

# CURRICULUM VITAE

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## Work Experience

- **May 14<sup>th</sup>, 2012 to till date**, Professor, School of Computing Sciences and Engineering, VIT University, Vellore – 632014, Tamil Nadu.
- **January 1<sup>st</sup>, 2009 to May 13<sup>th</sup>, 2012**, Associate Professor, School of Computing Sciences and Engineering, VIT University, Vellore – 632014, Tamil Nadu.
- **March 7<sup>th</sup>, 2005 to December 31<sup>st</sup>, 2008**, Assistant Professor, School of Computing Sciences and Engineering, VIT University, Vellore – 632014, Tamil Nadu.
- **August 16<sup>th</sup>, 2001 to March 3<sup>rd</sup>, 2005**, Head of the Department, Department of Computer Science, Rourkela Institute of Management Studies (RIMS), Rourkela-769015, Odisha.
- **July 02<sup>nd</sup>, 1994 to May 31<sup>st</sup>, 1999**, Lecturer in Mathematics, Bartini Science College, Bartini, Sodak-76118, Ganjam, Odisha.
- **November 26<sup>th</sup>, 1992 to December 16<sup>th</sup>, 1993**, Lecturer in Mathematics, R. C. M. Sc. College, Khallikote-761030, Ganjam, Odisha.

## ■ Academic Qualification

- **Ph. D. (Computer Science)** from Berhampur University, Berhampur, Odisha, India. Title of the thesis: “On Some Aspect of Rough Set Approach in the Study of Knowledge Discovery in Database and Granular Computing”, 2012.
- **M. Tech. (Computer Science)** from Utkal University, Bhubaneswar, Odisha, India, First Class (69.96%), 2002.
- **M. Phil. (Mathematics)** from Berhampur University, Berhampur, Odisha, India, Pass (74.4% Marks) Special Paper on Functional Differential Equations, 1994.
- **M. Sc. (Applied Mathematics)** from National Institute of Technology, Rourkela, Odisha, India, First Class (70.6 %), Special Paper on Operations Research and Fluid Dynamics, 1989. (*Received Gold Medal*)
- **B. Sc. (Mathematics)** from Berhampur University, Berhampur, Odisha, India, First Class with Distinction (66.67 %), other subjects included Physics and Chemistry, 1987. (*Secured 6<sup>th</sup> Position in University*)

## ■ Awards and Appreciation

- **2017, Bharat Vikas Award** from Institute of Self Reliance, Bhubaneswar, Odisha, India on 19<sup>th</sup> November, 2017.
- **2015, The Best Citizens of India Award** from The International Publishing House, New Delhi, India on December, 2015.
- **2015, Outstanding Educator and Scholar Award** from National Foundation for Entrepreneurship Development, Coimbatore, India on 5<sup>th</sup> September, 2015.
- **2015, Eminent Academician Award** from Khallikote Sanskritika Parisad, Brahmapur, Odisha on 15<sup>th</sup> March, 2015.
- **2014, Research Award** for publishing research papers in peer reviewed journals in 2013 from VIT University, Vellore, India
- **2013, Research Award** for publishing research papers in peer reviewed journals in 2012 from VIT University, Vellore, India
- **2012, Certificate of Appreciation** for publishing research papers in peer reviewed journals during 2010–2011 from VIT University, Vellore, India
- **1989, Gold Medal** in M. Sc. (Applied Mathematics) from Sambalpur University, Odisha.
- **1987, Sixth Position** in B. Sc. (Mathematics) from Berhampur University, Odisha.
- **1985, Dramatic Secretary** in College Union, R. C. M. Sc. College, Khallikote, Ganjam, Odisha.

## ■ Research and Development (Annexure - A)

- International Journals (Peer Reviewed): 38 + 03 (Accepted)
- National Journals (Peer Reviewed): 07
- International and National Conferences: 13

## ■ Research Guidance (Annexure - B)

- Ph. D. Thesis Awarded: 05
- Ph. D. Thesis Submitted: 01
- Working at present: 06
- Ph. D. Thesis examined: 08
- M. Tech. Thesis awarded: 09
- M. Tech. Thesis on going: 01

## ■ Books and Book Chapters (Annexure - C)

- Books published: 03 + 01 (In Press)
- Monograph: 01
- Edited books: 07 + 01 (On going)
- Book chapters: 12

## ■ Invited Talk

- Recurrence Relation and Algorithmic Paradigms: Invited Lecture in the Faculty Development Programme, Department of Computer Science and Engineering, Sri Krishna College of Technology, Coimbatore, India. 27<sup>th</sup> June, 2017.
- Rough Computing and its Applications: Invited Lectures in the Workshop on Computational Intelligence and its Application in Science and Engineering, Department of Computer Science and Engineering, PVP Siddhartha Institute of Technology, Vijayawada, Andhra Pradesh, India. 27<sup>th</sup> April, 2017.
- Rough Set: Abstraction, Generalization, Information Retrieval and Decision Making: Invited Lectures in the Workshop on Recent Trends on Optimization Techniques in Science and Engineering (ROTS-2017), Department of Mathematics, NIT-Silchar, Assam, India. 15<sup>th</sup>-20<sup>th</sup> March, 2017.
- Data Analysis using Intelligent Computing Techniques: Keynote Address at IEEE International Conference on Advances in Computing, Communication and Automaton (ICACCA 2016), Tula's Institute, Dehradun, India. 8<sup>th</sup>-9<sup>th</sup> April, 2016.
- Rough Computing: Abstraction, Generalization and Hybridization: Keynote Address at International Conference on Pattern Recognition and

Multimedia Signal Processing (ICPRMSP'15), Annamalai University, Chidambaram, Tamilnadu, India. 9<sup>th</sup> – 10<sup>th</sup> January, 2015.

