# Curriculum Vitae

## of

# Prasanta K. Jana, *IEEE Senior Member*

**Phone:** 0326-2235473 (Office) 9431126447 (Mob.) and **Email:** prasantajana@iitism.ac.in
**Homepage:** https://www.iitism.ac.in/~prasantajana

## Personal

Name: Prasanta K. Jana
Present Position: Professor (HAG)
Address: Department of Computer Science and Engineering
Indian Institute of Technology (ISM), Dhanbad – 826 004, India
Date of Birth: 12 January, 1961
Nationality: Indian

## Professional Qualifications

Ph. D. (Engineering) from Jadavpur University in 2000
M. Tech. (Computer Science) from Calcutta University in 1988

## Current Research Areas

Cloud Computing, Fog Computing, Internet of Things,
Machine Learning, Wireless Sensor Networks.

## Awards/Honors

(i) **Among the World ranking of top 2% (all fields) Indian Scientists in Artificial Intelligence** surveyed by Stanford University, USA in the years 2020-2024.

(ii) **DC Track Best Student Paper** in the 19th Intl. Conf. **ICDCIT 2023**. 18-22 January; Bhubaneswar, India.

(iii) **Canara Bank Research Publication Award**, 2015 & 2017.

(iv) **Expert Committee Member** on "Technologies for NSDI Applications", DST, New Delhi, India for the period of 2018-2021 and 2023-26.

(v) **Best Paper Award** in the Intl. Conf. ICACCI-2018, 19-22 Sept., 2018, Bangalore, India.

(vi) **Session Best Paper Award** in the Intl. Conf. CEECE-2017, 28-29 December, 2017, Pattaya, Thailand.

(vii) **Second Best Paper Award** in the ICECCS-2013, October17-19, 2013, Noida, India.

(viii) **Certificate of Merit by world Congress** on Engineering for participation in the Intl. Conf. PDC 2011, Imperial College of London, UK, 6-8 July, 2011.

(ix) ***IEEE Senior Member, 2009***.

# Ph. D Supervision:

## (Awarded: 20 Ongoing: 04)

| Sl. No. | Name | Research Field | Status | Year |
|---|---|---|---|---|
| 01 | Dheeresh K. Mallick | Parallel Computing | **Awarded** | **2010** |
| 02 | Kenny T. Lucas | Parallel Computing | **Awarded** | **2011** |
| 03 | Sudhanshu Kr. Jha | Parallel Computing | **Awarded** | **2011** |
| 04 | Damodar Reddy | Data Clustering | **Awarded** | **2013** |
| 05 | Pratyay Kuila | Wireless Sensor Networks | **Awarded** | **2014** |
| 06 | Amgoth Tarachand | Wireless Sensor Networks | **Awarded** | **2015** |
| 07 | Md Azharuddin | Wireless Sensor Networks | **Awarded** | **2016** |
| 08 | Suneet Kumar Gupta | Wireless Sensor Networks | **Awarded** | **2016** |
| 09 | CHJ. Srinivasa Rao | Wireless Sensor Networks | **Awarded** | **2017** |
| 10 | Srikanth Jannu | Wireless Sensor Networks | **Awarded** | **2017** |
| 11 | Sanjaya Panda | Cloud Computing | **Awarded** | **2017** |
| 12 | Kumar Nitesh | Wireless Sensor Networks | **Awarded** | **2018** |
| 13 | Lalatendu Muduli | Wireless Sensor Networks | **Awarded** | **2019** |
| 14 | Indrajeet Gupta | Cloud Computing | **Awarded** | **2019** |
| 15 | Abhinav Tomar | Wireless Sensor Networks | **Awarded** | **2020** |
| 16 | Madhusudan Kumar | Cloud Computing | **Awarded** | **2022** |
| 17 | Raj Anwit | Wireless Sensor Networks | **Awarded** | **2022** |
| 18 | Amar Kaswan | Wireless Sensor Networks | **Awarded** | **2023** |
| 19 | Nishant Jain | Machine Learning | **Awarded** | **2023** |
| 20 | Deepak Kumar Rakesh | Machine Learning | **Awarded** | **2023** |
| 21 | Ankita Sinha | Data Clustering | On Going | NA |
| 22 | Nidhi Kumari | Fog Computing | On Going | NA |
| 23 | Dipnarayan Das | Fog Security | On Going | NA |
| 24 | Smriti Priyadarshani | Fog Computing in IoT Paltform | On Going | NA |

