# Dr. Uday Pratap Singh

B.Sc., M.Sc. (Mathematics & Statistics) (Gold Medalist)
M.Sc. (Mathematics & Computing)-IITG, NET (CSIR),
Ph.D. (Computer Science)

**Professor**
**Department of Mathematics**
**Central University of Jammu, Samba (UT of J&K)**


## BRIEF BIOGRAPHICAL SKETCH

**Dr. Uday Pratap Singh,** graduated in Mathematics from Dr. Ram Manohar Lohiya (Avadh) University, Ayodhya (U.P.) in 1998. He obtained his first M.Sc. degree in **Mathematics & Statistics (Gold Medalist)** in 2000, from Dr. Ram Manohar Lohiya (Avadh) University, Ayodhya, U.P. and Second M.Sc. degree in **Mathematics & Computing** from **Indian Institute of Technology, Guwahati**. He also qualified **CSIR (NET)** in 2007 and later he received his **Ph.D. Degree in Computer Science** from **Barkatullah University**, Bhopal, in 2013. He is currently working as Professor in the Department of Mathematics, Central University of Jammu, Samba, (India). Dr. Singh has been recognized by Outstanding Research Achievement Award in 2024 for significant academic and research contribution and ranked among the world's top 2% scientists in a study at Stanford University of USA.

He published/presented around 138 research papers in reputed International/National Journals and Conferences, 06 Books and 23 Book Chapters in area of Nonlinear Dynamical Systems, Soft Computing and Image Processing etc. Also, he organized Faculty Development Programs (FDP), International /National Conferences and Workshops. His area of research includes Nonlinear Dynamical Systems, Image Processing, and Soft Computing etc. He is managing editor, associate editor and reviewer in various reputed journals and conferences. He is life member of the Computer Society of India (CSI), International Association of Physical Sciences (IAPS), Soft Computing Research Society (SCRS), Bharata Ganita Parishad (BGP) and IAENG and Member of IEEE and ACM.

**Educational Qualification:**

| S. No. | Qualification | Division | University/Institution |
|---|---|---|---|
| 01. | High School | I | U P Board |
| 02. | Intermediate | II | U P Board |
| 03. | B.Sc. (PCM) | I | Dr. RML (Avadh) University Ayodhya |
| 04. | M.Sc. (Gold Medalist) (Mathematics & Statistics) | I | Dr. RML (Avadh) University Ayodhya |

| | | | |
|---|---|---|---|
| 05. | M.Sc. (Mathematics & Computing) | I | IIT Guwahati |
| 06. | CSIR (NET) | ------ | CSIR |
| 07. | Ph.D. | ------ | Barkatullah University, Bhopal |

**Teaching Experience:**

| **Name of Institution** | **Position** | **From** | **To** | **Total Years** | **Basic Pay & Pay Scale with AGP** |
|---|---|---|---|---|---|
| RRPG College Amethi, Sultanpur | Lecturer | 01 Sep-2003 | 31 May-2006 | 02years 09 months | Rs. 8000.00 (Fix) |
| LNCT- Bhopal (M.P.) (An AICTE approved Engg. College) | Assistant Professor | 08 July-2008 | 22 April-2015 | 06 years 09 months | Rs.15600-39100 with AGP 6000 |
| Madhav Institute of Technology and Science, Gwalior (M.P.) | Assistant Professor | 23 April-2015 | 11 Aug. 2018 | 03 years 04 months | Rs.15600-39100 with AGP 6000 |
| Shri Mata Vaishno Devi University, Katra (J&K) | Associate Professor | 17 Aug. 2018 | 16 Aug. 2021 | 03 years | Level 13A |
| Shri Mata Vaishno Devi University, Katra (J&K) | Professor | 17 Aug. 2021 | 18 July. 2023 | 01 year 11 months | Level 14 |
| Central University of Jammu (J&K) | Professor | 20 July. 2023 | Till Date | --------- | Level 14 |

**Administrative and Academic Responsibility:**

[1]. **Associate Dean (Academics)** from October 2023, at Central University of Jammu.

[2]. **NIRF Coordinator** from October 2023 at Central University of Jammu.

[3]. **Member of IQAC** from October 2023, at Central University of Jammu.

[4]. **Professor In-charge Store** from November 2023, at Central University of Jammu.

[5]. **Convener of Pre (Initial) Screening Committee** at Central University of Jammu.

[6]. **Dean (Academic Affairs)** from 15$^{th}$ September 2022-18$^{th}$ July, 2023, at Shri Mata Vaishno Devi University, Katra.

[7]. **Head, School of Mathematics**, from 30$^{th}$ Aug. 2019-29$^{th}$ August 2022, at Shri Mata Vaishno Devi University, Katra.

[8]. **Chairman** of Board of Study (BoS) of School of Mathematics from Aug. 2019-Aug. 2022, at Shri Mata Vaishno Devi University, Katra.

[9]. **Chairman** of School Research Committee (SRC) of School of Mathematics Aug. 2019-Aug. 2022, at Shri Mata Vaishno Devi University, Katra.

[10]. **Chairman** of Academic Affair Committee (AAC) of School of Mathematics Aug. 2019-Aug. 2022.

[11]. **Member Secretary** of Committee constituted for short-listing the application forms received for Assistant Professor (on contractual basis) in School of Mathematics.

[12]. **Member** of Institutional Innovation Council (IIC), at Shri Mata Vaishno Devi University, Katra.

[13]. **Joint Warden, Basohli Hostel (2018-2020)**, at Shri Mata Vaishno Devi University, Katra.

[14]. Member of **ERP Committee** at Shri Mata Vaishno Devi University, Katra.

[15]. Member of **Examination Reforms Committee (AICTE recommendations /guidelines)** at Shri Mata Vaishno Devi University, Katra.

[16]. Member of **House Allotment Committee** at Shri Mata Vaishno Devi University, Katra.

[17]. Member of **Review and Performance of Housekeeping Committee** at Shri Mata Vaishno Devi University, Katra.

[18]. Member of **BOS**, Department of Applied Mathematics, MITS Gwalior.

[19]. Member of **Scrutiny Committee** for Teaching and Non-Teaching Post at MITS Gwalior.

[20]. Work as **Warden, Hostel No.02**, at Madhav Institute of Technology and Science, Gwalior.

[21]. Appointed as Departmental **NSS Coordinator** at Madhav Institute of Technology and Science, Gwalior, M.P.

[22]. Appointed as Departmental **SWAYAM** course Coordinator at Madhav Institute of Technology and Science, Gwalior, M.P.

[23]. Appointed as Departmental **MOODLE** Coordinator at Madhav Institute of Technology and Science, Gwalior, M.P.

[24]. Appointed as Departmental **Web Coordinator** at Madhav Institute of Technology and Science, Gwalior, M.P.

[25]. Appointed as Departmental Coordinator for the online program associated with **IIT Bombay**, at Madhav Institute of Technology and Science, Gwalior, M.P.

[26]. Class coordinator of **BE-I$^{st}$ Year**, (Information Technology, Chemical Engineering, Electronics and Telecommunication and Biotechnology) at Madhav Institute of Technology and Science, Gwalior, M.P.

[27]. Mentor of **BE-I$^{st}$ Year**, (Backlog Students) at Madhav Institute of Technology and Science, Gwalior, M.P.

[28]. **Group Leader of Anti-Ragging Duties**, at Madhav Institute of Technology and Science, Gwalior, M.P.

[29]. Member of **BE-I$^{st}$ Year**, Time-Table Committee at Madhav Institute of Technology and Science, Gwalior, M.P.

**MOOCs Certified Courses (Completed):**

[1]. Engineering Calculus and Differential Equations (HKU11x): University of Hong Kong, 2019.

[2]. Linear Algebra-Foundations to Frontiers (UT.5.05x): The University of Texas, 2019.

[3]. Modern Algebra, National Programme on Technology Enhanced Learning (NPTEL) certificate, offered by **IIT Kanpur (Prof. Manindra Agarwal, Instructor), Secured First Rank in this Course,** Aug.-Oct. 2019.

[4]. MATLAB Programming for Numerical Computation, NPTEL Course offered by IIT Madras, Jan-Mar 2020.

[5]. NBA Accreditation and Teaching-Learning in Engineering, NPTEL Course offered by IISc Bangalore, Jan-Apr 2020.

[6]. Mathematical Modelling: Analysis and Applications, NPTEL Course offered by IIT Roorkee, Sep.-Oct. 2020.

[7]. Multivariable Calculus, NPTEL Course offered by IIT Roorkee, Jan.-March. 2021.

[8]. Theory of Computation, NPTEL Course offered by IIT Kanpur, July-Dec., 2021.

[9]. Introduction to Abstract and Linear Algebra, NPTEL Course offered by IIT Kharagpur, July-Dec., 2021.

[10]. An Invitation to Topology, NPTEL Course offered by IIT Madras, January-April 2022.

**Research Projects:**

| S. No. | Name of Project | Funding Agency | PI/ Co-PI | Amount (Rs.) & Duration | Status |
|---|---|---|---|---|---|
| 1. | Department of Science & Technology - Fund for Improvement of S&T (DST-FIST) Program-2020 | DST | PI | Rs. 2,800,000/- (2021-2025) | Running |
| 2. | Plant Leaves Disease Classification Using Computational Intelligence Techniques | AICTE | PI | Rs. 4,96,854/- (2020-2023) | Running |
| 3. | Theoretical and Numerical Study of the Adaptive Control Design for Uncertain Nonlinear Systems Using Soft Computing Approach | SERB (MATRICS) | PI | Rs. 6,60,000/- (2022-2025) | Running |
| 4. | National Mathematics Day | JK Science & Technology & Innovation Council | PI | Rs. 50,000/- (2020) | Completed |

