

Curriculum Vitae/ Faculty Profile

- **Name :** DR. SANDIP DEY
- **Designation:** Assistant Professor
- **Department:** Computer Science
- **Date of Joining:** 22nd August, 2019
- **Nationality:** Indian
- **Address for Correspondence:** 407, Bankimpally, P.O.: Sodepur, Kolkata: 700110.
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ACADEMIC INFORMATION

- **Qualification Details:**

Examinations Passed	Institution/University	Year of Passing
M.Tech	West Bengal University of Technology	2008
Ph.D.	Jadavpur University	2016

- **Subject(s) Specialization:** Quantum Computing

CAREER INFORMATION

- **Professional Development Programs (FIP, RC, Short Course, Workshop)**

Sl. No.	Title of the Professional Development Program	Venue	Date and Duration
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1	Induction/Orientation Programme	Teaching Centre, College University of Delhi under the aegis of MINISTRY OF EDUCATION PANDIT MADAN MOHAN MALAVIYA NATIONAL MISSION ON TEACHERS AND TEACHING	Learning Ramanujan 21 August – 19 September, 2021
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ACHIEVEMENTS AND PUBLICATIONS

- **Research Field:** Soft computing, Hybrid Intelligence, Quantum Computing, and Image Analysis.
- **Published Papers/Articles:**
 1. D.Konar, S.Bhattacharyya, S. Dey and B. K. Panigrahi, \Optimized Activation for Quantum-Inspired Self-supervised Neural Network based Fully Automated Brain Lesion Segmentation", Applied Intelligence, vol. 52, pp. 15643-15672, 2022.
 2. A. Dey, S. Bhattacharyya, S. Dey, J. Platos and V. Snasel, \Automatic Clustering of Colour Images Using Quantum Inspired Metaheuristic Algorithms," Applied Intelligence, DOI: <https://doi.org/10.1007/s10489-022-03806-8>, 2022.
 3. T. Dutta, S. Dey, S. Bhattacharyya, and S. Mukhopadhyay, P. Chakrabarti, \Hyperspectral Multi-level Image Thresholding using Qutrit Genetic Algorithm", Expert Systems With Applications, vol. 181, no. 115107, 2021.
 4. A. Dey, S. Dey, S. Bhattacharyya, J. Platos and V. Snasel, \Quantum Inspired Meta-Heuristic Approaches for Automatic Clustering of Colour Images," International Journal of Intelligent Systems, vol. 36, pp. 4852-4901, 2021.
 5. T. Dutta, S. Dey, S. Bhattacharyya, and S. Mukhopadhyay, \Quantum Fractional Order Darwinian Particle Swarm Optimization for Hyperspectral Multi-level Image Thresholding," Applied Soft Computing, vol. 113, Part B, pp. 107976, 2021.
 6. T. Dutta, S. Bhattacharyya, S. Dey and J. Platos, \Border Collie Optimization," IEEE Access, vol. 8, pp. 109177-109197, 2020.
 7. A. Dey, S. Dey, S. Bhattacharyya, J. Platos and V. Snasel, \Novel Quantum Inspired Approaches for Automatic Clustering of Gray Level Images Using Particle Swarm Optimization, Spider Monkey

Optimization and Ageist Spider Monkey Optimization," Applied Soft Computing, vol. 88, no. 106040, pp. 1-29, 2020.

- **Patent:**

1. Siddhartha Bhattacharyya, Abhishek Basu, Subhrajit Sinha Roy, Prasun Chakrabarti, Sourav De, DebanjanKonar, DebabrataSamanta, Tulika Dutta, **Sandip Dey** and DebarkaMukhopad-hayay, "A Microcontroller based Low Cost Electronic Locking System using 2-Way Authentication," Australian Patent No. 2021101384 dated 17.04.2021(Granted).

2. Siddhartha Bhattacharyya, Abhishek Basu, Subhrajit Sinha Roy, Prasun Chakrabarti, Sourav De, DebanjanKonar, DebabrataSamanta, Tulika Dutta, **Sandip Dey** and DebarkaMukhopad-hayay, "A Microcontroller based Low Cost Electronic Locking System using 2-Way Authentication," Indian Patent No. 202041036194 dated 02.10.2020 (Published).

3. JOYDEV GHOSH, DEBASIS DE, GARGI JANA, MOUMITA GHOSH, SUDIPTA PAUL, SUDIPTO GHOSH, SASWATA DAS, **SANDIP DEY**, SHUBHOJIT BANERJEE, BISWARUP NEOGI, "Automatic Cloth changeable baby care smart intelligent cradle with real-time surveillance," Patent Application No. 201831044805 (Published).

4. ANKUR GANGULY, SALINI BOSE, SUDIPTO GHOSH, SUDIPTA PAUL, MOUMITA GHOSH, ANUBHAB, SARKAR, SASWATA DAS, **SANDIP DEY**, SOUVIK CHATTERJEE, BISWARUP NEOGI, "Self powered Smart intelligent washable green pay and use toilet," Patent Application No. 201831044807 (Published).