# M.Tech. Dissertation

## (Supervised: 59 Ongoing: 02)

| Dissertation Title | Year |
|---|---|
| Efficient Federated Learning Through Aggregator Selection and Cluster Formation in IoT Networks | **2024** |
| Federated Learning: A Client Selection and Reputation Based Approach | 2024 |
| Communication Cost Efficient Client Selection for non-IID Data in Federated Learning | 2023 |
| Credit Card Fraud Detection Using Dynamic Ensemble Classification | 2019 |
| Rainfall Prediction: Recurrent Neural Network Approach | 2019 |
| Machine Learning Based In-Hospital Mortality Prediction | 2019 |
| Ensemble of Stacked MLP and Random Forest to Predict Intention of Online Shoppers | 2019 |
| Trajectory Design for Mobile Sink in Wireless Sensor Network | 2019 |
| Prediction of Air Pollutant (PM10) Concentration: Machine Learning Approach | 2019 |
| Mortality Prediction using Machine Learning Classifiers and Neural Network | 2018 |
| Prediction of Credit Card Defaulters: A Comparative Study on Performance of Classifiers | 2018 |
| A cost-Efficient Deadline Constrained Scheduling for Ensembled Workflows | 2018 |
| Analysis and Classification of Images Using Convolutional Layer and Artificial Neural Network | 2018 |
| Stock Prediction with Random Forest | 2018 |
| A Deep Learning Approach for Traffic Flow Prediction | 2018 |
| Bi-objective Workflow Scheduling in Cloud Computing using Task Clustering | 2018 |
| Mortality Prediction of Hospital Patients with Colorectal Cancer Using Machine Learning Approaches | 2018 |
| Multi-Level Hierarchical Energy Efficient Clustering & Routing for Mobile Sink in WSNs | 2017 |
| Bi-objective Workflow Scheduling Algorithm Based on Shuffled Frog Leaping Algorithm | 2017 |
| On-Demand Charging Using Multiple Mobile Chargers in Wireless Rechargeable Sensor Networks | 2017 |
| Cloud Provisioning Based on the Characteristics of Tasks of a Workflow | 2017 |
| Path Determination Strategy for Mobile Data Collectors in Wireless Sensor Network with Obstacle | 2017 |
| A Dynamic Provisioning Based Workflow Scheduling for Heterogeneous Cloud: A Cost-Efficient Approach | 2017 |
| Design of Cost Effective Task Scheduling Algorithm in Cloud Computing | 2016 |
| Task Consolidation and Workflow Scheduling in Cloud Computing | 2016 |
| Energy Efficient Algorithms for Mobile Sink in Wireless Sensor Networks | 2016 |
| Metaheuristic Based Task Scheduling Algorithm for Cloud Computing | 2016 |