**Training Programs/Workshops/Conferences/Summer/Winter School Organized etc:**

| S. No. | Month & Year | Name of Institute /University | Convener/Coordinator/ Co-coordinator/ Organizing Secretary | Name of the Program |
|---|---|---|---|---|
| 01. | 26-27 March 2010 | Lakshmi Narayan College of Technology, Bhopal | **Co-Coordinator-** National Conference RTSCN | Recent Trends in Soft Computing and Networks |
| 02. | 08 Nov. 2014 | Lakshmi Narayan College of Technology, Bhopal | **Organizing Secretary-** IEEE International Conference | International Conference Computational Intelligence and Computer Networks |

| | | | | |
|---|---|---|---|---|
| 03. | 21-25 Jan. 2019 | Shri Mata Vaishno Devi University, Katra | **Coordinator**- One Week FDP (MHRD Sponsored) | Teaching Sciences and Mathematics |
| 04. | 25-26 Oct. 2018 | Shri Mata Vaishno Devi University, Katra | **Co-Convener:** International Conference ICRTAET; Sponsored by (SMVDU-TBIC & TEQIP-III) | 5th Int. Conf. on Recent Trends and Advancements in Engg. and Technology (ICRTAET) |
| 05. | 13-14 Dec. 2019 | Shri Mata Vaishno Devi University, Katra | **Convener**- Two days' National Conference RTMS | Recent Trends in Mathematical Sciences-2019 |
| 06. | 17-18 Jan. 2020 | Shri Mata Vaishno Devi University, Katra | **Co-Convener**- International Conference ICRTAET; Sponsored by (SMVDU-TBIC & TEQIP-III) | 6th Int. Conf. on Recent Trends and Advancements in Engg. and Technology (ICRTAET) |
| 07. | 21-22 December 2020 | Shri Mata Vaishno Devi University, Katra | **Convener**- Two days' International Conference on MSCI | International Conference (Virtual Mode) on Mathematical Sciences and Computational Intelligence |
| 08. | 27 Sep.-01 Oct. 2021 | Shri Mata Vaishno Devi University, Katra | **Convener**- One Week FDP (FDC Sponsored) | One Week FDP on Mathematics and Its Application in Science and Engineering |
| 09. | 21-22 Dec. 2021 | Shri Mata Vaishno Devi University, Katra | **Convener**- Two Day Webinar on National Mathematics Day (Sponsored by J&K Science Technology Innovation & Council) | Two-Day Webinar on Celebration on National Mathematics Day (Sponsored by J&K Science Technology Innovation & Council) |
| 10. | March 2022 (Proposed) | Shri Mata Vaishno Devi University, Katra | **Convener**- One Week Webinar on Life and Work of Srinivasa Ramanujan (Sponsored by J&K Science Technology Innovation & Council) | One Week Webinar on Life and Work of Srinivasa Ramanujan (Sponsored by J&K Science Technology Innovation & Council) |

**Workshops /FDP/Training Programs/Summer/Winter School Attended:**

| S. No. | Month & Year | Institute /Industry | Sponsored by | Name of the Course |
|---|---|---|---|---|
| 01. | Dec. 2008 | Sardar Vallabhbhai National Institute of Technology (SVNIT) Surat, 2008 | AICTE Sponsored Staff Development Programme | Applications of Mathematical Sciences and Soft Computing |

| | | | | |
|---|---|---|---|---|
| 02. | July 2009 | Banaras Hindu University (BHU), Varanasi, 2009 | DST Sponsored National Workshop Cum Training Prog. | Advanced Numerical Techniques and Applications |
| 03. | July 2009 | Jai Narain College of Technology, Bhopal, 2009 | ISTE Approved Short Term Training Programme | Applications of MATLAB in Science and Technology |
| 04. | Feb. 2010 | VNS Institute of Technology, Bhopal, 2010. | AICTE Sponsored Staff Development Programme | Recent Trends and Practices in Data Mining and Data Warehousing Technique |
| 05. | July 2010 | Truba Institute of Engineering and Information Technology, Bhopal | Indian Society for Technical Education (ISTE) and Wipro | Mission 10X |
| 06. | Dec. 2011 | Madhav Institute of Technology and Science, Gwalior | AICTE Sponsored Staff Development Programme | Soft Computing Tech. for Improvement of Processes and Systems in Chemical Engg. |
| 07. | Jan. 2012 | Lakshmi Narain College of Technology, Bhopal | Tata Consultancy Services | Data Warehousing |
| 08. | Jan. 2013 | Maulana Azad National Institute of Technology (MANIT), Bhopal | TEQIP-II | Intelligent Computing Techniques in Data Mining |
| 09. | May 2013 | Maulana Azad National Institute of Technology (MANIT), Bhopal | TEQIP-II | Workshop on Theory and Practice in Natural Language Processing |
| 10. | June 2013 | Rajiv Gandhi Proudyogiki Vishwavidyalaya, M.P. | AICTE Short Term Training Program Under TEQIP-II | Wireless Digital Communication |
| 11. | Feb. 2014 | Lakshmi Narain College of Technology, Bhopal | Vedisoft Academy, Bhopal | Linux Training Workshop |
| 12. | Jan. 2015 | EDI Ahemdabad and CRO, Rolta Incubation Centre MANIT, Bhopal | DST, Govt. of India and NSTEDB | FDP on Entrepreneurship |
| 13. | Sep. 2015 | Madhav Institute of Technology and Science, Gwalior, M.P. | DTE, Govt. of Madhya Pradesh | Research Methodology in Entrepreneurship Management |

| | | | | |
|---|---|---|---|---|
| 14. | 14-15 Oct 2015 | Madhav Institute of Technology and Science, Gwalior, M.P. | TEQIP-II | National Workshop on Application of MATLAB in Electrical Engineering |
| 15. | 12-16 March 2018 | Madhav Institute of Technology and Science, Gwalior, M.P. | TEQIP-III | Outcome Based Education |
| 16. | 03-07 Dec. 2018 | IIM Trichy Professional Development Training under | TEQIP-III | Professional Development Training |
| 17. | 26 April 2020 | Shri Rajasthani Seva Sangh's Smt. Parmeshwaridevi Durgadutt Tibrewala Lions Juhu College of Arts, Commerce and Science | IQAC & Department of Commerce | Quiz on Awareness: COVID -19 |
| 18. | 23-24th May 2020 | Faculty of science, R.R.P.G. College Amethi, (U. P.), India. | R.R.P.G. College Amethi, (U. P.) | International Webinar on Covid-19 |
| 19. | 03-07 June 2020 | Bannari Amman Institute of Technology, Chennai | Anna University, Chennai | International FDP Mathematical Modeling in Multidisciplinary Domain (Online) |
| 20. | 10 June 2020 | Department of Computer Engg. P.V. P.P. College of Engg. Mumbai. | P.V. P.P. College of Engg. Mumbai | Completed National Level Quiz on NBA |
| 21. | 10 June 2020 | Department of Computer Engg. P.V. P.P. College of Engg. Mumbai. | P.V. P.P. College of Engg. Mumbai | Completed National Level Quiz on NAAC |
| 22. | Aug. 12-Aug. 25, 2020 | Teaching Learning Centre Ramanujan College, University of Delhi (MHRD, PMMMNMTT) | MHRD, Sponsored Under PMMMNMTT, Ramanujan College, Uni. of Delhi | Quantitative Methods for Data Science |
| 23. | July. 25-Aug. 10, 2020 | Teaching Learning Centre Ramanujan College, University of Delhi (MHRD, PMMMNMTT) | MHRD, Sponsored Under PMMMNMTT, Ramanujan | Quantitative Managing Online Classes and Co-creating MOOC's 3.0 |

| | | | | |
|---|---|---|---|---|
| | | | College, Uni. of Delhi | |
| 24. | 04-07 Dec., 2020 | BVB College of Engineering & Technology Hubballi | National Project Implementation Unit (NPIU) | 4 Days Online Workshop on Train the Trainers on Examination Reforms |
| 25. | Jan., 30 - Feb., 14, 2021 | Teaching Learning Centre Ramanujan College, University of Delhi (MHRD, PMMMNMTT) | MHRD, Sponsored Under PMMMNMTT, Ramanujan College, Uni. of Delhi | Advanced Research Methodology Tools and Techniques |
| 26. | $25^{th}$ – $28^{th}$ August 2021 | Complex Systems and Dynamical Group, Indian Institute of Technology, Madras | Indian Institute of Technology, Madras | Networks and Dynamical Systems: An International Workshop |

**RESEARCH GUIDANCE:**

**(1) Ph.D. SUPERVISED *(Awarded/Submitted/Ongoing)*:**

| **S. No.** | **Name of Student** | **Title of Ph.D. Thesis** | **Supervisor / Co-supervisor** | **Status** | **Remark** |
|---|---|---|---|---|---|
| 1. | K. Deshmukh | Object Retrieval and Matching of Content Based Images Using Different Graphical Models | Supervisor | Awarded in 2018 | Assistant Professor in K.J. Somaiya Col. of Engg. Mumbai |
| 2. | Siddharth Singh Chouhan | Plant Leaves Disease Segmentation and Classification using Soft Computing Approaches | Co-supervisor | Awarded in 2020 | Assistant Professor in VIT Bhopal (Regular) |
| 3. | Jasvinder Pal Singh | Multi-Gait Occlusion Reconstruction and Identification using Hybrid-NN | Co-supervisor | Awarded in 2020 | Assistant Professor in CU Jammu (Regular) |
| 4. | Gourav Kumar | Hybrid Evolutionary Neural Networks Approach for Stock Market Prediction | Co-supervisor | Awarded in 2023 | Assistant Professor in CU Jammu (Regular) |
| 5. | Swati Jasrotia | Generalized Sequence Spaces & their Matrix Transformations | Co-supervisor | Awarded in 2023 | Working as Guest Faculty at CU |
| 6. | Rahul Kumar | Design of Adaptive Controllers for Uncertain | Supervisor | Awarded in 2023 | Assistant Professor in |

| | | | | | |
|---|---|---|---|---|---|
| | | Nonlinear Discrete-Time Systems with Unknown Disturbances using Soft Computing Techniques | | | MITS Gwalior (Regular) |
| 7. | Arun Bali | Design of Some Adaptive Controllers for Non-Linear Systems Using Computational Intelligence Techniques | Supervisor | Awarded in 2023 | Working as Guest Faculty at CU |
| 8. | Shubhangi Solanki | Study and Development of Medical Image Denoising Using Soft Computing Techniques | Co-Supervisor | Submitted | Working as Associate Prof. & Head in SKNSITS Lonavala |
| 9. | Navneet Kour | Study and Design of Adaptive Controllers for Nonlinear Systems with Faults | Co-Supervisor | Ongoing (from SMVDU, Katra) | ---------- |
| 10. | Simran Kharka | Study of Adaptive Neural Network Control for Class of Nonlinear Systems and Its Stability Analysis | Co-Supervisor | Ongoing (from SMVDU, Katra) | ---------- |
| 11. | Mahiwal Singh | Study and Analysis of Nonlinear Dynamical Systems (Tentative) | Supervisor | Ongoing | ---------- |

