

BIO-DATA



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3. **Date of Birth:** 05 October 1985

4. **Gender:** Male

5. **Whether differently abled (Yes/No):** No

6. **Academic Qualification:**

S. N.	Degree	Year	Subject	University/Institution
i.	Ph.D	2011	Computer Science and Engineering	Indian Institute of Technology (ISM) Dhanbad, Jharkhand
ii.	B.Tech	2006	Computer Science and Engineering	Government College of Engineering and Textile Technology, Berhampore, West Bengal
iii.	12 th	2002	Pure Science	Bolpur N.N.B. High School, Birbhum, West Bengal
iv.	10 th	2000	--	Bolpur N.N.B. High School, Birbhum, West Bengal

7. **Details of Employment:**

S. N.	Position Held	Name of the Institute	From	To
i.	Associate Professor	Indian Institute of Technology (Indian School of Mines) Dhanbad	12.04.2021	Till Date
ii.	Assistant Professor	Indian Institute of Technology (Indian School of Mines) Dhanbad	27.12. 2011	11.04.2021
iii.	Lecturer	National Institute of Technology, Jamshedpur	20.04.2011	26.12.2011

8. **Research Interests:** ML/DL based Image Analysis, Data Compression, Multimedia Security, Blockchain, and DNA Computing

9. **Teaching:** Blockchain Technology, Cryptography, Data Compression, Multimedia Systems and Security, Data Structures

10. Administrative Work Experience:

S. N.	Position Held	From	To
i.	Departmental Faculty Screening Committee (DFSC) of the Dept. of CSE for Assistant Professor position	01.12.2021	Till Date
ii.	Faculty Coordinators of SIG-Information Security	01.07.2026	Till Date
iii.	DPAC Member	02.05.2024	Till Date
iv.	DGRC Member	28.02.2024	Till Date
v.	DUGC Convener	25.01.2024	30.06.2026
vi.	Associate Dean (Automation)	22.06.2021	20.10.2023

11. Professional Recognition:

Year	Recognition	Details
2026	Best Paper Award	Ankur Mani Tripathi, Shukla Mondal, Arup Kumar Pal , and Manish Raj, “AGRT-Net: A Hybrid Attention-Guided Region Transformer for Osteoporosis Classification from Indian Femur Radiographs”, <i>International Conference on Complex System Modelling and Artificial Intelligence (CSMAI 2026)</i> held at Aleksandër Moisiu University, Durrës, Albania, Europe, May 21-22, 2026
2026	Best Paper Award	Shukla Mondal, Arup Kumar Pal , Pooja Mishra, and Manish Raj, “Deep Learning Approaches for Automated Osteoporosis Classification on Indian Hip X-Ray Data,” <i>12th IBS Conference on Marketing & Business Strategy (ICOMBS 2026)</i> in Association with Centre of Sustainable Energy (IIT Roorkee), held at IBS Hyderabad, India, 13-14 March, 2026
2025	Best Paper Award	Gourab Roy, Arup Kumar Pal , Manish Raj, and Jitesh Pradhan, “Knee Osteoarthritis Detection and Categorization with Deep Learning Models,” <i>International Symposium on Artificial Intelligence (ISAI-2025)</i> , held at NIT Sikkim, India, 5-7 March, 2025
2024	Best Paper Award	Pramod Kumar, Arup Kumar Pal and SK Hafizul Islam, “LASKV: Lightweight Authenticated Session Key Agreement for Video Surveillance System,” <i>Fifth International Symposium on Signal and Image Processing (ISSIP 2024)</i> held at Rochester Institute of Technology Kosovo (A.U.K), Kosovo, Europe, March 25-26, 2024.
2024	Best Paper Award	Mahesh Chaurasia, and Arup Kumar Pal , “A Blockchain-based Secure Fragile Watermarking Scheme for Image Tamper Detection,” <i>International Conference on Sustainable Development & Management Practices (ICSMDP-2024)</i> , held at IIT(ISM) Dhanbad, India, 09-10 February 2024.
2022	Excellent Paper Award	Shukla Mondal, Arup Kumar Pal , SK Hafizul Islam and Debabrata Samanta, “Objectionable Image Content Classification Using CNN-Based Semi-supervised Learning,” <i>5th International Conference on Smart Vehicular Technology, Transportation, Communication and Applications (VTCA-2022)</i> , December 24-26, 2022, Virtual Conference
2019	Best Paper Award	Srilekha Paul, and Arup Kumar Pal , “Active Forgery Detection in Grayscale Images using CRC-8 based Fragile Watermarking,” <i>1st International Conference on Machine Learning, Image Processing, Network Security and Data Sciences (MIND-2019)</i> , held at NIT Kurukshetra, India, 3-4 March 2019.