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|---|---|
| Algorithm Design for Sink Mobility in Mobile Sink in Wireless Sensor Networks | 2016 |
| Study and Design of Task Scheduling Algorithm for Cloud Computing | 2015 |
| Schemes for Determining Trajectory of Mobile Sink in Wireless Sensor Network | 2015 |
| Task Scheduling Algorithm in Cloud Computing: A GA Based Approach | 2015 |
| Task Scheduling Algorithm in Cloud Computing | 2014 |
| Energy Efficient Routing in Wireless Sensor Networks | 2014 |
| Genetic Algorithm Based Clustering and Routing Techniques for Wireless Sensor Network | 2013 |
| An algorithm for Cluster Centre Initialization for K-means Clustering | 2013 |
| Efficient Clustering Algorithm for Wireless Sensor Network with Load Balance Issue | 2012 |
| An Improved MST-based Clustering Algorithm | 2012 |
| Design and Implementation of K-Round Minimum Spanning Tree Based Clustering Algorithm | 2011 |
| A Modified K-Means Algorithm with Efficient Cluster Centre Initialization | 2011 |
| MST-Based Prototype Clustering Algorithm | 2011 |
| Parallel Prefix on Modified OTIS-MESH of Trees | 2011 |
| A clustering Algorithm based on Vornoi Diagram | 2010 |
| Design and Implementation of MST Based Clustering Algorithm | 2010 |
| Neighborhood Property of Multi-Mesh Interconnection Network | 2009 |
| Enumeration Sorting on OTIS-MESH of Trees | 2009 |
| Permutation Algorithms on WK-recursive Network | 2008 |
| Study and Implementation of Clustering Microarray Data | 2007 |
| Clustering Algorithm for Microarray Data Analysis | 2007 |
| A Parallel Algorithm for Finding Motif in Biological Sequences | 2006 |
| Demand Forecasting: A Genetic Algorithm Approach | 2005 |
| Multiple Sequence Alignment with Its Parallel Algorithms | 2004 |
| Parallel Numerical Algorithms on Multi-Mesh, OTIS-MESH and OMULT | 2004 |
| Parallel Algorithms on Optoelectronic Computer | 2004 |
| A Parallel Medial Axis Transformation Using Parallel Distance Transformation Distance Transformation for Skeletonization | 2002 |
| Implementation of Adaptive Fuzzy Kohonen Clustering Network Algorithm | 2002 |
| Time Series Forecasting: Parallel Processing and Neural Networks Approach | 2002 |
| Efficient Handoffs in Mobile Communications Systems: An Artificial Neural Network Approach | 2001 |
| Parallel Algorithms on Multi-Mesh of Trees and Cube-Connected Network | 2001 |
| Parallel Prefix Computation on Mesh and Multi-Mesh Network | 2001 |

# R & D Projects

| Project Title | Role | Funding Agency | Duration | Status |
|---|---|---|---|---|
| | | | | |
| Sensor-based Dust Suppression System for Haul Roads in Opencast Coal Mines | Principal Investigator | TexMin Foundation, IIT(ISM), Dhanbad | 2 yrs. (April 2022-March 2024) | On going |
| To strengthen the research facilities in the department of Computer Science & Engg. (FIST Project under DST) | Principal Investigator | DST, New Delhi | 5 yrs. (April 2018 - March 2023) | Completed |
| Designing Clustering Algorithms for Biological Data | Principal Investigator | CSIR, New Delhi | 4 yrs. (April 2009 - March 2013) | Completed |
| Designing Efficient Algorithms for Computational Biological Problems | Principal Investigator | IIT(ISM) | 2 yrs. (April 2007 - March 2008) | Completed |

# Patents

| Sl. No. | Title | Patent No. | Status | Date Applied |
|---|---|---|---|---|
| 01 | A System and Method for Operating Sprinklers. | 202331081240 | Applied | 30.11.2023 |

# Short-Term Courses Conducted

1. Short-Term Course on Advanced Algorithms and their Applications (2-5 April, 2012).
2. Short-Term Course on Advanced Data Structures and Algorithms (10-14 January, 2014).
3. Short-Term Certificate Course on Data Structures and Algorithms (16-20 June, 2014).
4. Short-Term Course on Wireless Network Protocols & Algorithms and their MATLAB Simulations (08-12 June, 2015).
5. Short-Term Course on Algorithms for Wireless Sensor Networks with Recent Trends (20-24 June, 2016).

6. Short-Term Course on Recent Trends in Wireless Sensor Networks and Internet of Things, (21-25 January, 2017).

7. One Week National Training Programme on Wireless Sensor Networks (18–22 Dec. 2017)

# Administrative Activities

(i) **Chairman, Grievance Redressal Committee (DGRC) 28.02.2024** till date.

(ii) **Chairman, Dept. Faculty Screening Committee** (DFSC): 01.12.2020 – 01.02.2024.

(iii) **Convener, Department Post Graduate Committee** (DPGC): 05.10. 2018– 09.05. 2019.