**(2) POST-GRADUATE**

| **S. No.** | **Name of Students** | **Title of Dissertation/Thesis** | **Status** |
|---|---|---|---|
| 1. | K. Chopra | Image Authentication Using Slepian Wolf Coding | Completed |
| 2. | P. Srivastava | Noise Removal Using First Order Neighbourhood Mean Filter | Completed |
| 3. | R.K. Sharma | Face Detection and Matching using Dynamic Region Merging | Completed |
| 4. | M. Verma | Image Compression using Discrete Wavelet Transform and JPEG with Arithmetic Coding | Completed |
| 5. | G S Chandel | Improve Efficiency of FP-Growth Tree using Database Projection for Dynamic Dataset | Completed |
| 6. | N. Mishra | Medical Image Registration Using Genetic Algorithm | Completed |
| 7. | R. Gupta | Video Segmentation using k-mean Algorithm on Moving Sliding Window | Completed |

| | | | |
|---|---|---|---|
| 8. | G S Dhakad | Image segmentation using signed pressure force function based active contour models | Completed |
| 9. | Rushali and Pooja Devi | Convergence Analysis of Particle Swarm Optimization | Completed |
| 10. | R. Sharma and Twinkle Gandral | Convergence Analysis of Particle Swarm Optimization | Completed |
| 11. | Anuradha and Sakshi Sharma | Study of Non-Linear Dynamical Systems | Completed |
| 12. | Poonam Kumari, Simran and Aarti | Cryptography | Completed |
| 13. | Sonia Suchal, Ishani Mahajan | Lyapunov Stability Criteria | Completed |
| 14. | Rupali, Amit Sharma & | Study of Dynamical Systems | Completed |
| 15. | Manju Devi, Kritika Sharma | Applications of Finite Fields | Completed |
| 16. | Abhishek, Nikhil Sharma | Study of Linear Dynamical Systems | Completed |
| 17. | Akshita Sharma, Satbir Singh | Application of Laplace Transform for Mechanical Systems | Completed |
| 18. | Simran Mantokia, Vasundhra Parihar | Analysis of State Space Systems | Completed |
| 19. | 22MMAT03 | Study of stability theorem using Lyapunov method | Completed |
| 20. | 22MMAT19 | Study of mathematical modelling for electromechanical systems | Completed |
| 21. | 22MMAT26 | Study of Controllability and observability of linear dynamical system | Completed |
| 22. | 22MMAT29 | Study of dynamical systems | Completed |
| 23. | 22MMAT35 | Study of second order linear partial differential equations | Completed |
| 24. | 22MMAT41 | Mathematical modelling through differential equation of first order | Completed |
| 25. | 22MMAT47 | Study of numerical solutions for elliptic equations | Completed |
| 26. | 22MMAT62 | Study of soft computing techniques and its applications | Completed |
| 27. | 22MMAT64 | Study of state space representation of dynamical systems | Completed |

**Computer Skills:**

**[1]. Programming Languages**: C, C++.

**[2]. Operating Systems**: Windows 11, Windows 10, Ubuntu.

**[3]. Software Packages**: MATLAB, LaTeX, Maple and Mathematica.

**RESEARCH PUBLICATIONS:**

## A1: Books:

[1]. S.S. Chouhan, Akash Saxena, **Uday Pratap Singh** and S. Jain, "Artificial Intelligence in Smart Agriculture", **Publisher: Springer**, DOI:10.1007/978-981-97-5878-4, **ISBN:978-981-97-5878-4.**

[2]. S.S. Chouhan, **Uday Pratap Singh and** S. Jain, "Applications of Computer Vision and Drone Technology in Agriculture 4.0", **Publisher: Springer**, DOI: 10.1007/978-981-99-8684-2, **ISBN: 978-981-99-8683-5.**

[3]. S.S. Chouhan, Akash Saxena, **Uday Pratap Singh** and S. Jain, "Artificial Intelligence and Computer Vision Technologies for Ecological Informatics", **Publisher: Taylor & Francis**, Under Publication Process**.**

[4]. V. Sakhre and **Uday Pratap Singh,** "Reactive Distillation Advanced Control Using Neural Networks," **Publisher: De-Gruyter**, DOI: 10.1515/9783110656268 **ISBN:978-3110656145.**

[5]. **Uday Pratap Singh and** S. Jain and Michael Sipser, "Theory of Computation (RGTU), 2/e" **Publisher: Cengage Learning, ISBN: 978-8131514771.**

[6]. **Uday Pratap Singh,** A. Tiwari and R. K. Singh, "Soft Computing-Based Nonlinear Control Systems Design", **Publisher: IGI Global, ISBN: 9781522535317, DOI: 10.4018/978-1-5225-3531-7, Feb. 2018.**

## A2: Book Chapters:

[7]. R. Kumar, **Uday Pratap Singh**, A. Bali and S.S. Chouhan, "IT2 Neuro Fuzzy Wavelet Network with Jordan Feedback Structure for the Control of Aerial Robotic Vehicles with External Disturbances", The Fourth International Conference on Artificial Intelligence and Computational Intelligence (AICI'2023) (Springer), Hanoi, Vietnam, Feb. 18-19, 2023.

[8]. **Uday Pratap Singh,** S. Jain, M. Parmar and R. K. Singh, "Modified Differential Evolution Algorithm Based Neural Network for Nonlinear Discrete Time System", Recent Developments in Intelligent Communication Applications **(IGI Global), (SCOPUS)**, **Chapter:16, pp.397-420, 2016, ISBN:9781522517856.**

[9]. D. Dubey, D. Dubey and **Uday Pratap Singh, "**Performance of Service-Oriented Architecture (SOA): Medical Image Systems for Chronic diseases", Exploring Enterprise Service Bus in the Service-Oriented Architecture Paradigm **(IGI Global), (SCOPUS), Chapter: 20, pp.327-343, 2016, ISBN: 9781522521570.**

[10]. **Uday Pratap Singh** and S. Jain, "Object Extraction Using Topological Models from Complex Scene Image", Advanced Concepts in Real-Time Image and Video Processing, **(IGI Global), Chapter: 13, pp. 335-357,2017, ISBN:9781522528487.**

[11]. **Uday Pratap Singh**, S. Jain, A. Tiwari and R.K. Singh, "Nature Inspired Based Adaptive Neural Network Approximation for Uncertain System", Emergent Research on the Application of Optimization Algorithms, **(IGI Global), Chapter: 19, pp. 439-461, 2017, ISBN: 9781522529903.**

[12]. **Uday Pratap Singh**, S. Jain, D. K. Jain and R.K. Singh, "An Improved RBFNN Controller for a Class of Nonlinear Discrete-Time Systems with Bounded Disturbance", Emergent Research on the Application of Optimization Algorithms, **(IGI Global), Chapter: 28, pp. 439-461, 2017, ISBN: 9781522529903.**

[13]. B. Sowkartika, A. Tiwari and **Uday Pratap Singh**, "Utility and Significance of Vague Set Theory and Advanced Optimization Mechanisms for Uncertainty Management", (Approved) Soft Computing-Based Nonlinear Control Systems Design.**(IGI Global), Chapter:10, pp. 191-219, 2018, ISBN: 9781522535317, DOI: 10.4018/978-1-5225-3531-7.ch010.**

[14]. S. S. Chauhan, U. Sharma and **Uday Pratap Singh**, "Soft Computing Approaches for Image Segmentation", (Approved),Soft Computing-Based Nonlinear Control Systems Design. **(IGI Global), Chapter: 14, pp. 286-310, 2018, ISBN: 9781522535317, DOI: 10.4018/978-1-5225-3531-7.ch014.**

[15]. **Uday Pratap Singh**, S. Jain, D. Dubey and R.K. Singh, "Momentum and Resilient Based Level Set for Medical Image Segmentation", (Approved) Intelligent Multidimensional Data and Image Processing. **(IGI Global), Chapter: 15, pp. 311-342, 2018, ISBN: 9781522535317, DOI: 10.4018/978-1-5225-3531-7.ch015.**

[16]. S. Agarwal, R.K. Singh and **Uday Pratap Singh**, "Fuzzy Counter Propagation Network for Free Hand Sketches Based Image Retrieval", Soft Computing: Theories and Applications **(Springer, SCOPUS Index)**, Bundelkhand University Jhansi (U.P.), 22-24 Dec. 2017, 978-3-031-23635-8.

[17]. J S Kumre, P. Gupta, **Uday Pratap Singh** and Rajeev Kumar Singh, "An Efficient Contrast Enhancement Technique Based on Firefly Optimization", Soft Computing: Theories and Applications **(Springer SCOPUS Index)**, Bundelkhand University Jhansi (U.P.), 22-24 Dec. 2017, 978-3-031-23635-8.

[18]. J.S. Kumare, P. Gupta, **Uday Pratap Singh** and R.K. Singh, "An Efficient Brightness preserving Contrast enhancement technique using Discrete wavelet transform and Singular value decomposition wavelet transform and Singular value decomposition", Microelectronics, Computing & Communication Systems **(MCCS- 2017, Springer SCOPUS Index)**, 13-14 May, Ranchi, 978-981-10-8234-4.

[19]. R.K. Singh, S. Agarwal, **Uday Pratap Singh** and S. Jain, "Intelligent Image Retrieval via Deep Learning Techniques", Deep Learning for Image Processing Applications, IOS Press, 2017, **(SCOPUS Index)** DOI: 10.3233/978-1-61499-822-8-68.

[20]. P. Agarwal, A. Tiwari and **Uday Pratap Singh,** "An Innovative Design of RF Energy Harvester for Wireless Sensor Devices", Soft Computing-Based Nonlinear Control Systems Design.**(IGI Global), Chapter:15, pp. 311-342, 2018, ISBN: 9781522535317, DOI: 10.4018/978-1-5225-3531-7.ch015.**

[21]. J.S. Kumare, P. Gupta, **Uday Pratap Singh** and R.K. Singh "An Efficient Brightness preserving Contrast enhancement technique using Discrete wavelet transform and Singular value decomposition wavelet transform and Singular value decomposition", Microelectronics, Computing & Communication Systems **(MCCS- 2019, Springer SCOPUS Index)**, 13-14 May, Ranchi.

[22]. S. Agarwal, R.K. Singh and **Uday Pratap Singh** "Fuzzy Counter Propagation Network for Freehand Sketches-Based Image Retrieval" Soft Computing: Theories and Applications, Advances in Intelligent Systems and Computing, DOI.: 10.1007/978-981-13-0589-4-17, **2019 Springer SCOPUS Index)**, 22-24 Dec, Jhansi.

[23]. P. Gupta, J.S. Kumare, **Uday Pratap Singh** and R.K. Singh "An Efficient Contrast Enhancement Technique Based on Firefly Optimization", Soft Computing: Theories and Applications, Advances in Intelligent Systems and Computing, DOI.: 10.1007/978-981-13-0589-4-18, **2019 Springer SCOPUS Index)**, 22-24 Dec, Jhansi.

**B1: PATENT FILED / PUBLISHED/AWARDED:**

[1]. Convertible solar pawer robot for precision agriculture, 202421000134 (Application No.) 546635 (Patent No.).

[2]. An Electronic Device for Medical Image Processing, 435834-001 (Design No.) 188314 (Serial No.).

[3]. A Method and A System for Human Identification Human Identification in Multi-Gait Scenario, (Application No.: 201911029219 A).

[4]. Device to Automatically Configure a Firewall and Monitor Network, (Application No.: 201921017918 A).

**B2: DATA SET:**

[1]. S.S. Chouhan, A. Koul, **Uday Pratap Singh**, and S. Jain, "A Database of Leaf Images: Practice Towards Plant Conservation with Plant Pathology", MENDELEY DATASET, https://data.mendeley.com/datasets/hb74ynkjcn/1, 6th June 2019, DOI:10.17632/hb74ynkjcn.1.