12. Research Projects:

Sl. No	Project Title	Funding Agency	Project Cost (₹ Lakhs)	Date of Sanction and Duration	Role as PI/Co- PI
i.	Development of Low-Cost Artificial Intelligent System for Prediction of Bone Mineral Density (BMD) From Plain Radiographic Images in Osteoporosis Detection (Project No: SRDP1164G)	ICMR	219.00 IIT(ISM) Dhanbad Received 29.16828	01.02.2025 (03 Years)	Site PI
ii.	Information Security Education and Awareness (ISEA) Project Phase-III (Project No: MeitY/2024-2025/1106/CSE)	MeitY	201.60	18.04.2024 (05 years)	Co-PI
iii.	Indigenous Development of Hand-held Multigas Detector for underground coal mining for real time monitoring (Project No: SRDP 1304 I)	CIL (CMPDI)	44.63	23.03.2026 (02 Years)	Co-PI
iv.	Design and Development of AI-Integrated Sensors for Continuous Monitoring of Ocean Environment and Microplastic Pollution to Enhance Seaweed and Fishery Production (Project No: SRDP 1342 G)	MST	76.92069	21.05.2026 (02 Years)	Co-PI
v.	Cloud based Smart Video Surveillance System with Application Layer Cyber Physical Systems Security (Project No: C3iHUB/2021-2022/820/CSE)	C3iHUB IIT Kanpur	31.28	29.09.2021 to 31.03.2025	Sole PI
vi.	Development of Content-Based Image Filtering Approach to Prevent Objectionable Image Retrieval from The Internet (Project No: CSIR(34)/2020-2021/754/CSE)	CSIR	18.60	21.12.2020 to 16.03.2024	Sole PI
vii.	FIST- 2018 (Project No: DST-FIST(208)/2018-2019/606/CSE)	DST	52.00	10.08.2018 to 09.08.2023	Co-PI
viii.	Information Security Education and Awareness (ISEA) Phase-II (Project No: MCIT(3)/2015-16/419/CSE)	MeitY	148.10	30.06.2015 to 31.12.2023	Co-PI

13. Details of Patents

Sl. No	Patent Number	Title of the patent	Country	Date of Filing	Status
[P:1].	202431055122	A genetic coding video frame features for content-based video surveillance system	India	19/07/2024	Published
[P:2].	202631061987	Blockchain Integrated Verifiable Deep Inference Framework for Privacy-Preserving Edge-AI Based VSS Anomaly Detection	India	15/05/2026	Filed
[P:3].	202631062256	A System and Method for Osteoporosis Screening in Indian Hip X-Rays using Fourier-Integrated Hybrid CNN-Transformer	India	16/05/2026	Filed

14. List of Selected Papers Published/Accepted in SCI/SCIE Journals

- [J:1]. Deepankumar S, Rengaraj R, Pranesh R, P. Mishra, and **A. K. Pal**, "A 3D Chaotic Map-based Novel Intra and Inter-level Bit Plane Image Content Encryption", *Journal of Information Security and Applications*, vol. 98, May 2026, doi:[10.1016/j.jisa.2026.104389](https://doi.org/10.1016/j.jisa.2026.104389) [SCIE (Q2), IF: 4.4]
- [J:2]. P. Kumar, **A. K. Pal**, S. H. Islam, and P. Soni, "LPSF-DA-VSS: Lightweight and Provably Secure Cloud-Server Framework for Data Access in Video Surveillance System", *IEEE Transactions on*