- Rough Computing and its Applications: DST Sponsored Workshop on Mathematical Modeling in Computer Science and Information Technology, School of Computing Science and Engineering, VIT University, Vellore, Tamilnadu, India. 20<sup>th</sup> – 22<sup>nd</sup> February, 2014
- Classical Set to Rough Set – A Journey: Faculty Development Program on Recent Trends in Data Mining Tools, Techniques and Research, School of Computing Science and Engineering, VIT University, Vellore, Tamilnadu, India. 28<sup>th</sup> – 29<sup>th</sup> June, 2013
- Algorithm Analysis and Various Strategies: Faculty Development Program on Advanced Algorithmic Analysis, School of Computing Science and Engineering, VIT University, Vellore, Tamilnadu, India. 25<sup>th</sup> – 27<sup>th</sup> June, 2011.
- Fuzzy Sets and its Applications to Computer Science: Basant Utsav, Majhighariani Institute of Technology and Science (MITS), Rayagada, Odisha, India. 20<sup>th</sup> – 22<sup>nd</sup> February, 2009.

### Professional Member

- Life Member: Orissa Information Technology Society (OITS); L 03 / 180
- Life Member: Indian Society for Technical Education (ISTE); LM 47359
- Life Member: Indian Mathematical Society (IMS); A-06-075
- Life Member: Association of Mathematics Teachers of India (AMTI); L06062
- Life Member: Indian Society of Industrial and Applied Mathematics (ISIAM); 009/07
- Associate Member: Computer Society of India (CSI); Membership Number: 00159903
- Member: International Association of Computer Science and Information Technology (IACSIT); Membership Number: 80331721
- Member: International Association of Engineers (IAENG); Membership Number: 101893
- Member: Computer Science Teachers Association (CSTA); Membership Number: 5778234
- Member: International Rough Set Society (IRSS);
- Member: Association for Computing Machinery (ACM);

### Other Academic Responsibilities

- Division leader of Computer Architecture Group, School of Computing Science and Engineering, VIT University, Vellore (March 2014 to January 2016)

- Worked as a Guest lecturer on Tapaswini Institute of Information Technology, Kansabahal, Odisha.
- Worked as Academic Councilors for IGNOU.
- Worked as a guest lecturer for Sambalpur University (Off Campus) MCA program.
- Working as an Academic Guide for ICFAI University.
- Worked as chief examiner for Biju Pattnaik University of Technology, Odisha for Analysis and Design of Algorithms.
- Conducting board member of Government (Autonomous) College, Rourkela.
- Paper setter for L N Mishra College of Business Management, Muzaffarpur and Vellore Institute of Technology.
- Founder Secretary of OITS, Rourkela Chapter, Odisha.
- Member of the Board of Studies in Computer Sciences of the Vellore Institute of Technology.
- Member of Networking National and International Relations of the Vellore Institute of Technology.
- Submission Reviewer of I<sup>3</sup>SITE 2006, and 2007 conferences for Informing Science Institute, Salford (England).

### ✚ **Area of Research Interest**

- Rough Sets, Knowledge Representation, Soft Computing and Computational Intelligence, Business Intelligence, Computational intelligence in Image processing, Graph mining.

### ✚ **Workshop / Conference Attended (Annexure - D)**

- Workshop Attended: 12
- Conference Attended: 07

### ✚ **Personal Information**

Date of Birth: February 27<sup>th</sup> 1969.

Nationality: Indian

Gender Marital Status: Married with two kids

Language(s) Known: English, Hindi and Oriya.



(Debi Prasanna Acharjya)

## Annexure - A

### Research and Development

#### I. International Journal Papers

1. Brijendra Singh and **D. P. Acharjya**: Computational Intelligence Techniques for Efficient Delivery of Healthcare, Health and Technology, Springer (**Scopus**) (**Accepted in 2019**)
2. N. Syed Siraj Ahmed and **D. P. Acharjya**: A Framework for Various Attack Identification in Mobile Ad-hoc Network using Multi-granular Rough Set, International Journal of Information Security and Privacy (**Accepted in 2017**) (**Scopus and SCI**) **UGC Number: 22950**
3. A. Anitha and **D. P. Acharjya**: Crop Suitability Prediction in Vellore District using Rough Set on Fuzzy Approximation Space and Neural Network, Neural Computing & Applications, Vol. 30 (12), pp. 3633–3650, DOI: 10.1007/s00521-017-2948-1 (2018) (**Scopus and SCI**), **UGC Number: 37534, IF: 4.203**
4. R. Rathi and **D. P. Acharjya**: A Framework for Prediction using Rough Set and Real Coded Genetic Algorithm, Arabian Journal for Science and Engineering, Vol. 43 (8), pp. 4215 - 4227 (2018) (**Scopus and SCI**) **UGC Number: 8147, IF: 1.065**
5. Nikhil Mukund, Saurabh Thakur, Sheelu Abraham, A. K. Aniyani, Sanjit Mitra, Ninan Sajeeth Philip, Kaustubh Vaghmare, and **D. P. Acharjya**: An Information Retrieval and Recommendation System for Astronomical Observatories, The Astrophysical Journal Supplement Series, Vol. 235 (22), pp. 1 – 9, (2018) (**Scopus and SCI**) **IF: 8.955**
6. R. Rathi and **D. P. Acharjya**: A Rule Based Classification for Vegetable Production for Tiruvannamalai District using Rough Set and Genetic Algorithm, International Journal of Fuzzy System Applications, Vol. 7 (1), pp. 74 - 100 (2018) (**Scopus**) **UGC Number: 22815**
7. **D. P. Acharjya** and T. K. Das: A Framework for Attribute Selection in Marketing using Rough Computing and Formal Concept Analysis, IIMB Management Review, Elsevier, Vol. 29 (2), pp. 122-135, doi.org/10.1016/j.iimb.2017.05.002 (2017) (**Scopus, SCI and ABDC-B**) **UGC Number: 64149**
8. **D. P. Acharjya** and A. Anitha: A Comparative Study of Statistical and Rough Computing Models in Predictive Data Analysis, International Journal of Ambient Computing and Intelligence, Vol. 8 (2), pp. 32-51, (2017) (**Scopus and SCI**) **UGC Number: 2539**