(iv) **Head of the Department**(**Tenure-I**): 16.10.2010 – 18.11.2013

(v) **Head of the Department** (**Tenure-II**): 04.05.2017– 07.06.2018

(vi) **Chief Hostel Warden**: 07.05.2014 – 22.04.2017.

(vii) **Chairman, Website Committee**: 14.02.2012 – 18.11.2013.

(viii) **Chairman, Office Automation Committee**: 10.05.2012 – 18.11.2013.

(ix) **Chairman, E-Class Room Committee**: 07.01.2013 – 18.11.2013.

(x) **Chairman, Video Conferencing Committee:** Sept. 2012 – 18.11.2013

# Recent Professional Activities

## 1. Invited Talk / Keynote Speech:

(i) Invited lecture on "Federated Learning: A Recent Trend on Machine Learning*"* FDP jointly organized by NIT Warangal and SJBIT Bengalur, 4 May, 2024.

(ii) Invited lecture on "Federated Learning: Today's Machine Learning Paradigm", Intl. Conf. CoCoLe 2023, NIT Warangal, 29-31 August 2023.

(iii) Invited lecture on "*Machine Learning for e-Governance*", Refresher Course, UGC-HRDC, Allahabad University, 30 March, 2023.

(iv) Keynote speech on "*Federated Learning in FOG/IoT Environment*", Intl. conference ICNSBT 2023, Vidyasagar University, West Bengal, 25-26 March, 2023.

(v) Invited talk on "*FOG-based Federated Learning in IoT Platform*", Workshop CIoT-2023, Bennett University, Greater Noida, 05 – 09 June 2023.

(vi) Invited lecture on "*Task offloading and Federated Learning in FOG/Edge Network for IoT Applications,"* FDP by ATAL Academy, NIT Warangal, 19-30 September, 2022.

(vii) Invited lecture on "*Federated Learning in IoT Platform*", e-workshop on " Machine Learning and Cloud Computing (MLCC-2022), NIT Hamirpur, 15-19 October, 2022

(viii) Invited lecture on "*An Introduction to Machine Learning*", FDP at B. C. Roy Engineering College, Durgapur, West Bengal, 28 March, 2022.

(ix) Invited lecture on "*Fog: An Emerging Computing Platform for Modern Applications* ", at Bennett University, India, 30 September, 2021.

(x) Invited lecture on "*Algorithms in Wireless Sensor Networks*", G. Pulla Reddy Engg. College, Kurnool, 8 September, 2021.

(xi) Invited lecture on "*Machine Learning based Classifiers for Data Science*", FDP at E & ICT, NIT Warangal, 24 Aug. 2021.

(xii) Invited lecture on "*Machine Learning Algorithms for Data Science*", FDP at G L. Bajaj Institute of Technology and Management, Greater Noida, 17 Aug. 2021.

(xiii) Invited lecture on "*Fundamentals of Cloud Computing with Workflow Scheduling Algorithms,"* FDP on Latest Trends in Computer Education & Research - 2021", Amity University, Ranchi, India, 28 July, 2021.

(xiv) Invited lecture on "*Fog for IOT Applications: An Overview and Research Challenges,"* FDP on Machine Learning for IoT Applications, NIT Warangal, 7-15 June, 2021.

(xv) Keynote Speech on "*Evolutionary Computing for Wireless Sensor Networks*," Workshop on Industrial Wireless Sensor Networks and IOT, IIT Patna, 24 March ,2021.

(xvi) Invited Talk on "*Algorithms for Mobile Charging and Data Collection in Wireless Sensor Networks*", in the National Webinar on "Innovative Applications of IoT, Sensor Networks and Machine Learning", Berhampur University, Odisha, 15 March 2021.

(xvii) Tutorial Talk on "*Mobile Charging and Data Collection in Wireless Sensor Networks*", in the *Pre-Conference Tutorial of the Intl. Conf. ICCIC 2021*, Jhansi, India, 7 Feb. 2021.

(xviii) Invited talk on "*Evolutionary Computing Algorithms for Wireless Sensor Networks*," *International Conference on Applied Mathematics and Computational Intelligence* (*ICAMCI-2020*), NIT Agartala, 24 December 2020.