[2]. J.P. Singh, S. Jain, S. Arora and **Uday Pratap Singh**, "Dataset for Human Recognition under Multi-Gait Scenario", MENDELEY DATASET, DOI: 10.17632 /py4zw6g 7xc.2, https://data. mendeley.com/datasets /py4zw6g7xc/2, 6th June 2019.

**B3: INTERNATIONAL / NATIONAL JOURNALS:**

**Cumulative Impact Factor: 146.81**

[1]. S.Kharka, S.Sharma, A.Bali and **Uday Pratap Singh**, "Adaptive Global Asymptotic Control for Time-Varying Complex Systems with Input Saturation Under Prescribed Performance Constraints," Circuits, Systems, and Signal Processing **(Springer), IF:**

**2.31, 2025,** Accepted, **ISSN: 1531-5878.**

[2]. R. Kumar, R. Dey, K. Guelton, A. Bali and **Uday Pratap Singh**, "Adaptive Control for Cyber-Physical Systems Under Man-in-the-Middle Attacks with False Data Injections", Journal of the Franklin Institute **(Elsevier) IF: 4.10,** 2024**, DOI:** 10.1016/j.jfranklin.2024.106661, **ISSN: 1879-2693.**

[3]. N. Kour, K. Raj, A. Bali and **Uday Pratap Singh**, "Adaptive Fault-Tolerant Control for Switched Nonlinear Systems with Input Deadzone and Sensor Faults", International Journal of Control **(Taylor & Francis), IF: 2.89,** 2024, DOI: 10.1080/00207179.2024.2433972, **ISSN: 1366-5820**

[4]. S.S. Chouhan, **Uday Pratap Singh**, and S. Jain, "Performance evaluation of different Deep Learning models used for the purpose of healthy and diseased leaves classification of Cherimoya (Annona Cherimola) Plant", Neural Computing and Applications **(Springer)**, **IF: 4.5,** (2024), DOI: 10.1007/s00521-024-10830-x, **ISSN: 1433-3058**.

[5]. S.S. Chouhan, **Uday Pratap Singh**, U. Sharma and S. Jain, "Classification of different Plant Species using Deep Learning and Machine Learning algorithms", Wireless Personal Communications (**Springer**), **IF: 1.67,** 2024, **DOI:** 10.1007/s11277-024-11374-y, **ISSN: 1572-834X**.

[6]. A. Bali, **Uday Pratap Singh**, R. Kumar, and S. Jain, "Neural Networks Based-Adaptive Control of Nonlinear Ship Manoeuvring System", Journal of Control, Automation and Electrical Systems (Springer), IF: 1.50, 2024, DOI: 10.1007/s40313-024-01065-1, **ISSN: 2195-3899.**

[7]. A. Bali, **Uday Pratap Singh**, R. Kumar, and S. Jain, "Neural networks-based adaptive output-feedback control design for nonlinear systems with dead zone output and uncertain disturbances", International Journal of Control **(Taylor & Francis), IF: 2.89, 2023,** DOI: 10.1080/00207179.2023.2263591, **ISSN: 1366-5820.**

[8]. R. Kumar, **Uday Pratap Singh**, A. Bali, S.S. Chouhan and A.K. Tiwari, "Adaptive Control of Unknown Fuzzy Disturbance-Based Uncertain Nonlinear Systems: Application to Hypersonic Flight Dynamics", Journal of Analysis **(Springer), IF:**

**0.80, 2023,** DOI: 10.1007/s41478-023-00687-z, **ISSN: 2367-2501.**

[9]. G. Kumar, **Uday Pratap Singh** and S. Jain, "Stock price forecasting based on the relationship among Asian stock markets using deep learning", Concurrency and Computation Practice and Experience **(Wiley)**, **IF**: 2.0, 2023, DOI: 10.1002/cpe.7864, **ISSN:1532-0634.**

[10]. S. Solanki, S.S. Chouhan, **Uday Pratap Singh**, and S. Jain, "A Systematic Analysis of Magnetic Resonance Images and Deep Learning Methods Used for Diagnosis of Brain Tumor", Multimedia Tools and Applications **(Springer), IF: 3.6,** DOI:10.1007/s11042-023-16430-6**, 2023, ISSN: 1573-7721.**

[11]. Arun Bali, S.S. Chouhan, G. Kumar, R. Kumar, **Uday Pratap Singh**, "Adaptive Fault-Tolerant Control for Pure-Feedback Stochastic Nonlinear Systems With Sensor and Actuator Faults", Circuits, Systems, and Signal Processing **(Springer), IF: 2.31, 2023,** DOI:10.1007/s00034-023-02366-7, 2023, **ISSN: 1531-5878.**

[12]. Arun Bali, **Uday Pratap Singh,** Rahul Kumar, and S. Jain, "Adaptive Finite-Time Fault-Tolerant Control for Switched Nonlinear Systems with Actuator Fault and Dead-Zone via Prescribed Performance", European Journal of Control (**Elsevier)**, **IF: 2.65**, **2023,** DOI: 10.1016/j.ejcon.2023.100799, **2023, ISSN: 0947-3580.**

[13]. S. Solanki, S.S. Chouhan, **Uday Pratap Singh**, and S. Jain, "Brain Tumor Detection and Classification using Intelligence Techniques: An Overview" **IEEE Access** (**IEEE**), **IF: 3.58**, **2023,** DOI: 10.1109/ACCESS.2023.3242666, 2023, **ISSN: 1886-1784.**

[14]. S. Solanki, Uday Pratap Singh, S.S. Chouhan, and S. Jain, "Brain Tumor Detection and Classification by using Deep Learning Classifier", International Journal of Intelligent Systems and Applications in Engineering **(SCOPUS),** Vol. 11, No. 2, pp. 279–292 **ISSN: 2147-6799.**

[15]. Arun Bali, **Uday Pratap Singh,** Rahul Kumar, and S. Jain, "Hybrid Neural Network Control of Uncertain Switched Nonlinear Systems with Bounded Disturbance", International Journal of Robust and Nonlinear Control **(Wiley)**, **IF: 3.897, 2022,** DOI:10.1002/rnc.6533, **ISSN:1099-1239.**

[16]. Arun Bali, **Uday Pratap Singh,** and Rahul Kumar, "Hybrid Neural Network Control Design for Uncertain Switched Nonlinear Systems with External Disturbances: Application to Ship Manoeuvring System", Transactions of the Institute of Measurement and Control (**Sage**), **IF: 2.14, 2022,** DOI: 10.1177/01423312221141633, **ISSN: 1477-0369**.

[17]. J.P. Singh, **Uday Pratap Singh** and S. Jain, "Model Based Person Identification in Multi-Gait Scenario using Hybrid Classifier", Multimedia Systems (**Springer**), **IF: 2.63, 2022,** DOI: 10.1007/s00530-022-01041-2, **ISSN: 1432-1882**.

[18]. Arun Bali, **Uday Pratap Singh,** and Rahul Kumar, "Adaptive neural control for nonlinear systems with sensor fault and input nonlinearities", Soft Computing (**Springer**), **IF: 3.73, 2022,** DOI: 10.1007/s00500-022-07585-9, **ISSN: 1433-7479**.

[19]. Arun Bali, **Uday Pratap Singh,** Rahul Kumar, and K. Raj, "Multi-dimensional Taylor Network-Based Fault-Tolerant Control for Nonlinear Systems with Unmodeled Dynamics and Actuator Faults", Neural Processing Letters (**Springer**), **IF: 2.56, ISSN: 1573-773X**, DOI:10.1007/s11063-022-11027-w.

[20]. Rahul Kumar, **Uday Pratap Singh,** Arun Bali, and S. Jain, "Neuro-Fuzzy Elman Wavelet Control for Nonlinear Uncertain Systems with Fuzzy Input and Unknown Fuzzy Disturbances: Application to Robotics", International Journal of Adaptive Control and Signal Processing, **(Wiley), IF: 3.63, 2022,** DOI: 10.1002/acs.3493, **ISSN: 1099-1115,**

[21]. G. Kumar, **Uday Pratap Singh** and S. Jain, "An Adaptive Particle Swarm Optimization based Hybrid Long Short-Term Memory Model for Stock Price Time Series Forecasting", Soft Computing (**Springer**), **IF: 3.73, 2022,** DOI:10.1007/s00500-022-07451-8, **ISSN: 1433-7479.**

[22]. Arun Bali, **Uday Pratap Singh,** Rahul Kumar, and K. Raj, "Hybrid Neural Network Control for Nonlinear Continuous-Time Systems with Time Delays and Dead Zone Input", International Journal of Adaptive Control and Signal Processing, **(Wiley)**, **IF: 3.63, 2022,** DOI: 10.1002/acs.3403, **ISSN: 1099-1115.**

[23]. Rahul Kumar, **Uday Pratap Singh,** Arun Bali, and K. Raj, "Hybrid Neural Network

Controller for Uncertain Nonlinear Discrete-Time Systems with Non-Symmetric Dead Zone and Unknown Disturbances", International Journal of Control, **(Taylor & Francis), IF: 2.89, 2022,** DOI:10.1080/00207179.2022. 2080117, **ISSN: 1366-5820.**

[24]. Rahul Kumar, **Uday Pratap Singh,** Arun Bali, and K. Raj, "Hybrid Neural Network Control for Uncertain Nonlinear Discrete-Time Systems with Bounded Disturbance", Wireless Personal Communications (**Springer**), **IF: 1.67,** 2022, DOI:10.1007/s11277-022-09875-9**, ISSN: 1572-834X.**

[25]. J.P. Singh, S. Jain, **Uday Pratap Singh** and S. Arora, "Hybrid neural network model for reconstruction of occluded regions in multi-gait scenario", Multimedia Tools and Applications (**Springer**), **IF: 2.57, 2022, ISSN: 1432-1882,** DOI:10.1007/s11042-022-11964-7.

[26]. S. Jasrotia, **Uday Pratap Singh**, K. Raj, "Applications of statistically probability convergence to approximation theorem", Mathematical Methods in Applied Sciences, **(Wiley)**, **IF: 2.32, 2021, ISSN: 1099-1476,** DOI: 10.1002/mma.8067**.**

[27]. G. Kumar, **Uday Pratap Singh** and S. Jain, "Swarm Intelligence Based Hybrid Neural Network Approach for Stock Price Forecasting", Computational Economics **(Springer)**, **IF: 1.88**, 2021, **ISSN:1572-9974**, DOI:10.1007/s10614-021-10176-9.

[28]. G. Kumar, **Uday Pratap Singh** and S. Jain, "Hybrid Evolutionary Intelligent System and Hybrid Time Series Econometric Model for Stock Price Forecasting" International Journal of Intelligent Systems, (**Wiley**), **IF: 10.312**, 2021, **ISSN: 1098-111X,** DOI: 10.1002/int.22495**.**

[29]. S.S. Chouhan, **Uday Pratap Singh**, S. Jain "Automated Plant Leaf Disease Detection and Classification Using Fuzzy Based Function Network", Wireless Personal Communications (**Springer**), **IF: 1.67,** 2021, **ISSN: 1572-834X,** DOI: 10.1007/s11277-021-08734-3.