- **Published Textbooks, Edited Books, and Book Chapters in Edited Volumes:**

Sl. No.	Title of the Chapter	Title of the Book/ Edited Book	Publishers
1.		Quantum-Inspired Metaheuristics for Image Analysis (Authored book)	John Wiley & Sons, UK
2.		Recent Advances in Hybrid Metaheuristics for Data Clustering (Edited book)	John Wiley & Sons, UK
3.		Advanced Machine Vision Paradigms for Medical Image Analysis (Edited book)	Elsevier
4.		Advanced Data Mining Tools and Methods for Social Computing (Edited book)	Elsevier

5.	Modified Harris Hawk Optimization Algorithm for Multi-level Image Thresholding	Hybrid Computational Intelligent Systems-Modeling, Simulation and Optimization	CRC Press
6.	Quantum Inspired Manta Ray Foraging Optimization Algorithm for Automatic Clustering of Colour Images	Hybrid Quantum Metaheuristics: Theory and Applications	CRC Press
7.	An Introductory Illustration to Quantum Inspired Meta-heuristics	Hybrid Quantum Metaheuristics: Theory and Applications	CRC Press
8.	Introduction to quantum machine learning	Quantum Machine Learning	De Gruyter
9.	An introductory illustration of medical image analysis	Advanced Machine Vision Paradigms for Medical Image Analysis	Elsevier
10.	Conclusion and future research directions	Advanced Machine Vision Paradigms for Medical Image Analysis	Elsevier
11.	Quantum Inspired Automatic Clustering Algorithms: A comparative study of Genetic Algorithm and Bat Algorithm	Quantum Machine Learning	De Gruyter
12.	Magnetic Resonance Image Segmentation Using Quantum Inspired Modified Genetic Algorithm (QIANA) Based FRCM	Recent Advances in Hybrid Metaheuristic for Data Clustering	John Wiley & Sons, UK

13.	Automatic Clustering of Hyperspectral Images Using Qutrit Based Particle Swarm Optimization	Intelligence Enabled Research, Advances in Intelligent Systems and Computing (AISC, volume 1109)	Springer Nature Singapore Pte Ltd.
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• **Participation in Seminars/ Conferences (State/ National/ International):**

Sl. No.	Name of Seminar/ Conference	Level of Seminar	Attended as Participant only/ Paper Presented	Name of the Paper/ Lecture Topic
1.	11th International Conference on Cloud Computing, Data Science & Engineering (Conuence-2021), Noida, India	International		New Approach of Data Clustering Using Quantum Inspired Particle Swarm Optimization Based Fuzzy c-means
2.	11th International Conference on Cloud Computing, Data Science & Engineering (Conuence-2021), Noida, India	International		Multilevel Image Segmentation Using Modified Red Deer Algorithm
3.	2020 Fifth International Conference on Research in Computational Intelligence and Communication Networks (ICRCICN 2020)	International		A New Modified Red Deer Algorithm for Multi-level Image Thresholding
4.	IEEE INTERNATIONAL CONFERENCE ON COMMUNICATION, COMPUTING, AND INDUSTRY 4.0 (C2I4), Bangalore, India	International	Participated and presented	Neighbourhood Based Bi-Level Contrast Adjustment for Under-water Image Enhancement Using Modified Particle Swarm Optimization

5.	7th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON 2020), Prayagraj, India	International		Underwater Image Enhancement Using Neighbourhood Based Two Level Contrast Stretching and Modified Artificial Bee Colony
6.	2020 IEEE International Conference on Electronics, Computing and Communication Technologies (CONECCT)	International		A Novel Approach of Data Clustering Using An Improved Particle Swarm Optimization Based K-Means Clustering Algorithm
7.	Multilevel Quantum Inspired Fractional Order Ant Colony Optimization for Automatic Clustering of Hyperspectral Images	International		IEEE World Congress on Computational Intelligence (IEEE WCCI 2020), Glasgow, UK
8.	Opti-QIBDS Net: A Quantum Inspired Optimized Self-supervised Neural Network for Automatic Brain MR Image Segmentation	International		TENCON 2019 - 2019 IEEE Region 10 Conference (TENCON)
9.	Novel Qutrit Based Quantum Ant Colony Optimization for Multi-level Thresholding	International		TENCON 2019 - 2019 IEEE Region 10 Conference (TENCON)
10.	Multilevel Quantum Sperm Whale Metaheuristic for Gray Level Image Thresholding	International		International Conference on Innovative Computing and Communication (ICICC-2019), Czech Republic

- **Participation as Resource Person/ Guest Speaker:**

1. Participated as the Session Chair of the 2021 Sixth International Conference on Computational Intelligence and Communication Networks (ICRCICN 2021) hold during December 11-12, 2021 in virtual mode.

2. Participated as the Session Chair of the 2020 Third International Symposium on Signal and Image Processing (ISSIP) hold during October 21-22, 2020 in virtual mode.