(xix) Invited lecture on "*Meta-Heuristic-Based Workflow Scheduling Algorithms for Cloud Computing," FDP on Cloud and Fog Computing Platforms for Internet of Things Application at NIT Warangal*, 23 December 2020.

(xx) Invited lecture on "*Fog Computing*: *Architecture, Applications and Research Challenges, " FDP on Cloud and Fog Computing Platforms for Internet of Things Application at NIT Warangal*, 22 December 2020.

(xxi) Invited lecture on "*An overview of Fog Computing with Applications and Research Challenges*", *National Webinar on 'Recent Trends in Computer Science' Ramakrishna Mission Residential College, Narendrapur, West Bengal,* 21 December 2020.

(xxii) Invited lecture on "*Machine Learning Algorithms for Wireless Sensor Networks*", *National Webinar "Machine Learning and its Applications" Haldia Institute of Technology, West Bengal*, 19 November 2020.

(xxiii) Guest lecture (virtual) on "*Cloud Computing: Fundamental Concepts and Workflow Scheduling*", Spectrum-Learning Weeks, Exploration & Production Academy, Reliance Industries Limited, 10 October 2020.

(xxiv) Invited talk on "*Association Analysis : A Rule based Machine Learning Technique*", *TEQIP – III Sponsored One Week Online FDP on Recent Advances in Computational Techniques, CET, Bhubaneswar, Odisha,* 19– 23 September 2020.

(xxv) Invited talk on "*Fog Computing: An Overview, Applications and Research Challenges*", *TEQIP – III Sponsored One Week Online FDP on Recent Advances in Computational Techniques, CET, Bhubaneswar, Odisha,* 19 – 23 September 2020.

(xxvi) Invited talk on "*Wireless Sensor Networks: Algorithmic Challenges and Solutions*", *TEQIP – III Sponsored One Week Online FDP on Emerging Technologies: Theory and Applications VSSUT, Burla, Odisha,* 5 – 10 September 2020.

(xxvii) Lecture Series on "*Fundamentals on Machine Learning and its Applications*", *FDP, Durgapur Institute of Advanced Technology & Management (DIATM), Durgapur, West Bengal,* 3-7 August, 2020.

(xxviii) Keynote Speech on "*Evolutionary Computing Techniques for Wireless Sensor Networks*," *FDP on Image Authentication, WSNs and IoT, JIS College of Engineering, Kolkata*, 24 June, 2020.

(xxix) Keynote Speech on "*Fog Computing: An Emerging Paradigm*" *International Conference ICADCML-2020 at VIT, Vellore*, 31 Jan. 2020.

(xxx) Tutorial talk on "*Algorithms for Wireless Sensor Networks: Evolutionary Computing Approach*" *7th Intl. Conf. on Smart Computing & Communications (ICSCC 2019)*, Curtin University, Malaysia, 28-30 June 2019.

(xxxi) Invited Talk on "*Machine Learning and its Applications*" *Asansol Engg. Colloge, West Bengal*, 31 Aug. 2019.

(xxxii) Expert Lecture on "*Cloud Computing: An Emerging Technology Paradigm*", *Workshop on Recent Advancement in Engg.-Industry-4.0 Ready at BIT Mesra, Deoghar Campus*, 14 Feb. 2019.

(xxxiii) Invited Talk on "*Task/workflow Scheduling Algorithm for Cloud Computing*" *FDP at BIT Sindri, India,* 27 September 2018.

(xxxiv) Invited talk on "*Algorithms for Wireless Sensor Networks: Machine Learning Approaches* " *NIT Kurukshetra, India*, 02 April 2018.

(xxxv) Invited talk on "*Automata Theory, Formal languages and Compiler Design"* BIT Mesra, India, 21 January 2018.

(xxxvi) Invited Talk on "*Machine Learning Applications for Wireless Sensor Networks*" *VSSUT, Burla, Odisha, India*, 12 November 2017.

(xxxvii) Invited Talk on "*EC Algorithms for wireless sensor networks*" *Jadavpur University (Salt Lake Campus), West Bengal*, 10 March 2017.

(xxxviii) Invited Talk in the FDP on "*High Performance Computing*" *ABES Engineering College, Ghaziabad, India*, 06 February 2017.