[30]. S.S. Chouhan, **Uday Pratap Singh,** U. Sharma and S. Jain, "Leaf Disease Segmentation and Classification of Jatropha Curcas L. and Pongamia Pinnata L. Biofuel Plants using Computer Vision based approaches," Measurement Journal

**(Elsevier)**, **IF: 3.927,** Nov., 2020 **ISSN: 0263-2241,** DOI: 10.1016/j. measurement. 2020.108796.

[31]. S. Jasrotia, **Uday Pratap Singh**, K. Raj, Applications of deferred Cesaro statistical convergence of sequences of fuzzy numbers of order $(\xi, \omega)$, Journal of Intelligent & Fuzzy Systems **(IOS Press)**, **IF: 1.85,** Oct. 2021 **ISSN: 1875-8967**, DOI: 10.3233/JIFS-211201.

[32]. S. Jasrotia, **Uday Pratap Singh**, K. Raj, "Some new observations on Catalan almost convergent sequence spaces and the Catalan core", Acta Sci. Math. (Szeged), SCOPUS Indexed, 87 (2021), 295-305, **ISSN: 2064-8316,** DOI: 10.14232/ actasm-020-793-6.

[33]. S. Jasrotia, **Uday Pratap Singh,** K. Raj, "Applications of Statistical Convergence of order $(\eta, \delta + \gamma)$ in difference sequence spaces of fuzzy numbers," Journal of Intelligent & Fuzzy Systems **(IOS Press)**, **IF: 1.85,** Nov., 2020 **ISSN: 1875-8967**, DOI: 10.3233/JIFS-201539.

[34]. G. Kumar, S. Jain and **Uday Pratap Singh**, **"**Stock Market Forecasting Using Computational Intelligence: A Survey", Archives of Computational Methods in Engineering (**Springer**), **IF: 7.24**, 2020, **ISSN: 1886-1784, DOI: 10.1007/s11831-020-09413-5.**

[35]. S.S. Chouhan, **Uday Pratap Singh** and S. Jain, "Web facilitated Anthracnose disease segmentation from the leaf of Mango tree using Radial basis function (RBF) neural network," Wireless Personal Communications (**Springer**), **IF: 1.10,** 2020 **ISSN: 1572-834X,** DOI: 10.1007/s11277-020-07279-1.

[36]. S.S. Chouhan, **Uday Pratap Singh** and S. Jain, "Images as Graphical Password: Verification and Analysis using Non-Regular Low-Density Parity Check Coding," International Journal of Information Technology (**Springer**), May, 2020 **ISSN: 2511-2112, DOI: 10.1007/s41870-020-00477-x.**

[37]. J.P. Singh, S. Jain, S. Arora and **Uday Pratap Singh**, "A Survey of Behavioral Biometric Gait Recognition: Current Success and Future Perspectives", Archives of Computational Methods in Engineering (**Springer**), **IF: 7.24**, 2020, **ISSN: 1886-**

**1784, DOI:10.1007/s11831-019-09375-3.**

[38]. J.P. Singh, S. Jain, S. Arora and **Uday Pratap Singh**, “Reconstruction of Occluded ROI in Multi-person Gait Based on Numerical Methods”, Multimedia Systems (**Springer**), **IF: 2.63,** 2019**, ISSN: 1432-1882,** DOI: 10.1007/S00530-019-00641-9.

[39]. **Uday Pratap Singh**, S.S. Chouhan, and S. Jain, “Image Segmentation Using Fuzzy Competitive Learning Based Counter Propagation Network”, Multimedia Tools and Applications **(Springer), IF: 2.58, 2018, ISSN: 1573-772, DOI: 10.1007/s11042-019-08094-y**

[40]. **Uday Pratap Singh**, S.S. Chouhan, S. Jain and S. Jain, "Multilayer Convolution Neural Network for the Classification of Mango Leaves Infected by Anthracnose Disease" **IEEE Access** (**IEEE**), **IF: 4.09**, DOI: 10.1109/ACCESS.2019.2907383, 2019, **ISSN: 1886-1784.**

[41]. **Uday Pratap Singh,** S. Jain, R.K. Gupta and A. Tiwari, “AFMBC for a Class of Nonlinear Discrete-Time Systems with Dead Zone”, International Journal of Fuzzy Systems (**Springer**), **IF: 4.673**, 2019, (Accepted), **ISSN: 2199-3211, DOI: 10.1007/s40815-019-00621-1.**

[42]. S.S. Chouhan, **Uday Pratap Singh** and S. Jain, "Application of Computer Vision in Plant Pathology: A Survey," Archives of Computational Methods in Engineering (**Springer**), **IF: 7.24**, (Accepted), 2019, **ISSN: 1886-1784.**

[43]. J.S. Rajput, A. K. Saxena and **Uday Pratap Singh**, "Application of Mathematical Modeling for the Prediction of NOx Concentration due to Vehicular Emission and Model Performance in Gwalior City, (M.P.)", International Journal of Innovative Science and Research Technology**,** Vol.4, No. 1, 2019, **ISSN: 2456-2165.**

[44]. J.P. Singh, S. Jain, S. Arora and **Uday Pratap Singh**, "Vision-Based Gait Recognition: A Survey," **IEEE Access** (**IEEE**), **IF: 4.09**, DOI: 10.1109/ACCESS.2018.2879896, 2018, **ISSN: 1886-1784.**

[45]. V. Sakhre, S. Jain, and **Uday Pratap Singh**, "Fuzzy Induced Counter Propagation Neural Network (FCPN) for the Control of Reactive Distillation Column", Journal of Advanced Research in Dynamical & Control Systems, Vol. 10, No. 13 (Special

Issue), **(SCOPUS)** 2018, **ISSN: 1943-023X.**

[46]. S. Agarwal, R.K. Singh, **Uday Pratap Singh** and S. Jain, "Biogeography Particle Swarm Optimization Based Counter Propagation Network for Sketch Based Face Recognition," Multimedia Tools and Applications **(Springer), IF: 2.10, 2018, ISSN: 1573-7721.**

[47]. S.S. Chouhan, A. Koul and **Uday Pratap Singh**, "Image Segmentation using Computational Intelligence Techniques: Review," Archives of Computational Methods in Engineering (**Springer**), **IF: 7.24**, DOI:10.1007/s11831-018-9257-4, 2018, **ISSN: 1886-1784.**

[48]. **Uday Pratap Singh**, S. Jain, A. K. Tiwari and R. K. Singh, "Gradient Evolution Based Counter Propagation Network for Approximation of Noncanonical System," Soft Computing (**Springer**), **IF: 2.36**, 2018. DOI:10.1007/s00500-018-3160-7, **ISSN: 1433-7479.**

[49]. S.S. Chouhan, A. Koul and **Uday Pratap Singh**, "Soft Computing approaches for Image Segmentation: A Survey," Multimedia Tools and Applications **(Springer), IF: 2.10, 2018, ISSN: 1573-7721, DOI:** 10.1007/s11042-018-6005-6.

[50]. S.S. Chouhan, A. Koul and **Uday Pratap Singh**, "Bacterial Foraging Optimization Based Radial Basis Function Neural Network (BRBFNN) for Identification and Classification of Plant Leaf Diseases: An Automatic Approach Towards Plant Pathology," **IEEE Access** (**IEEE**), **IF: 4.09**, **DOI: 10.1109/ACCESS.2018.2800685**, 2018, **ISSN: 1886-1784.**

[51]. **Uday Pratap Singh** and Sanjeev Jain, "Optimization of Neural Network for Nonlinear Discrete Time System Using Modified Quaternion Firefly Algorithm: Case Study of Indian Currency Exchange Rate Prediction," Soft Computing (**Springer**), **IF: 2.36**, Vol. 22, No. 8, pp. 2667–2681, 2018. DOI: 10.1007/s00500-017-2522-x, 2017, **ISSN: 1433-7479.**

[52]. Vandana Sakhre, **Uday Pratap Singh** and Sanjeev Jain, "FCPN Approach for Uncertain Nonlinear Dynamical System with Unknown Disturbance," International Journal of Fuzzy Systems (**Springer**), **IF: 3.10**, Vol. 19, No. 4, 2017,

**DOI:10.1007/s40815-016-0145-5**, **ISSN: 2199-3211.**

[53]. **Uday Pratap Singh** and S. Jain, A. Tiwari and R.K. Singh, "Approximation of Nonlinear Discrete Time System Using FA Based Neural Network", Granular Computing (**Springer**), Vol. 3, No. 1, pp. 49-59, 2017, **DOI: 10.1007/s41066-017-0055-4**, **ISSN: 2364-4974.**

[54]. **Uday Pratap Singh** and S. Jain, "Modified Chaotic Bat Algorithm-Based Counter Propagation Neural Network for Uncertain Nonlinear Discrete Time System," International Journal of Computational Intelligence and Applications (**World Scientific**), **IF: 0.719**, Vol. 15, No. 3, 2016, 1650016, DOI: 10.1142/S1469026816 500164, **ISSN: 1757-5885**.

[55]. S. Agarwal, R.K. Singh and **Uday Pratap Singh,** "Adaptive Neural Network for Sketch Based Image Retrieval", International Journal of Advanced Research in Computer Science, Vol. 8, No. 7, 2017, **ISSN: 0976-5697**.

[56]. R.K. Sharma and **Uday Pratap Singh**, "Image Compression Using Differential Pulse Code Modulation," International Journal of Multidisciplinary Research and Technology, Vol. 2, No. 1, pp. 1-4, Jan. 2017.

[57]. **Uday Pratap Singh** et. al., "Dynamic Surface Control Based TS-Fuzzy Model for a Class of Uncertain Nonlinear Systems", International Journal of Control Theory and Applications (**SCOPUS**)IF: 0.56, Vol. 9, No. 2, May 2016, **ISSN: 0974-5572**.

[58]. K. Deshmukh and **Uday Pratap Singh**, "A Novel Approach for Region Based Image Partitioning Methods Using Graphical Model," International Journal of Control Theory and Applications (**SCOPUS**) IF: 0.56, Vol. 9, No. 23, Oct. 2016, **ISSN: 0974-5572**.

[59]. **Uday Pratap Singh** et. al., "Adaptive Neural Network Controller for Nonlinear Discrete Time Systems with Bounded Disturbances," International Journal of Control Theory and Applications (**SCOPUS**) IF: 0.56, Vol. 9, No. 23, Oct. 2016, **ISSN: 0974-5572**.

[60]. S. Singh, R. K. Singh, and **Uday Pratap Singh**, "Intensification of Packet Delivery and Meliorating Security in VANET using ONE Simulator," International Journal of

Control Theory and Applications, (**SCOPUS**) IF: 0.56, Vol. 9, No. 20, Sep. 2016, **ISSN: 0974-5572**.

[61]. V. Sharma, G.S. Chandel and **Uday Pratap Singh**, "Different Image Encryption Techniques-Survey and Overview," International Journal of Advanced Research Computer Science and Software Engineering, Vol. 6, No. 8, 2016, **ISSN: 2277-128X**.