9. Geetha Mary A, **D. P. Acharjya** and N. Ch. S. N. Iyengar: Privacy Preservation in Fuzzy Association Rules using Rough Set on Intuitionistic Fuzzy Approximation Spaces and DSR, International Journal of Autonomous and Adaptive Communications Systems, Vol. 10 (1), pp. 67 – 87 (2017) **(Scopus) UGC Number: 44942**
10. Chiranji Lal Chowdhary and **D. P. Acharjya**: Clustering Algorithm in Possibilistic Exponential Fuzzy C-Mean Segmenting Medical Images, Journal of Biomimetics, Biomaterials and Biomedical Engineering, Vol. 30, pp. 12 – 23, (2017) **(Scopus and SCI) UGC Number: 21650**
11. N. Syed Siraj Ahmed, **D. P. Acharjya** and Sugata Sanyal: A Framework for Phishing Attack Identification using Rough Set and Formal Concept Analysis, International Journal of Communication Networks and Distributed Systems, Vol. 18 (2), pp. 186 – 212, (2017) **(Scopus) UGC Number: 2746**
12. A. Anitha, **D. P. Acharjya**: Customer Choice of Super Markets using Fuzzy Rough Set on Two Universal Sets and Radial Basis Function Neural Network, International Journal of Intelligent Information Technologies, Vol. 12 (3), pp. 20 – 37, (2016) **(Scopus, SCI and ABDC-C) UGC Number: 22986**
13. Chiranji Lal Chowdhary, G. V. K. Sai and **D. P. Acharjya**: Decreasing False Assumption for Improved Breast Cancer Detection, Journal of Science and Arts, Vol. 35 (2), pp. 157-176, (2016) **(SCI)**
14. Chiranji Lal Chowdhary, **D. P. Acharjya**: A Hybrid Scheme for Breast Cancer Detection using Intuitionistic Fuzzy Rough Set Technique, International Journal of Healthcare Information Systems and Informatics, Vol. 11 (2), pp. 38 – 61, (2016) **(Scopus, SCI and ABDC-C) UGC Number: 22873**
15. Amrut Ranjan Jena, Raja Das, **D. P. Acharjya**: Using of Three Training Algorithms for Material Remove Rate (MRR) in Electrical Discharge Machining (EDM) for ANSI D2 Steel by Neural Network: A Comparative Study, International Journal of Pharmacy & Technology. Vol. 8 (2), pp. 12701 – 12711, (2016) **(Scopus)**
16. **D. P. Acharjya** and Kauser Ahmed P: A Survey on Big Data Analytics: Challenges, Open Research Issues and Tools, International Journal of Advanced Computer Science and Applications, Vol. 7 (2), pp. 511 – 518, (2016) **(SCI)**
17. Brijendra Singh and **D. P. Acharjya**: Nurse's Attitude towards Computerization in Private Hospitals of Tamilnadu, India, Research Journal of Pharmacy and Technology, Vol. 9 (12), pp. 2205 – 2210, (2016) **(Scopus)**
18. N. Syed Siraj Ahmed and **D. P. Acharjya**: A Dominance based Rough Set Approach for the Detection of Jamming Attack, International Journal of Philosophies in Computer Science, Vol. 1 (2), pp. 45-66, (2015)



19. N. Syed Siraj Ahmed and **D. P. Acharjya**: Detection of Denial of Service Attack in Wireless Network using Dominance based Rough Set, International Journal of Advanced Computer Science and Applications, Vol. 6 (12), pp. 267 – 278, **(2015) (SCI)**
20. A. Anitha and **D. P. Acharjya**: Neural Network and Rough Set Hybrid Scheme for Prediction of Missing Associations, International Journal of Bioinformatics Research and Applications, Vol. 11 (6), pp. 503-524, **(2015) (Scopus) UGC Number: 2636**
21. Mesala Sravani, Shivali Sonwani and **D. P. Acharjya**: An Improved Vertical Handoff Algorithm for 4G Heterogeneous Wireless Networks, International Journal of Philosophies in Computer Science, Vol. 1 (1), pp. 1-12, **(2015)**
22. T. K. Das, **D. P. Acharjya** and M. R. Patra: General Characterization of Classifications in Rough Set on Two Universal Sets, Information Resources Management Journal, Vol. 28 (2), pp. 1-19, **(2015) (Scopus, SCI and ABDC-C) UGC Number: 21125**
23. S. Chakraborti, **D. P. Acharjya** and Sugata Sanyal: Application Security Framework for Mobile App Development in Enterprise Setup, International Journal of Advanced Networking and Applications, Vol. 6 (5), pp. 2440-2445, **(2015) 62587**
24. T. K. Das, **D. P. Acharjya** and M. R. Patra: Multi Criterion Decision Making using Intuitionistic Fuzzy Rough Set on Two Universal Sets, International Journal of Intelligent Systems and Applications, Vol. 7 (4), pp. 26-33, **(2015)**.
25. Geetha Mary A, **D. P. Acharjya** and N. Ch. S. N. Iyengar: On Some Algebraic Properties of Rough Set on Two Universal Sets based on Multi-Granulation, International Journal of Rough Sets and Data Analysis, Vol. 1 (2), pp. 49-61, **(2014) UGC Number: 48803**
26. T. K. Das and **D. P. Acharjya**: A Decision Making Model using Soft Set and Rough Set on Fuzzy Approximation Spaces, International Journal of Intelligent Systems Technologies and Applications, Vol. 13 (3), pp. 170-186, **(2014) (Scopus) UGC Number: 22989**
27. Geetha Mary A, **D. P. Acharjya** and N. Ch. S. N. Iyengar: Improved Anonymization Algorithms for Hiding Sensitive Information in Hybrid Information System, International Journal of Computer Network and Information Security, Vol. 6 (6), pp. 9-18, **(2014)**
28. Geetha Mary A, **D. P. Acharjya** and N. Ch. S. N. Iyengar: Privacy Preservation in Fuzzy Association Rules using Rough Computing and DSR, Cybernetics and Information Technologies, Vol. 14 (1), pp. 52-71, **(2014) (Scopus) UGC Number: 14472**
29. **D. P. Acharjya** and D. Bhattacharjee: A Rough Computing based Performance Evaluation Approach for Educational Institutions, International