(xxxix) Invited Talk in the FDP on "*Parallel and Distributed Computing*" *FGIET, Raebarely,UP, India*, 01 February 2017.

(xl) Invited Talk on "*Introduction to Parallel Computing*" *BIT Mesra,Ranchi, India*, 02-03 May 2016.

(xli) Invited Talk on "*Some Energy Efficient Schemes for Wireless Sensor Networks*" *University of Kalyani, West Bengal, India*, 09 January, 2015.

(xlii) Invited talk in National workshop CLOCOM' 15, *CIT, Ranchi, India*, 25-26 July, 2015.

(xliii) Invited talk on "*Efficient Clustering and Routing Algorithms for Wireless Sensor Networks: PSO Based Approach*", *Burdwan University, India,* 12 December, 2014.

(xliv) Invited talk on "*Modeling of Some Biological Problems and Their Solutions in Parallel Processing Platform*", *Burdwan University, India*, 13 September, 2014.

(xlv) Invited talk on "*Energy Efficient Algorithms for Wireless Sensor Networks*" *C V Raman of Engineering, Bhubaneswar, Odisha, India,* 14 December, 2013.

(xlvi) Invited talk, National workshop RTIT '13, *College of Engineering & Management, Kolaghat, West Bengal, India,* 09 November, 2013.

(xlvii) Invited talk on "*Clustering Algorithm for Wireless Sensor Networks*" *Burdwan University, West Bengal, India*, 14 September, 2013.

(xlviii) Invited talk on "*Clustering in Wireless Sensor Networks*" *BIT Mesra,* (*Patna Campus), India*, 01 August, 2013.

## 2. Advisory Comm. Member/Chair/Guest of Honour

(i) ***General Chair,*** Third Intl. Conference on Advances in Distributed Computing and Machine Learning (3rd ICADCML) NIT Warangal, 15-16 January 2022

(ii) ***Advisory Comm. Member***, 4th International Conference on Machine Intelligence and Signal Processing (MISP2022)

(iii) ***Advisory Comm. Member***, Intl. Conference IEMIS 2022, 23-25 July, 2022 Institute of Engineering & Management, Kolkata India.

(iv) ***Advisory Comm. Member***, Intl. Conference ICCIOT 2018 at Chaibasa Engg. College, West Singhbhum, India.

(v) ***General Chair***, Intl. Conference on RAIT-2018, 15-17 March, 2018 at IIT (ISM) Dhanbad, India.

(vi) ***Session Chair*** in 52nd Annual Convention of Computer Society of India, CSI-2017, 20 January, 2018 at Science City Kolkata, India.

(vii) ***Advisory Comm. Member*** Intl. Conference ICIAC 2016, 18-19 March, 2016 at GITAM University Hyderabad, India.

(viii) ***Advisory Comm. Member*** Intl. Conference ICCCMT, 22-24 September, 2016 at SPMIT Allahabad (U.P.), India.

(ix) ***Advisory Comm. Member*** Intl. Conference ICCI 2015, 10-11 December, 2015 at BIT Mesra, India.

(x) ***Advisory Comm. Member*** Intl. Conference IEEE-UPCON 2015, 4-6 December, 2015 at IIIT Allahabad, India.

(xi) ***Advisory Comm. Membe***r, Intl. Conference ICCIDM-2015 at V.S.S.U.T, Burla, Odisha.

(xii) ***Guest of honor***, Intl. Conference ICCS 2016, 21-22 January, 2016 at Burdwan University, India.

## 3. Program Committee Member:

(i) 19th Intl. Conference on Wireless Networks and Mobile Systems (WINSYS 2022), Lisbon, Portugal, 11-13 July 2022.

(ii) 9th Intl. Conf., PReMI'21, ISI Kolkata, Dec. 15-18,2021.

(iii) Intl. Conference ICCI 2018, BIT Mesra, India, 10-11 Dec. 2018.

(iv) Special Issue on A2ICS 2017 for Journal of Intelligent & Fuzzy Systems (IOS Press).