[62]. G. Singh and **Uday Pratap Singh**, "A Review of Object Detection and Tracking in Video Image," International Journal of Engineering, Management & Medical Research (IJEMMR), Vol. 1, No. 3, March-2015, **ISSN: 2395-2180**.

[63]. R. Singh and **Uday Pratap Singh**, "IEEE 802.11 Wireless Local Area Networks: A Review," International Journal of Engineering, Management & Medical Research (IJEMMR), Vol. 1, No. 3, March-2015, **ISSN: 2395-2180**.

[64]. P. Srivastava and **Uday Pratap Singh**, and V. Richhariya, "Removal of Impulse Noise using First Order Neighborhood Mean Filter" International Journal of Computer Applications, Vol. 87, No. 4, pp. 34-39, 2014, **ISSN: 1741-5047**.

[65]. D. Misra and **Uday Pratap Singh**, "Survey Paper on Different Techniques of Social Tag Relevance", International Journal of Engineering Research & Technology, Vol.2, No.6, 2013, **ISSN: 0974 –3154**.

[66]. D.Misra, **Uday Pratap Singh** and V. Richhariya, "Tag Relevance for Social Image Retrieval in Accordance with Neighbor Voting Algorithm," Journal of Environmental Science, Computer Science and Engineering & Technology Vol. 5, No. 1 pp. 37-56, Aug. 2013, **ISSN: 2278-179X**.

[67]. P. Srivastava and **Uday Pratap Singh**, "Error Detection and Correction Using Reed Solomon Codes," International Journal of Advanced Research in Computer Science and Software Engineering, Vol. 3, No. 8, Aug. 2013, **ISSN:2277-128X**.

[68]. V. Sakalle, A. Chaturvedi and **Uday Pratap Singh**, "Performance Analysis of Orthogonal Frequency Division Multiplexing System Using MLCFO for fading channel," International Journal of Computer Science and Software Engineering, Vol. 1, No.2, June 2013.

[69]. N. Mishra, **Uday Pratap Singh** and V. Richhariya, "Performance Evaluation in Term

of Genetic Algorithm Based Mutual Information for Image Registration," Pioneer Journal of Computer Science and Engineering Technology, Vol. 4, No. 2, pp. 1-13, 2012, **ISSN**: **2231-184X**.

[70]. D. Sunoriya, **Uday Pratap Singh** and V. Ricchariya, "Image Compression Technique Based on Discrete 2-D wavelet transforms with Arithmetic Coding," International Journal of Advanced Computer Research, Vol. 2, No. 2, pp. 92-99, Sep. 2012, **ISSN: 2277-7970 (Online), ISSN: 2249-7277 (Print)**.

[71]. D. Sunoriya, **Uday Pratap Singh** and V. Ricchariya, "Comparison and Analysis of an efficient Image Compression Technique Based on Discrete 2-D wavelet transforms with Arithmetic Coding," International Journal of Advanced Computer Research, Vol. 2, No. 3, Sep.2012, **ISSN: 2277-7970**.

[72]. P.K. Naroliya, A. Chaturvedi and **Uday Pratap Singh**, "Optical Character Recognition Using SVM Based Segmentation Techniques," Pioneer Journal of Computer Science and Engineering Technology, Vol. 4, No. 2, pp. 27-41, 2012, **ISSN: 2231-184X**.

[73]. P. Gupta, **Uday Pratap Singh** and V. Richhariya, "Analysis and comparison of the 4-PSK and 8-PSK STTC over Rayleigh fading Channels for determining Performance," Pioneer Journal of Computer Science and Engineering Technology, Vol. 3, No. 2, pp. 73-91, June 2012, **ISSN: 2231-184X**.

[74]. A.K. and **Uday Pratap Singh**, "Image Segmentation using Graphical Models: A Survey" International Journal of Emerging Technology and Advanced Engineering, Vol. 2, No. 3, pp.290-294, 2012, **ISSN: 2250–2459**.

[75]. D. Dubey, A. Jain, and **Uday Pratap Singh**, "An Overview on: Image Alignment & Open Issues," International Journal of Advanced Research Computer Science and Software Engineering, Vol. 2, No. 4, pp. 137-142, 2012, **ISSN: 2277-128X**.

[76]. D. Dubey, A. Jain and **Uday Pratap Singh**, "An Image Alignment Based on Enhanced Correlation Coefficient" International Journal of Advanced Research in Computer Science and Software Engineering, Vol.2, No.4, pp. 130-136, 2012, **ISSN: 2277-128X**.

[77]. R.K. Singh, S. Phulre and **Uday Pratap Singh**, "A Review: Semantic Template Matching using Color-Texture features", International Journal of Engineering and Innovative Technology (IJEIT), Vol. 1, No. 3, pp. 68-72, 2012, **ISSN:2277-3754**.

[78]. P. Gupta, and **Uday Pratap Singh**, "Analysis and comparison of the 4-PSK and 8-PSK STTC over Rayleigh fading Channels for determining Performance," International Journal of Advanced Computer Research, Vol. 2, No. 3, pp. 142-149, 2012, **ISSN: 2277-7970**.

[79]. K. Chopra, **Uday Pratap Singh** and V. Richhariya, "Key Generation and Management for Image Encryption and Decryption", Pioneer Journal of Computer Science and Engineering Technology, Vol.3, no.1, pp. 27-34, March 2012, **ISSN: 2231-184X**.

[80]. A. Kumar, **Uday Pratap Singh** and V. Richhariya, "Interactive Image Segmentation and Object Extraction Using Probabilistic Graph", Pioneer Journal of Computer Science and Engineering Technology, Vol.2, no.2, pp. 75-92, 2011, **ISSN: 2231-184X**.

[81]. **Uday Pratap Singh**, K. Saxena and S. Jain, "A Review: Different Types of Similarity Measures", Pioneer Journal of Computer Science and Engineering Technology, vol. 2, no. 1, pp. 43-63, 2011, **ISSN: 2231-184X**.

[82]. **Uday Pratap Singh**, K. Saxena and S. Jain, "Semi-Supervised Method of Multiple Object Segmentation with Region Labeling and Flood Fill", Signal and Image Processing: An International Journal (SIPIJ), vol. 2, no.3, pp. 175-193, 2011, **ISSN: 0976 - 710X**.

[83]. B. Pillai and **Uday Pratap Singh**, "NIDS for Unsupervised Authentication Records of KDD Dataset in MATLAB," International Journal of Advanced Computer Science and Applications (IJACSA) **SCOPUS**, Special Issue on Wireless & Mobile Networks, 2011. http://dx.doi.org/10.14569/SpecialIssue.2011.010209,**ISSN: 2156-5570**.

[84]. K. Saxena, S. Jain and **Uday Pratap Singh**, "Unsupervised Method of Object Retrieval with Region Labeling and Flood Fill" International Journal of Advanced

Computer Science and Applications (IJACSA), **SCOPUS**, "Special Issue on Artificial Intelligence", Vol. (1), pp. 41-50, 2011, **ISSN: 2156-5570**.

[85]. **Uday Pratap Singh**, A. Chaturvedi and V. Nigam, "A Novel Similar Region Merging and Flood Fill Technique for Efficient Object Retrieval," Current Development in Theory and Applications of Computer Science, Engineering and Technology, vol. 3, no. 1/2, pp. 25-54, 2011, **ISSN: 0976-1438**.

[86]. G.F. Ahmed, **Uday Pratap Singh** and S. Jain "Content Based Image Retrieval Using Phong Shading" International Journal of Computer Science and Information Security (IJCSIS) **SCOPUS,** Vol. (8), No. (1), pp. 301-306301-306, 2010, **ISSN: 1947-5500**.

[87]. **Uday Pratap Singh**, R. Pandit and R. Shukla "Content Based Image Retrieval Using Mean Shift Algorithm &Permuto Metric Measure" International Journal of Computer Engineering and Information Technology, Vol. 11, No.16, pp. 31-34, 2010, **ISSN: 2412-8856**.

[88]. P. Pandey, **Uday Pratap Singh**, and S. Jain "Categorization and Searching of Color Images Using Mean Shift Algorithm" Leonardo Journal of Science, Issue 14, pp. 173-182, 2009, **ISSN: 1583-0233**.

[89]. P. Srivastava and **Uday Pratap Singh**, "A Review on Reed-Solomon Codes for Error Detection and Correction," National Journal of Engineering Science and Management, Vol. 3, No.1 June 2013, **ISSN: 2249-0264**.

[90]. M. Kumar, **Uday Pratap Singh** and V. Richhariya, "Image Compression Using DWT and JPEG with Arithmetic Coding," National Journal of Engineering Science and Management, Vol. 4, No.1, pp.155-160, Jan. 2014, **ISSN: 2249-0264**.

[91]. P. Srivastava, **Uday Pratap Singh** and V. Richhariya, "Noise Removal Using First Order Neighbourhood Mean Filter", National Journal of Engineering Science and Management, Vol. 3, no.2, pp. 7-13, Dec. 2013, **ISSN:2249-0264**.

[92]. S. Srivastava and **Uday Pratap Singh**, "Anisotropic Diffusion and Wavalet Packet Decomposition", CIT International Journal of Engineering and Research, Vol. 2, No. 2, pp. 1-6, 2012, **ISSN-2230-9144**.

[93]. **Uday Pratap Singh** and S. Jain, "Content Based Image Retrieval Using Euclidean

and Manhattan Distance," Journal of Mathematical Sciences Advances and Applications, vol. 4, no. 1, pp.217-226, 2010, **ISSN: 0974-5750**.

**C: INTERNATIONAL/NATIONAL CONFERENCES:**

[1]. **Uday Pratap Singh,** Arun Bali and Rahul Kumar, "Control of Non-strict feedback Non-linear systems with actuator faults via adaptive methods", International Conference on Innovations in Computational and Physical Sciences for Sustainable Development (ICPSSD-2022), 21-23 Dec., 2022, Vijayanagara Sri Krishnadevarya University, Ballari Karnataka.

[2]. Gourav Kumar, S. Jain, and **Uday Pratap Singh**, "Neuro-Fuzzy and particle swarm optimization-based hybrid approach for stock price forecasting", International Conference on Emerging Smart Computing and Informatics (ESCI), $5^{th}$-$7^{th}$ March 2021, Pune, India.

[3]. J.P. Singh, S. Arora, S. Jain, and **Uday Pratap Singh**, "A Multi-Gait Dataset for Human Recognition under Occlusion Scenario," 2019 International Conference on Issues and Challenges in Intelligent Computing Techniques (ICICT), 27-28 September 2019, KIET Gaziyabad.

[4]. S.S. Chouhan, **Uday Pratap Singh**, A. Koul, "Radial Basis Function Neural Network for the Segmentation of Plant leaf disease," 2019 4th International Conference on Information Systems and Computer Networks (ISCON), 21-22, Nov. 2019 GLA Mathura.

