- [24] Journal of Super computing, Springer.
- [25] Neural Processing Letters, Springer.
- [26] Cluster Computing, Springer.

## **References:**

#### Prof. Chiranjeev Kumar

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#### **Prof. Muthu Ramachandran** *Visiting Professor*

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#### Prof. Lipo Wang

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#### Prof. Salil S. Kanhere

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