- Journal of Software Engineering and Its Applications, Vol. 7 (4), pp. 331-348, (2013) (Scopus)
30. K. Senthil Kumar, **D. P. Acharjya** and T. Arun Kumar: Trust Evaluation using Fuzzy Proximity Relation with Ordering for MANET, International Journal of Trust Management in Computing Communications, Vol. 1 (2), pp. 105-120, (2013)
  31. **D. P. Acharjya** and B. K. Tripathy: Topological Characterization, Measures of Uncertainty and Rough Equality of Sets on Two Universal Sets, International Journal of Intelligent Systems and Applications, Vol. 5 (2), pp. 16-24, (2013)
  32. M. A. Saleem Durai, **D. P. Acharjya**, A. Kannan and N. Ch. Sriman Narayana Iyengar: An Intelligent Knowledge Mining Model for Kidney Cancer using Rough Set Theory; International Journal of Bioinformatics Research and Applications, Vol. 8 (5/6), pp. 417-435, (2012) (Scopus) UGC Number: 2636
  33. **D. P. Acharjya**, Debasrita Roy and Md. A. Rahaman: Prediction of Missing Associations using Rough Computing and Bayesian Classification, International Journal of Intelligent Systems and Applications, Vol. 4 (11), pp. 1-13, (2012)
  34. **D. P. Acharjya** and B. K. Tripathy: Intuitionistic Fuzzy Rough Set on Two Universal Sets and Knowledge Representation, Mathematical Sciences International Research Journal, Vol. 1 (2), pp. 584-598, (2012) UGC Number: 43832
  35. R. Manjula, J. Vaideeswaran, and **D. P. Acharjya**: A Capability Maturity Decision Making System for Educational Quality Based on Rough Computing; International Journal of Advanced Science and Technology, Korea; Vol. 45, pp. 55-72, (2012)
  36. B. K. Tripathy and **D. P. Acharjya**: Approximation of Classification and Measures of Uncertainty in Rough Set on Two Universal Sets; International Journal of Advanced Science and Technology, Korea; Vol. 40, pp. 77-90, (2012)
  37. B. K. Tripathy and **D. P. Acharjya**: Association Rule Granulation using Rough Sets on Intuitionistic Fuzzy Approximation Spaces and Granular Computing; ANALE Seria Informatica; Vol. IX, fasc. 1, pp. 125 – 144, (2011)
  38. B. K. Tripathy, **D. P. Acharjya** and V. Cynthya: A Framework for Intelligent Medical Diagnosis using Rough Set with Formal Concept Analysis; International Journal of Artificial Intelligence & Applications; Vol. 2 (2), pp. 45 – 66, (2011)
  39. **D. P. Acharjya** and L. Ezhilarasi: A Knowledge Mining Model for Ranking Institutions using Rough Computing with Ordering Rules and Formal Concept

- Analysis; International Journal of Computer Science Issues; Vol. 8 (2), pp. 417 – 425, (2011)
40. K. Senthil Kumar and **D. P. Acharjya**: An Optimal and Cluster based Intra-Domain Secure Routing for Mobile Ad-hoc Network using Elliptic Curve Cryptography; International Journal of Computer Information Systems; Vol. 1 (5), pp. 1 – 6, (2010)
  41. B. K. Tripathy and **D. P. Acharjya**: Knowledge Mining using Ordering Rules and Rough Sets on Fuzzy Approximation Spaces; International Journal of Advances in Science and Technology; Vol. 1 (3), pp. 41 – 50, (2010)
  42. **D. P. Acharjya**: Comparative Study of Rough Sets on Fuzzy Approximation Spaces and Intuitionistic Fuzzy Approximation Spaces; International Journal of Computational and Applied Mathematics; Vol. 4 (2), pp. 95-106, (2009)
  43. **D. P. Acharjya** and B. K. Tripathy: Rough Sets on Intuitionistic Fuzzy Approximation Spaces and Knowledge Representation; International Journal of Artificial Intelligence and Computational Research; Vol. 1 (1), pp. 29-36, (2009)
  44. **D. P. Acharjya** and B. K. Tripathy: Rough Sets on Fuzzy Approximation Spaces and Applications to Distributed Knowledge Systems; International Journal of Artificial Intelligence and Soft Computing; Vol. 1 (1), pp. 1-14, (2008) **UGC Number: 49129**

## II. International Journal Papers (Communicated)

1. A. Anitha and **D. P. Acharjya**: Crop Suitability Prediction using Rough Set on Intuitionistic Fuzzy Approximation Space and Neural Network, Fuzzy Information and Engineering, Elsevier, (In Review)
2. Geetha Mary A, **D. P. Acharjya** and N. Ch. S. N. Iyengar: Measures of Uncertainty and Topological Characterization in Rough Set on Two Universal Sets based on Multigranulation; Information Resources Management Journal (In Review).
3. Chiranji Lal Chowdhary and **D. P. Acharjya**: A Survey on Segmentation and Feature Extraction in Medical Imaging, Journal of Engineering Science and Technology Review (In Review)