[5]. S.S. Chouhan, **Uday Pratap Singh,** A. Koul and S. Jain, "A Data Repository of Leaf Images: Practice towards Plant Conservation with Plant Pathology," 2019 4th International Conference on Information Systems and Computer Networks (ISCON), 21-22 Nov. 2019 GLA Mathura.

[6]. S.S. Chouhan, A. Koul and **Uday Pratap Singh,** "A deep learning approach for the classification of diseased plant leaf images", 2019, International Conference on Communication and Electronics Systems (ICCES), 17-18 July, PPG Institute of Technology, Coimbatore, India.

[7]. S.S. Chouhan, A. Koul and **Uday Pratap Singh**, "Plants Leaf Segmentation using Bacterial Foraging Optimization algorithm", 2019, International Conference on Communication and Electronics Systems (ICCES), 17-18 July, PPG Institute of Technology, Coimbatore, India.

[8]. **Uday Pratap Singh**, A. Tiwari, R.K. Singh, D. Dubey, "Kohonen Neural Network for Nonlinear Discrete Time Systems", IEEE CICT-2017, Gaziabad (U.P.), 09-10 Feb. 2017, **IEEE Xplore**.

[9]. U. Sharma, S.S. Chauhan and **Uday Pratap Singh**, "Heuristic Based Categorization Approach for Maze Problems Using Evolutionary Algorithms", International Conference on Mechanical, Energy and Power Systems (ICMPES)-2017, OIST, Bhopal (M.P.).

[10]. R.K. Sharma, **Uday Pratap Singh**, S.S. Chauhan and M. Parmar, "Image Denoising Using Fuzzy Mean Filter", National Conference on Information Technology and Business Analytics (NCITBA-2017), SMVDU, Katra, J& K, pp. 66-70, 07-08 Jan. 2017.

[11]. **Uday Pratap Singh**, S.S. Singh Chauhan, R.K. Singh and M. Parmar, "Comparison of Some Neural Network for Nonlinear Discrete-Time Systems", National Conference on Information Technology and Business Analytics (NCITBA-2017), SMVDU, Katra, J & K, pp. 52-56, 07-08 Jan. 2017.

[12]. **Uday Pratap Singh**, et al. "Neural Network Controller for Discrete Time Nonlinear Systems," International Conference on Advanced Computing and Software Engineering (ICACSE-16), 14-15 Oct. 2016, **IEEE Xplore**: **ISBN: 978-93-86256-05-8**.

[13]. V. Agarwal, A. Tiwari, R.K. Gupta and **Uday Pratap Singh**, "Discovering Optical Pattern for Forensic Pattern Warehouse," 10th International Conference on Advanced Computing and Communication Technologies, (**Springer)** 18-19 Nov. 2016, Panipat, India.

[14]. **Uday Pratap Singh**, K. Deshmukh, R. Sharma, J S Kumare and P Saxena, "Object Template Matching using Topological Models," IEEE ICTBIG-2016, Udaipur (Rajasthan), 18-19Nov. 2016, IEEE Xplore.

[15]. **Uday Pratap Singh**, K. Deshmukh, R. Sharma, J S Kumare and R K Singh, "Object Extraction using Topological Models," IEEE ICTBIG-2016, Udaipur (Rajasthan), 18-19 Nov. 2016, IEEE Xplore.

[16]. **Uday Pratap Singh**, S. Jain and R.K. Singh, "Adaptive Neural Network Controller for Nonlinear Discrete Time Systems with Bounded Disturbances," International Conference on Sustainable Computing Techniques in Engineering Science and Management, 9-10 Sep. 2016.

[17]. **Uday Pratap Singh**, R.K. Singh and M. Parmar, "Neural Network for Dynamic Surface Control Using Bat Algorithm," 20th Annual National Conference of Gwalior Academy of Mathematical Sciences and Symposium on Mathematics in Real Life Problems with Special References to Life Sciences, Jivaji University, Gwalior, 2016.

[18]. **Uday Pratap Singh**, R.K. Singh and M. Parmar, "Adaptive Fuzzy Controller Design for Nonlinear Discrete Time Systems," 24th International Conference on Finite or Infinite Dimensional Complex Analysis and Applications, 22-26 August 2016, Anand International College of Engineering, Jaipur, India, 2016.

[19]. P. Srivastava and **Uday Pratap Singh**, "Noise Removal Using First Order Median Filter," IEEE International Conference CSIBIG-2014, **IEEE Xplore**: 12 March 2014, DOI: 10.1109/CSIBIG.2014.7057004, Indore, **ISBN: 978-1-4799-3063-0.**

[20]. M. Verma, **Uday Pratap Singh** and V. Richhariya, "Image Compression Using Discrete Wavelet Transform & JPEG with Arithmetic Coding", IEEE Sponsored International Conference on Empowering Emerging Trends in Computer, Information Technology & Bioinformatics, pp. 1-6, 2014.

[21]. V. Trivedi and **Uday Pratap Singh**, "Arnold Based Pixel Permutation and XOR Based Pixel Substitution Image Encryption", **IEEE** Sixth International Conference (CICN)-2014, pp. 318-322.

[22]. K. Rai, N. Rai and **Uday Pratap Singh**, "Design and Implementation of Stegnography Techniques Using DWT," **IEEE** Sixth International Conference (CICN)-2014, pp. 306-311.

[23]. **Uday Pratap Singh**, "RNG Based Image Segmentation and Object Extraction" National Conference on Advances in Mathematical Applications for Engineering & Technology, at Madhav Institute of Technology and Science Gwalior, Dec. 2014.

[24]. S. Jain, A. Kusumakar and **Uday Pratap Singh**, "An Application of Fuzzy Logic for IPL-5 Cricket League Prediction", National Conference on Computational Intelligence and Soft Computing, 2012, pp. 85-90.

[25]. R. Srivastava and **Uday Pratap Singh**, "Distribution Approach of Intrusion Detection System: Survey", International Conference on Emerging Trends and Technology, 2012.

[26]. **Uday Pratap Singh**, K. Saxena and S. Jain, "Comparison of Different color Spaces and its Applications", International Conference on Concurrent Techno and Enviro. Search, Search and Research Youth Congress, pp. 16, 2010.

[27]. **Uday Pratap Singh**, R. Pandit and R. Shukla, "Content Based Image Retrieval Using Mean Shift Algorithm & Permuto Metric Measure", International Conference on Recent Trends in Soft Computing and Information Technology, pp. 112-116, 2010.

[28]. **Uday Pratap Singh**, A. Rai "Biometric Techniques" National Conference on Soft Computing in Electrical Engineering (SCTEE), Vol. 1, pp.73, 2010.

[29]. S. Jain, **Uday Pratap Singh** and V. Trivedi "Texture Based Image Retrieval Using Gray Level Co-occurrence Matrix (GLCM)" National Conference on Recent Trends in Soft Computing & Network, pp.14-20, 2010.

[30]. G.F. Ahmed, **Uday Pratap Singh** and R. Barskar "Content Based Image Retrieval: A Review" National Conference on Recent Trends in Soft Computing & Network, pp. 223-228, 2010.

[31]. **Uday Pratap Singh,** S. Jain and P. Pandey, "Object Retrieval of Color Images Using Mean Shift Algorithm," National Conference on Recent Trends in Soft Computing & Network, pp. 223-228, 2010.

[32]. **Uday Pratap Singh**, “Image Matching Using Low Level Visual Features”, National Conference on Emerging Technology Trends, pp. 64-69, 2010.

[33]. P. Srivastava, A. Kusmakar and **Uday Pratap Singh**, "Genetic Algorithm for Travelling Salesman Problem Using Mixed Cross-Over" National Seminar on Mixed Signal VLSI Signal, 20-21 July 2012.

**Awards and Honors:**

[1]. ***Reviewer*** of IEEE Transactions on Neural Systems & Rehabilitation Engineering

[2]. ***Reviewer*** of International Journal of Fuzzy Systems, (Springer).

[3]. ***Reviewer*** of IEEE Access, (IEEE).

[4]. ***Reviewer*** of Biomedical Research, (Allied Academies Journals).

[5]. ***Reviewer*** of IGI Global (An International Publisher).

[6]. **Expert Member**, of Union Public Service Commission **(UPSC)**, New Delhi.

[7]. **Editor-in-Chief,** Pioneer Journal of Computer Science and Engineering Technology, ISSN: 2231-184X.

[8]. **Managing Editor** of Oriental Journal of Mathematics, ISSN (Print): 0975-7740, ISSN (Online): 0975-7759.

[9]. **Associate Editor** of National Journal of Engineering Science and Management, ISSN: 2249-0264.

[10]. **Member of Editorial Board** of International Journal of Advanced Computer Research, ISSN: 2277-7970 (Online), ISSN: 2249-7277 (Print).

[11]. **Technical Committee member** of 2022 the 8th International Conference on Virtual Reality (ICVR 2022), held during July 3-5, 2022 in Nanjing, China.

[12]. **Technical Committee Member** of 9$^{th}$ International Conference on Software and Computer Applications (ICSCA 2020), held in Langkawi, Malaysia during February 18-21, 2020.

[13]. Member of Scope Database (Journal and Indexing)-International Advisory Board Certificate **ID: IAB0000199.**

[14]. Received Letter of Appreciation for ***National Conference on Recent Trends in Soft Computing and Network, 26-27 March-2010***, work as Co-Coordinator, at Lakshmi Narain College of Technology Bhopal, M.P.

[15]. **Best Paper Award** at *VNS Institute of Technology*, Bhopal in **NCETT March-2010**.

[16]. **Best Paper Award** at *All Saints College of Technology*, *Bhopal* in 6th National Level Technical Symposium, **Vision Tech-2009**.

[17]. Received Letter of Appreciation for ***Planet Engineer-2009*** (A National Level Technical Mega Event), and work as Co-Coordinator, Lakshmi Narain College of Technology Bhopal, M.P.

**Invited/Expert Talk:**

[1]. Delivered an Expert Talk: **"Implementation of NEP-2020 in Higher Education Institutions"**, in Refresher Course Organized by University of Jammu, Jammu, 13 Dec., 2024.

[2]. Delivered an Expert Talk: **"Applications of Probability and Statistics in Data Science"**, in Refresher Course Organized by University of Jammu, Jammu, 13 Dec., 2024.

[3]. Delivered an Expert Talk: **"Probability and Statistics for Data Science"**, in FDP Organized by Central University of Jammu, Jammu, 11 Dec., 2024.

[4]. Delivered an Expert Talk as Keynote Speaker: **"Mathematical Study of Controller Design for Switched Nonlinear Systems"**, **in IEEE International Conference on Data, Computation and Communication (ICDCC-2024)** Organized by VIT Bhopal University, M.P., 29-30 Nov., 2024.

[5]. Delivered an Expert Talk: **"Implementation of SAMARTH Academic Module"**, Organized by Dr. Ram Manohar Lohiya (Avadh) University, Ayodhya, 30 Nov., 2024.