(v) Intl. Conference MIKE 2017, 13-15 December 2017 at IDRBT Hyderabad, India.

(vi) Intl. Conference IACD 2017, 12-15 November 2017.

(vii) Intl. Conference NGCT 2017, 30-31 October 2017 at UPES Dehradun, India.

(viii) Intl. Conference IC4S 2017, 11-12 October 2017 at Thailand.

(ix) Intl. Conference RACCCS 2017, 2-3 September 2017 at ACERC Ajmer, India.

(x) Intl. Conference IoT4TD 2017, 1-2 April 2017 at KSV Gandhinagar, India.

(xi) 1st Intl. Conference CICBA 2017, 24-25 March 2017 at CBS Kolkata, India.

(xii) 3rd International Symposium NextGenCIT-2017, March 22-23,2017 at Cambridge University Ranchi, India.

(xiii) 8th International Conference GRAPH-HOC 2016, December 23- 24, 2016, Sydney, Australia.

(xiv) Intl. Conference INDIA-2015, University of Kalyani, India.

## 4. Visiting Scientists

(i) At Adv. Comp. & Microelectronics Unit (ACMU), Indian Statistical Institute, Kolkata, 2003

## 5. Academic Foreign Visit

(i) Curtin University, Miri, Malaysia, 2019

(ii) Kowloon, Hong Kong, 2015

(iii) University of Maccau, Maccau, 2012

(iv) Imperial College of London, London UK, 2011

(v) Las Vegas, USA in 2008

(vi) University of Aizu, Wakamatsu, Japan in 2003

## 6. List of Publications

Link to Google Scholar: https://scholar.google.co.in/citations?hl=en&user=J_0lERUAAAAJ

Link to DBLP: https://dblp.org/pers/hd/j/Jana:Prasanta_K=

## A. Books / Book Chapters

1. Rashmi Ranjan Rout , Soumya Kanti Ghosh , P. K. Jana, Asis Kumar Tripathy, Jyoti Prakash Sahoo , Kuan-Ching Li, *Advances in Distributed Computing and Machine Learning*: Proceedings of ICADCML 2022: 427 **(Lecture Notes in Networks and Systems) (*Springer*)**, 2022.
2. Tomar, Abhinav, and P. K. Jana. "Design of Efficient Algorithms for Mobile Charging in Wireless Sensor Networks." *Intelligent Technologies: Concepts, Applications, and Future Directions*. **Springer, Singapore**, pp. 1-28, 2022.
3. Pratyay Kuila and P. K. Jana, Clustering and Routing Algorithms for Wireless Sensor Networks: Energy Efficiency Approaches, 1st Ed., ***CRC Press* (*Taylor & Francis Group*),** ISBN 9781498753821, 2017.

4. Ankita Sinha and P. K. Jana, Clustering Algorithms for Big Data: A Survey, book chapter in The Human Element of Big Data: Issues, Analytics, and Performance, ***CRC Press* (*Chapman and Hall*)**, pp.143-162, 2016.
5. Pratyay Kuila and P. K. Jana, Evolutionary Computing Approaches for Clustering and Routing in Wireless Sensor Networks, book chapter in Handbook of Research on Natural Computing for Optimization Problem***, IGI Global***, pp. 246-266, 2016.
6. Damodar Reddy, P. K. Jana, and S. Machavarapu, KD-Tree Based Clustering for Gene Expression Data, book chapter in Encyclopedia of Business Analytics and Optimization, ***IGI Global,*** pp. 1343-1357, February 2014.
7. Damodar Reddy and P. K. Jana, Clustering Algorithms for Biological Data, ***LAP Lambert Academic Publishing,*** ISBN 978-3-659-45474-5, 2013.
8. Kenny T. Lucas and P. K. Jana, Mapping of Algorithms on Parallel Architectures, ***LAP Lambert Academic Publishing, Germany,*** ISBN 978-3-8465-5857-7, 2011.
9. Sudhanshu K. Jha and P. K. Jana, Study and Design of Parallel Algorithms for interconnection networks, ***LAP Lambert Academic Publishing, Germany***, ISBN 978-3-8454-3829-0, 2011.
10. Dheeresh K. Mallick and P. K. Jana, A monograph on Design of Parallel Algorithms and Architecture for Numeric and Non-numeric Problems, ***LAP Lambert Academic Publishing, Germany***, ISBN 978-3-8433-9341-6, 2011.
11. P. K. Jana et. al. Recent Advances on Information Technology, Edited Volume, (Proc. of the National Seminar (RAIT-2007), Feb. 26-27, 2007, Indian Institute of Technology (ISM) Dhanbad, ***Allied Publishers Pvt. Ltd., New Delhi***, 2007.
12. C. Kumar, S. Mukhopadhyay, G. P. Biswas, and P. K. Jana, Recent Advances on Information Technology, Edited Volume, (Proc. of the National Seminar (RAIT-2009), ***Allied Publishers Pvt. Ltd., New Delhi***, 2009.