## III. National Journal Papers

1. M. Abhinivesh, Mayank Garg, Karishma and **D. P. Acharjya**: Secured Transaction for Distributed Service System, Indian Journal of Science and Technology, Vol. 8 (S2), pp. 160-164, (2015) (Thompson Reuter)
2. **D. P. Acharjya** and Anirban Mitra: Mobile and Wireless Communication Convergence Information Society in Business Intelligence for Development of Holistic Infrastructure; Indian Journal of Management Technology; Vol. 2 (II), September 2008 – February 2009, pp. 47-55, (2009)

3. Sreekumar and **D. P. Acharjya**: Emergence and Convergence of Information and Communication Technology in Higher Education; GYAN Management (International Journal of Management and Technology; Gian Jyoti Institute of Management and Technology, Chandigarh); Vol. I, Issue 2, pp. 176–182, (2007) **UGC Number: 46821**
4. **D. P. Acharjya** and Anirban Mitra: Knowledge Management and Business Intelligence through Artificial Intelligence; The Chanakya-JRIMS (Journal of Rourkela Institute of Management Studies), Odisha; Vol. VI, Issue 2, pp. 66–72, (2006)
5. Anirban Mitra, **D. P. Acharjya** and B. K. Ray: Mobile Computing and Data Communication Security in the Changing Corporate World; ANVESA: The Journal of Fakir Mohan University, Odisha; Vol. 1, No. 2, pp. 42–47, (2005)
6. Sreekumar and **D. P. Acharjya**: IButton and its use in Medical Information System; Pragyaan; Vol. 2, Issue 3, pp. 11–14, (2005) **UGC Number: 64380**
7. K. K. Patra and **D. P. Acharjya**: Management – A Quantitative Perspective; The Chanakya-JRIMS (Journal of Rourkela Institute of Management Studies), Odisha; Vol. II, Issue 2, pp. 49–55, (2002)

#### **IV. International / National Conference Papers**

1. Richa Bhateja, **Debi Prasanna Acharjya**, and Naman Saxena: Enhanced timing enabled proxy re-encryption model for E-health data in the public cloud, International Conference on Advances in Computing, Communications and Informatics (ICACCI-2017), 13<sup>th</sup> -16<sup>th</sup> September, 2017, IEEE Xplore, pp. 2040-2044 (2017)
2. Chiranji Lal Chowdhary and **D. P. Acharjya**: Segmentation of Mammograms using a Novel Intuitionistic Possibilistic Fuzzy C-Mean Clustering Algorithm, 50<sup>th</sup> Annual Golden Jubilee Convention of the Computer Society of India (CSI-2015), 2<sup>nd</sup>-5<sup>th</sup> December, 2015, Springer, AISC Vol. 652, pp. 75-82 (**Scopus**) **UGC Number: 49365**
3. Chiranji Lal Chowdhary, Gudavalli Vijaya Krishna Sai and **D. P. Acharjya**: Decrease in False Assumption for Detection using Digital Mammography, International Conference on Computational Intelligence in Data Mining (ICCIDM-2015), December 5-6, 2015, Bhubaneswar, India, Springer, pp. 325-333, (2016) **AISC Vol. 411** (**Scopus**) **UGC Number: 49365**
4. Bapuji Rao, Anirban Mitra and **D. P. Acharjya**: A New Approach of Compression of Large Community Graph using Graph Mining Techniques, International Conference on Emerging Research in Computing, Information, Communication and Applications (ERCICA-2015), July 31-August 1, 2015, Bangalore, India, Springer, pp. 127-136, (2015) (**Scopus**)
5. T. K. Das, **D. P. Acharjya** and M. R. Patra: Business Intelligence from Online Product Review-A Rough Set Based Rule Induction Approach, International

- Conference on Contemporary Computing and Informatics (IC3I-2014), November 03 – 05, 2014, Mysore, India, IEEE Xplore, pp. 800 – 803, **(2014) (Scopus)**
6. T. K. Das, **D. P. Acharjya** and M. R. Patra: Opinion Mining about a Product by Analyzing Public Tweets in Twitter, International Conference on Computer Communication and Informatics (ICCCI -2014), January 03 – 05, 2014, Coimbatore, India, IEEE Xplore, pp. 1-4, **(2014) (Scopus)**
  7. Geetha Mary A and **D. P. Acharjya**: Comparative Study of Privacy Preservation in Fuzzy Association Rules RSFAS and RSIFAS with DSR, CCIIS 2013
  8. Pranjal Daga, **D. P. Acharjya**, J. Senthil and Pranam Daga: An Efficient Network Management and Power Saving Wake-On-LAN; in the Proceedings of 3<sup>rd</sup> International Conference on Soft Computing for Problem Solving (SocPros 2013), December 26-28, 2013, Greater Noida, New Delhi, India, pp. 767 – 778, Springer, USA **(2014) AISC Vol. 259 (Scopus) UGC Number: 49365**
  9. Geetha Mary A, **D. P. Acharjya** and N. Ch. S. N. Iyengar: Algebraic Properties and Measures of Uncertainty in Rough Set on Two Universal Sets based on Multi-Granulation, Compute 2013, August 22 - 24, Vellore, Tamilnadu, India, ACM 978-1-4503-2545-5/13/08. **(2013) (Scopus)**
  10. B. K. Tripathy, **D. P. Acharjya** and L. Ezhilarasi: Topological Characterization of Rough Set on Two Universal Sets and Knowledge Representation, in: Global Trends in Information Systems and Software Applications, Proceedings of the 4<sup>th</sup> ObCom-2011, Vellore, India, Springer – CCIS, Vol. 270, pp. 68–81, **(2011) (Scopus)**
  11. J. Aruna Deepika, N. Soniya, K. Sharmila, and **D. P. Acharjya**: Water Component Analysis in Vellore District – A Rough Computing Approach; in the Proceedings of 3<sup>rd</sup> International Conference on Science, Engineering and Technology, Vol. 4, pp. 538–552, **(2011)**
  12. Khusboo, Bhagya V., and **D. P. Acharjya**: A Comparative Study on Some of the Clustering Algorithm Techniques; in the Proceedings of 3<sup>rd</sup> International Conference on Science, Engineering and Technology, Vol. 4, pp. 1015–1031, **(2011)**
  13. R. Bhandari, R. Prusty, A. K. Niranjana, Jha D. S, and **D. P. Acharjya**: A Study on Information Retrieval in the Context of Knowledge Discovery in Databases; in the Proceedings of First International Conference on Science, Engineering and Technology, **(2010)**
  14. Madan Lal Kumawat and **D. P. Acharjya**: Knowledge Granulation, Association Rules and Granular Computing; in the Proceedings of Second