[6]. Delivered an Expert Talk: **"Mathematical Study of Dynamical Systems and Its Applications"**, International Seminar on Recent Advances in Mathematical

Sciences-2024 (RAMS-2024) Organized by Department of Mathematics, Dr. Ram Manohar Lohiya (Avadh) University, Ayodhya, 03 Dec., 2024.

[7]. Delivered an Invited Talk: **"Linear and Nonlinear Dynamical Systems-I and II"**, in the Faculty Development Programme Organized by Shri Mata Vaishno Devi University, 14-19 Oct., 2024.

[8]. Delivered an Invited Talk: **"Curriculum Design and Outcome Based Education"**, in the Refresher Course organized by Jammu University, 18 Oct., 2024.

[9]. Delivered an Invited Talk: **"Mathematical Study of Adaptive Controllers for Nonlinear System with Faults"**, in the National Seminar organized by Jammu University, 12-14 Sep., 2024.

[10]. Delivered an Invited Talk: **"National Education Policy (NEP)-2020"**, in the Refresher Course organized by Central University of Jammu, March, 2024.

[11]. Delivered an Invited Talk: **"Applications of Probability and Statistics in Data Science"**, in the Refresher Course organized by Jammu University from 19 Feb.-2 March, 2024.

[12]. Delivered an Invited Talk: **"Scientific Paper Writing"**, in the Refresher Course organized by Jammu University from 19 Feb.-2 March, 2024.

[13]. Delivered an Invited Talk: **"National Education Policy (NEP)-2020"**, in the Refresher Course organized by Jammu University from 19 Feb.-2 March, 2024.

[14]. Delivered an Expert Talk: **"Non-linear Dynamical Systems and Applications"**, at Shri Vishwnath PG College, Kalan Sultanpur (U.P.), 7 Nov., 2023.

[15]. Delivered an Expert Talk: **"National Education Policy (NEP)-2020"**, at Shri Vishwnath PG College, Kalan Sultanpur (U.P.), 8 Nov., 2023.

[16]. Delivered an Invited Talk: **"Lyapunov Based Stability Analysis of Non-linear Dynamical Systems"**, in the National Conference on Mathematical and Computational Analysis, 28-30 Jan., 2023, Department of Mathematics, T.D.P.G. College Jaunpur, U.P.

[17]. Delivered an Invited Talk: **"Adaptive Control for Non-linear System under strict and non-strict feedback structure with faults"**, in the International Conference on Innovations in Computational and Physical Sciences for Sustainable Development (ICPSSD-2022), 21-23 Dec., 2022, Vijayanagara Sri Krishnadevarya University, Ballari Karnataka.

[18]. Delivered an Invited Talk: **"Adaptive tracking control of Nonlinear Systems"** as a keynote speaker in the Symposium on Recent Trends and Applications of Mathematics and Statistics in Engineering (RTAMSE-2022) held on March 24, 2022, organized by School of Engineering and IT, **Manipal Academy of Higher Education, Dubai Campus, UAE**.

[19]. Delivered an Invited Talk: **"Stock Market Forecasting using Computational Intelligence Technique"**, Online Two Days International Conference on "Soft Computing Techniques & Communication Engineering", From 29-30 Jan., 2021.

[20]. Delivered an Invited Talk: **"Probability & Statistics for Data Science",** in AICTE Training and Learning (ATAL) FDP on Data Science on 2nd Nov. 2020 at Hindustan College of Engineering and Technology, Coimbatore.

[21]. **Keynote Speaker:** in Virtual online National Conference on Big Data and Intelligent Systems, organized by Lakshmi Narain College of Technology, Bhopal, 30 April, 2020.

[22]. Delivered an Invited Talk: **"How to write good Research Paper",** in One Week FDP on Research Methodology using R & E Views. Organized by Faculty Development Centre, Shri Mata Vaishno Devi University, Katra, April 2019.

[23]. Delivered an Invited Talk: **"Object Extraction and Matching from Complex Scene of Images",** in International Conference on Analysis and its Applications, Organized by Department of Mathematics, Jammu University (J&K), 16-18 December, 2019.

[24]. Delivered an Invited Talk: "**Applications of Nature Inspired Optimization Techniques**," in Two Week Winter School for Engineering Stream organized by

Faculty Development Centre, Shri Mata Vaishno Devi University, Katra, 16 Feb-01 March 2019.

[25]. Delivered an Invited Talk: "**Convergence Analysis of PSO**", in One Week Faculty Development Program on Teaching Sciences and Mathematics organized by Faculty Development Centre, Shri Mata Vaishno Devi University, Katra, 21-25 Jan. 2019.

[26]. Delivered an Invited Talk: "**Nature Inspired Optimization Techniques**," in National Conference organized by **BHARATA GANITA PARISAD** at Lucknow University, Lucknow, 10-11 Nov. 2018.

[27]. Delivered an Invited Talk: "Sector Nonlinearity Based Fuzzy Model," in DST Sponsored National Conference on Fractional Calculus, Special Functions and Their Applications in Computer Science, organized by **Ramanujan Society of Mathematics and Mathematical Sciences** at T.D.P.G. College, Jaunpur (U.P.), 10-12 Nov. 2018.

[28]. Delivered an Invited Talk: "**Formal Language and Abstract Machines**," in DST Sponsored National workshop on Science Fare Creating Awareness, Interest, Motivation in Science and Mathematics for School Students and Teachers, organized by **Ramanujan Society of Mathematics and Mathematical Sciences** at T.D.P.G. College, Jaunpur (U.P.), 10-13 Nov. 2018.

[29]. Delivered an Expert Lecture: "**Group Theory and Its Applications**," at Lakshmi Narain College of Technology, Bhopal, 22 Sep. 2017.

[30]. Delivered an Expert Lecture: "**PoSET and Hasse Diagram**," at IES Engineering College, Bhopal, 22 Sep. 2017.

[31]. Delivered an Expert Lecture: "**Finite Field and It's Applications**," at IES Engineering College, Bhopal, 23 Sep. 2017.

[32]. Delivered an Invited Talk: "**Image Processing: A Mathematical Approach**," in National Conference on Emerging Trends and Technology, LNCT, Bhopal, 2016.

[33]. Delivered an Invited Talk: "**Object Extraction Using Low Level Features**," in National Conference on Emerging Trends and Technology, LNCT, Bhopal, 2016.

[34]. Delivered an Invited Talk: "**Formal Language and Automata Theory**," in National Conference on Emerging Trends and Technology, LNCT, Bhopal, 2015.

[35]. Delivered an Invited Talk: "**Algorithmic Analysis and Complexity Theory**," in National Conference on Emerging Trends and Technology, LNCT, Bhopal, 2015.

[36]. **Best Faculty Award** for Analysis and Design of Algorithm, by ***SRIJAN-2014*** at Ravindra Bhavan, Bhopal.

[37]. Delivered an Expert Lecture: ***"Finite Basis Problem and Finite Field and its applications in Computer Science"*** at Madhav Institute of Technology and Science, Gwalior (M.P.), from 12-14 April 2011.

[38]. Delivered an Expert Lecture: ***"Theory of Computation"*** at Madhav Institute of Technology and Science, Gwalior (M.P.), from 13-14 August 2010.

[39]. Delivered an Invited talk: **"*Finite Difference Method*"** AICTE sponsored staff development program on "Manufacturing Automation and Mechatronics" $6^{th}$ -$18^{th}$ July 2009 at Samrat Ashok Technological Institute, Vidisha (M.P.).

[40]. Delivered an Invited talk: ***"Applications of MATLAB in Numerical Methods"*** ISTE and MPCST sponsored staff development program on "Applications of MATLAB for Engineers" July 2009.

**MEMBERSHIP:**

| S.No. | Name of Society | Period | Position | Membership No. |
|---|---|---|---|---|
| 01. | IEEE | 01/01/2023 | Member | 91222373 |
| 02. | Soft Computing Research Society | 03/01/2023 | Member | SCRS 900 |
| 03. | American Mathematical Society | 01/01/2023 | Member | 2991372536 (SNUDPB) |
| 04. | International Association of Physical Sciences | Life Member | Member | A22386 |
| 05. | Computer Society of India (CSI) | Life Member | Member | 01200986 |
| 06. | Bharata Ganita Parisad (BGP) | Life Member | Member | 580 |
| 07. | International Association of Engineer's (IAENG) | Life Member | Member | 105362 |

**LINKS:**

**YouTube Channel:**

**Abstract Algebra (MTL 6051):**
**https://www.youtube.com/playlist?list=PLA00S78M6ArjitERSWDgqCCQsPMzYMjrg**

**Engineering Mathematics-I (MTL 1025):**
**https://www.youtube.com/playlist?list=PLA00S78M6AriiBV-nWDcwGR6t-l0x2RMz**

**GOOGLE SCHOLAR:**

**https://scholar.google.co.in/citations?view_op=list_works&hl=en&hl=en&user=iTa_p_cAAAAJ**

**RESEARCH GATE:**

**https://www.researchgate.net/profile/Dr_Uday_Singh**

**SCOPUS AUTHOR ID: 56581160200**

**https://www.scopus.com/authid/detail.uri?authorId=56581160200**

**ORCID ID:**

**https://orcid.org/0000-0003-2077-0793**

**RESEARCHER ID: M-5904-2016**

**MENDELEY:**

**https://www.mendeley.com/profiles/uday-pratap-singh/publications/**

**PUBLONS:**

**https://publons.com/researcher/1541733/uday-pratap-singh/**

**VIDWAN:**

**https://vidwan.inflibnet.ac.in/profile/424204**

**Area of Research Interest:**

- Nonlinear Systems
- Soft Computing
- Image Processing
- Nature Inspired Algorithms

**Subjects Taught at UG, PG and Ph.D. Levels:**

**P.G. (M.Sc./M.E./M.Tech.) / Ph.D. LEVEL:**

- Abstract Algebra
- Differential and Integral Equations

- Dynamical System and Control
- Numerical Analysis
- Coding Theory
- Information Theory Coding
- Soft Computing
- Image Processing

**U.G. LEVEL (Integrated M.Sc./ B.E./B.Tech.):**

- Theory of Computation
- Analysis and Design of Algorithm
- Introduction to Programming
- Mathematical Logic
- Fundamentals of Computer Programming
- Discrete Structure
- Engineering Mathematics-I
- Engineering Mathematics-II
- Engineering Mathematics-III

**Personal Details:**


| | |
|---|---|
| Father Name: | Shri Ram Sumiran Singh |
| Marital Status: | Married |
| Postal Address: | Department of Mathematics |
| | Central University of Jammu |
| | Samba-181143, UT of J&K (India) |
| Mob No.: | 8899033055 |
| Email: | usinghiitg@gmail.com |


**Certificate:** It is certified that the information given above are correct to the best of my knowledge.

**Sd/-**
**(Dr. Uday Pratap Singh)**
**Professor**
**Department of Mathematics**
**Central University of Jammu**
**Samba-181143, UT of J&K (India)**