## B. International Journals

1. Nidhi Kumari, P. K. Jana, “Communication efficient federated learning with data offloading in fog-based IoT environment”, ***Future Generation Computer Systems***, vol. 158, pp. 158-166, 2024.
2. Nidhi Kumari, P. K. Jana, “A metaheuristic-based task offloading scheme with a trade-off between delay and resource utilization in IoT platform”, ***Cluster Computing***, pp.1–15, 2023.
3. Raj Anwit, P. K. Jana and M. S. Obaidat, "Obstacle Adaptive Smooth Path Planning for Mobile Data Collector in the Internet of Things," ***IEEE Transactions on Sustainable Computing***, vol. 8, no. 4, pp. 727-738, Oct.-Dec. 2023. SCIE/Q1 (WoS)

4. Deepak K. Rakesh, Raj Anwit and P. K. Jana, “A new ranking-based stability measure for feature selection algorithms,” ***Soft Computing,*** *vol.* 27, pp. 5377–5396, 2023. SCIE/Q2 (WoS)

5. Deepak K. Rakesh and P. K. Jana, “An improved differential evolution algorithm for quantifying fraudulent transactions,” ***Pattern Recognition***, 2023, doi.org/10.1016/j.patcog.2023.109623.

6. Nishant Jain, P. K. Jana, “LRF: A logically randomized forest algorithm for classification and regression problems”, ***Expert Systems with Applications***, https://doi.org/10.1016/j.eswa.2022.119225, 2022. SCIE/Q1 (WoS)

7. Nishant Jain, P. K. Jana, “XRRF: An eXplainable reasonably randomised forest algorithm for classification and regression problems”, ***Information Sciences***, vol. 613, pp. 139-160, 2022. SCIE/Q1 (WoS).

8. Nidhi Kumari, Anirudh Yadav, Prasanta K. Jana, “Task offloading in fog computing: A survey of algorithms and optimization techniques”, ***Computer Networks***, 2022, doi.org/10.1016/j.comnet.2022.109137. SCIE/Q1 (WoS)

9. A. Kaswan, P. K. Jana and S. K. Das, "A Survey on Mobile Charging Techniques in Wireless Rechargeable Sensor Networks," in IEEE Communications Surveys & Tutorials, vol. 24, no. 3, pp. 1750-1779, thirdquarter 2022, doi: 10.1109/COMST.2022.3189387. SCIE/Q1 (WoS)

10. Madhu Sudan Kumar, Anubhav Choudhary, Indrajeet Gupta and P. K. Jana, “An efficient resource provisioning algorithm for workflow execution in cloud platform”, ***Cluster Computing*** (2022), Vol. 6, pp. 4233-4255, 2022. SCIE/Q2 (WoS)

11. Deepak K. Rakesh and P. K. Jana, “A general framework for class label specific mutual information feature selection method”, ***IEEE Transactions on Information Theory***, vol. 68, no. 12, pp. 7996-8014. SCIE/Q2 (WoS)

12. A. Yadav, P. K. Jana, S. Tiwari and A. Gaur, "Clustering-Based Energy Efficient Task Offloading for Sustainable Fog Computing," in ***IEEE Transactions on Sustainable Computing***, vol. 8, no. 1, pp. 56-67, 2022. SCIE/Q1 (WoS)

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