National Conference on Advanced Technologies in Electrical Engineering  
(NCEE'10), pp. 43 – 46, **(2010)**

## Annexure – B

### Books and Book Chapters

#### I. Books

1. **D. P. Acharjya**: Theory of Computation, 1<sup>st</sup> Edition, MJP Publishers, Chennai, ISBN: 978-81-8094-076-7. [www.mjppublishers.com](http://www.mjppublishers.com) (2010)
2. **D. P. Acharjya**; Sreekumar: Fundamental Approach to Discrete Mathematics; 2<sup>nd</sup> Edition, New-Age International (P) Limited, New Delhi; ISBN: 978-81-224-2607-6. [www.newagepublishers.com](http://www.newagepublishers.com) (2009)
3. **D. P. Acharjya**; Sreekumar: Computer Based on Mathematics; 1<sup>st</sup> Edition, Laxmi Publications (P) Ltd, New Delhi, ISBN: 81-318-0096-2, 2<sup>nd</sup> Edition (Communicated). [www.laxmipublications.com](http://www.laxmipublications.com) (2007)
4. **D. P. Acharjya**: Introduction to Information Technology and Computer Programming, MJP Publishers, Chennai, (In Press).
5. **D. P. Acharjya** and T. K. Das: Data Structure using C (Under Progress).

#### II. Monograph

1. **D. P. Acharjya**: Rough Set in Knowledge Representation and Granular Computing – On Some Aspects, Lambert Academic Publishing, Germany; ISBN: 978-3-659-16084-4. [www.lap-publishing.com](http://www.lap-publishing.com) (2012)

#### III. Edited Books

1. **D. P. Acharjya** and V. Santhi: Bio-Inspired Computing for Image and Video Processing, CRC Press (Taylor and Francis), USA; ISBN: 978-1-498-76592-3 (2018)
2. **D. P. Acharjya**, and M. Kalaiselvi Geetha: Internet of Things: Novel Advances and Envisioned Applications, Springer International Publishing AG, Switzerland, USA; ISBN 978-3-319-53470-1. (2017)
3. **D. P. Acharjya** and Anirban Mitra: Bio-Inspired Computing for Information Retrieval Applications, IGI Global Publishers, USA; ISBN 13: 978-1-522-52375-8, ISBN 10: 1522523758, EISBN 13: 978-1-522-52376-5 (2017)
4. V. Santhi, **D. P. Acharjya** and M. Ezhilarasan: Emerging Technologies in Intelligent Applications for Image and Video Processing, IGI Global Publishers, USA; ISBN 13: 9781466696853, ISBN 10: 1466696850, EISBN 13: 9781466696860 (2016) (Scopus)
5. **D. P. Acharjya**, S. Dehuri and Sugata Sanyal: Computational Intelligence for Big Data Analysis-Frontier Advances and Applications, Springer International Publishing AG, Switzerland, USA. ISBN 978-3-319-16597-4, EISBN 978-3-319-16598-1. [www.springer.com](http://www.springer.com) (2015)

6. B. K. Tripathy and **D. P. Acharjya**: Global Trends in Intelligent Computing Research and Development, IGI Global Publishers, USA; ISBN 13: 9781466649361, ISBN 10: 1466649364, EISBN 13: 9781466649378. [www.igi-global.com](http://www.igi-global.com) (2014) (Scopus)
7. B. K. Tripathy and **D. P. Acharjya**: Advances in Secure Computing, Internet Services, and Applications, IGI Global Publishers, USA; ISBN 13: 9781466649408, ISBN 10: 1466649402, EISBN 13: 9781466649415. [www.igi-global.com](http://www.igi-global.com) (2014) (Scopus)

#### IV. Chapters in Books

1. **D. P. Acharjya** and Chiranji Lal Chowdhary: Breast Cancer Detection Using Hybrid Computational Intelligence Techniques (Chapter 11); In: Emerging Perspectives on Healthcare Information Systems and Informatics; Joseph Tan (Ed.); IGI Global Publishers, USA, pp. 251-280. ISBN: 978-1-5225-5460-8 (2018) (Scopus)
2. V. Santhi and **D. P. Acharjya**: Intelligent based Adaptive Digital Watermarking for Images in Wavelet Transform Domain (Chapter 12); In: Emerging Perspectives in Intelligent Pattern Recognition, Analysis, and Image Processing; Narendra Kumar Kamila (Ed.); IGI Global Publishers, USA, pp. 243-263. ISBN: 978-1-4666-8654-0 (2016) (Scopus)
3. V. Santhi and **D. P. Acharjya**: Improving the Security of Digital Images in Hadamard Transform Domain Using Digital Watermarking (Chapter 9); In: Improving Information Security Practices through Computational Intelligence; Wasan Shaker Awad, El Sayed M. El-Alfy, Yousif Al-Bastaki (Eds.); IGI Global Publishers, USA, pp. 228-254. ISBN: 978-1-4666-9426-2 (2016) (Scopus)
4. Bapuji Rao, Anirban Mitra and **D. P. Acharjya**: A New Approach of Compression of Large Community Graph using Graph Mining Techniques; In: Emerging Research in Computing, Information, Communication and Applications; N. R. Shetty, N. H. Prasad, N. Nalini (Eds.); Springer International Publishing AG, Switzerland, USA, pp. 127-136. ISBN: 978-81-322-2549-2 (2015) (Scopus)
5. **D. P. Acharjya** and V. Santhi: Prediction of Missing Associations from Information System using Intelligent Techniques (Chapter 9); In: Trends and Future Directions in Big Data and Web Intelligence; Noor Zaman, Mohamed Elhassan, Mohd Fadzil Hassan, Fausto Pedro Gracia Marquez (Eds.); IGI Global Publishers, USA, pp. 164-189. ISBN: 978-1-4666 -8505-5 (2015) (Scopus)
6. **D. P. Acharjya**: Knowledge Extraction from Information System using Rough Computing (Chapter 9); In: Improving Knowledge Discovery through the Integration of Data Mining Techniques; Muhammad Usman (Ed.); IGI



- Global Publishers, USA, pp. 161-182. ISBN: 978-1-4666-8513-0 **(2015)**  
**(Scopus)**
7. **D. P. Acharjya** and Kauser Ahmed P: Swarm Intelligence in Solving Bio-Inspired Computing Problems – Reviews, Perspectives, and Challenges (Chapter 3); In: Handbook of Research on Swarm Intelligence in Engineering, IGI Global Publishers, USA, pp. 74-98. ISBN: 978-1-4666-8291-7 **(2015)**  
**(Scopus)**
  8. A. R. Jena, M. K. Pradhan, Raja Das, **D. P. Acharjya** and M. Mishra: Prediction of Radial Overcut in Electro-Discharge Machining through Artificial Neural Network (Chapter 4); In: Advancements and Current Trends in Industrial, Mechanical and Production Engineering; Ajay Verma, Arvind Kumar, M. K. Pradhan (Eds.); Excellent Publishing House, New Delhi, pp. 29 – 36. ISBN: 978-93-84935-03-0 **(2014)**
  9. **D. P. Acharjya**: Rough Set on Two Universal Sets and Knowledge Representation (Chapter 5); In: Case Studies in Intelligent Computing; Biju Issac and Nauman Israr (Eds.); CRC Press, USA, pp. 79-108. ISBN: 978-1-4822-0703-3 **(2014)** **(Scopus)**
  10. **D. P. Acharjya** and Geetha Mary A: Rough Set on Two Universal Sets based on Multigranulation (Chapter 9); In: Data Mining and Analysis in the Engineering Field; Vishal Bhatnagar (Ed.); IGI Global Publishers, USA, pp. 159 – 179. ISBN 10: 1466660864 **(2014)** **(Scopus)**
  11. **D. P. Acharjya** and Geetha Mary A: Privacy Preservation in Information System (Chapter 3); In: Advances in Secure Computing, Internet Services, and Applications; B. K.Tripathy and D. P. Acharjya (Eds.); IGI Global Publishers, USA, pp. 49 – 72. ISBN 10: 1466649402 **(2014)** **(Scopus)**
  12. **D. P. Acharjya**: Rough Computing based Information Retrieval in Knowledge Discovery Databases (Chapter 7); In: Information and Knowledge Management – Tools, Techniques and Practices; Ajit Kumar Roy (Ed.); New-India Publishing Company, New-Delhi, pp. 123 – 153. ISBN: 9789381450628 **(2013)**
  13. B. K. Tripathy, **D. P. Acharjya** and L. Ezhilarsi: Topological Characterization of Rough Set on Two Universal Sets and Knowledge Representation; In: Global Trends in Information Systems and Software Applications, Springer – CCIS, Vol. 270, pp. 68–81, **(2012)**

## Annexure - C

### Research Guidance

#### I. Ph. D. Student Thesis Awarded

1. Name of Student: **Geetha Mary A**  
Guides: N. Ch. S. N. Iyengar and **D. P. Acharjya** (Co-Guide)  
Title of the Thesis: Privacy Preservation using Intelligent Techniques  
Name of University: School of Computing Science and Engineering, VIT University, Vellore, Tamilnadu, India  
Year of Award: 2014
2. Name of Student: **Tapan Kumar Das**  
Guides: M. R. Patra and **D. P. Acharjya** (Co-Guide)  
Title of the Thesis: Analysis of Uncertain Information using Intelligent Techniques  
Name of University: School of Information Technology and Engineering, VIT University, Vellore, Tamilnadu, India  
Year of Award: 2015
3. Name of Student: **A. Anitha**  
Guide: **D. P. Acharjya**  
Title of the Thesis: Knowledge Discovery in Databases using Rough Computing and Neural Network  
Name of University: School of Information Technology and Engineering, VIT University, Vellore, Tamilnadu, India  
Year of Award: 2016
4. Name of Student: **Syed Siraj Ahmed N**  
Guide: **D. P. Acharjya**  
Title of the Thesis: A Novel IDS Framework for Computer Networks using Hybrid Rough Computing Approaches  
Name of University: School of Computing Science and Engineering, VIT University, Vellore.  
Year of Award: 2016
5. Name of Student: **Chiranjilal Choudhury**  
Guide: **D. P. Acharjya**  
Title of the Thesis: Segmentation and Feature Extraction of Mammograms using Computational Intelligence Approach  
Name of University: School of Information Technology and Engineering, VIT University, Vellore.  
Year of Award: 2017

## II. Ph. D. Student Thesis Submitted

1. **R. Rathi:** Knowledge Discovery from Databases using Rough Set and Genetic Algorithm; School of Information Technology and Engineering, VIT University, Vellore.

## III. Ph. D Students Currently Working

1. **Gladys Gnana Kiruba. B:** Rough Computing and Ontology in the study of Knowledge Discovery in Databases; School of Computer Science and Engineering, VIT University, Vellore.
2. **Abraham Paul:** On Some Aspects of Rough Set in the Study of Knowledge Discovery in Databases, School of Information Technology and Engineering, VIT University, Vellore.
3. **Kauser Ahmed P:** On some applications of Bio-informatics using Intelligent Techniques, School of Computing Science and Engineering, VIT University, Vellore.
4. **Amrut Ranjan Jena:** Data Mining Applications using Artificial Neural Networks, School of Computing Science and Engineering, VIT University, Vellore.
5. **Madhusmita Mishra:** Knowledge Acquisition using Rough and Bio-inspired Computing, School of Computer Science and Engineering, VIT University, Vellore.
6. **Brijendra Singh:** Use of Information Technology by Nurses in the Hospitals of Tamilnadu using Soft Computing Approaches, School of Information Technology and Engineering, VIT University, Vellore.

## IV. M. Tech. Students Guided

1. **Himani Thakur:** Fuzzy Rough Set Data Reduction with Firefly Algorithm; VIT University, Vellore (2017)
2. **Varsha Agrawal:** Robust Efficient Biometric Fingerprint and Password Authentication using Smart Cards (2015)
3. **S. Lavanya:** Secure Data De-duplication in Hybrid Cloud Architecture, (2015)
4. **D. Bhattacharjee:** A Rough Computing based Performance Evaluation Approach for Educational Institutions (2013)
5. **Gaurav Sharma:** A Rough Computing based recommendation Technique for Multi-criteria System (2013)
6. **Sourabh Babelay:** A Rough Set based Performance Evaluation for Multicast Routing Strategies; VIT University, Vellore (2012)

7. **L. Ezhilarsi:** A Knowledge Mining Model for Ranking Institutions using Rough Computing with Ordering Rules and Formal Concept Analysis; VIT University, Vellore (2011)
8. **V. Cynthia:** A Framework for Intelligent Medical Diagnosis using Rough Set and Formal Concept Analysis; VIT University, Vellore (2011)
9. **K. Senthil Kumar:** An Optimal and Cluster based Intra-Domain Secure Routing for Mobile Ad-hoc Network using Elliptic Curve Cryptography; VIT University, Vellore (2010)

## **Annexure – D**

### **I. Workshop Attended**

1. 19<sup>th</sup> February, 2011: Faculty Training Programme on “Interpersonal Communication Skills”, VIT University, Vellore.
2. 22<sup>nd</sup> October – 23<sup>rd</sup> October, 2010: Workshop on “Cloud Computing and Databases”, VIT University, Vellore.
3. 8<sup>th</sup> October, 2010: Workshop on “Overview of Mathematica for Education and Research”, VIT University, Vellore.
4. 25<sup>th</sup> September, 2010: Faculty Training Programme on “Transformational Leadership”, VIT University, Vellore.
5. 11<sup>th</sup> April, 2010: Workshop on “Linux Process Management”, VIT University, Vellore.
6. 16<sup>th</sup> February, 2010: Faculty Training Programme on “Mind Matters”, VIT University, Vellore.
7. 28<sup>th</sup> November – 29<sup>th</sup> November, 2009: International Summit on “Global Trends in Higher Education and Challenges”, VIT University, Vellore.
8. 19<sup>th</sup> September, 2009: Faculty Training Programme on “Understanding Self and Others”, VIT University, Vellore.
9. 31<sup>st</sup> August – 2<sup>nd</sup> September, 2009: Workshop on “From Instructional Paradigm to Learning Paradigm”, VIT University, Vellore.
10. 6<sup>th</sup> July – 11<sup>th</sup> July, 2009: Faculty Development Programme on “Parallel Distributed Computing and Computational Research”, VIT University, Vellore.
11. 18<sup>th</sup> February, 2006: Workshop on “Effective Guidance and Supervision of Student’s Projects”, VIT University, Vellore.
12. 9<sup>th</sup> June – 15<sup>th</sup> June, 2005: Faculty Development Programme, VIT University, Vellore.

### **II. Conference Attended**

1. International Conference on Emerging Research in Computing, Information, Communication and Applications (ERCICA-2015), July 31<sup>st</sup>-August 1<sup>st</sup>, 2015, Bangalore, India.
2. International Conference on Pattern Recognition and Multimedia Signal Processing (ICPRMSP-2015) held on 9<sup>th</sup> – 10<sup>th</sup> January, 2015 at Annamalai University, Chidambaram, Tamilnadu, India.
3. International Conference on High Performance Computing and Applications (ICHPCA-2014) held on 22<sup>nd</sup> – 24<sup>th</sup> December, 2014 at C. V. Raman College of Engineering, Bhubaneswar, India.
4. All India Seminar held on 21<sup>st</sup> and 22<sup>nd</sup> April, 2006 at The Institution of Engineers (India), Tamilnadu State Centre, Chennai focusing on Achieving Business Excellence through Total Quality Management.
5. National Seminar held on 28<sup>th</sup> and 29<sup>th</sup> January, 2005 at Rourkela Institute of Management Studies, Rourkela.
6. National Seminar held on 16<sup>th</sup> December, 2003 at Rourkela Institute of Management Studies, Rourkela focusing on The Future of Management Education in India.
7. National Seminar held on 15<sup>th</sup> November, 2003 at Rourkela Institute of Management Studies, Rourkela focusing on Challenges before Service Sectors.