- Consumer Electronics*, vol. 72, no. 1, pp. 584–595, Feb. 2026, doi: [10.1109/TCE.2025.3634328](https://doi.org/10.1109/TCE.2025.3634328) [SCIE (Q1), IF: 9.9]
- [J:3]. M. Chaurasia, **A. K. Pal**, S. H. Islam, and J. Pradhan, “ASCON-Based Mutual Authentication and Secure Surveillance Video Data Management in Smart Cities Using Blockchain,” *IEEE Transactions on Consumer Electronics*, vol. 71, no. 2, pp. 3029–3039, May 2025, doi: [10.1109/TCE.2025.3552591](https://doi.org/10.1109/TCE.2025.3552591). [SCIE (Q1), IF: 9.9]
- [J:4]. P. Soni, S. H. Islam, **A. K. Pal**, N. Mishra, and D. Samanta, “Blockchain-Based User Authentication and Data-Sharing Framework for Healthcare Industries,” *IEEE Transactions on Network Science and Engineering*, vol. 11, no. 4, pp. 3623–3638, Jul. 2024, doi: [10.1109/TNSE.2024.3381723](https://doi.org/10.1109/TNSE.2024.3381723). [SCIE (Q1), IF: 7.3]
- [J:5]. J. Pradhan, **A. K. Pal**, S. H. Islam, and C. Bhaya, “DNA Encoding-Based Nucleotide Pattern and Deep Features for Instance and Class-Based Image Retrieval,” *IEEE Transactions on NanoBioscience*, vol. 23, no. 1, pp. 190–201, Jan. 2024, doi: [10.1109/TNB.2023.3303512](https://doi.org/10.1109/TNB.2023.3303512). [SCIE (Q1), IF: 4.2]
- [J:6]. S. Mukherjee, **A. K. Pal**, and S. Maji, “A copy-move forgery detection technique using DBSCAN-based keypoint similarity matching,” *International Journal of Machine Learning and Cybernetics*, vol. 15, no. 12, pp. 5607–5634, Dec. 2024, doi: [10.1007/s13042-024-02268-3](https://doi.org/10.1007/s13042-024-02268-3). [SCIE (Q3), IF: 2.9]
- [J:7]. S. Mondal, **A. K. Pal**, and S. H. Islam, “CBIF-M: A content-based image filtering and retrieval scheme using multi-classifier filtering framework,” *Computers and Electrical Engineering*, vol. 118, p. 109450, Sep. 2024, doi: [10.1016/j.compeleceng.2024.109450](https://doi.org/10.1016/j.compeleceng.2024.109450). [SCIE (Q1), IF: 5.5]
- [J:8]. P. Kumar, **A. K. Pal**, and S. H. Islam, “2F-MASK-VSS: Two-factor mutual authentication and session key agreement scheme for video surveillance system,” *Journal of Systems Architecture*, vol. 153, p. 103196, Aug. 2024, doi: [10.1016/j.sysarc.2024.103196](https://doi.org/10.1016/j.sysarc.2024.103196). [SCIE (Q1), IF: 5.3]
- [J:9]. P. Soni, J. Pradhan, **A. K. Pal**, and S. H. Islam, “Cybersecurity Attack-Resilience Authentication Mechanism for Intelligent Healthcare System,” *IEEE Transactions on Industrial Informatics*, vol. 19, no. 1, pp. 830–840, Jan. 2023, doi: [10.1109/TII.2022.3179429](https://doi.org/10.1109/TII.2022.3179429). [SCIE (Q1), IF: 9.8]
- [J:10]. S. Prasad, **A. K. Pal**, and S. Mukherjee, “An RGB Color Image Steganography Scheme by Binary Lower Triangular Matrix,” *IEEE Transactions on Intelligent Transportation Systems*, vol. 24, no. 7, pp. 6865–6873, Jul. 2023, doi: [10.1109/TITS.2023.3264467](https://doi.org/10.1109/TITS.2023.3264467). [SCIE (Q1), IF: 9.1]
- [J:11]. J. Pradhan, C. Bhaya, **A. K. Pal**, and A. Dhuriya, “Content-Based Image Retrieval Using DNA Transcription and Translation,” *IEEE Transactions on NanoBioscience*, vol. 22, no. 1, pp. 128–142, Jan. 2023, doi: [10.1109/TNB.2022.3169701](https://doi.org/10.1109/TNB.2022.3169701). [SCIE (Q1), IF: 4.2]
- [J:12]. S. Paul and **A. K. Pal**, “A fast copy-move image forgery detection approach on a reduced search space,” *Multimedia Tools and Applications*, vol. 82, no. 17, pp. 25917–25944, Jul. 2023, doi: [10.1007/s11042-022-14224-w](https://doi.org/10.1007/s11042-022-14224-w). [SCIE (Q2), IF: 3.0]
- [J:13]. S. Kumar, **A. K. Pal**, N. Varish, I. Nurhidayat, S. M. Eldin, and S. K. Sahoo, “A hierarchical approach based CBIR scheme using shape, texture, and color for accelerating retrieval process,” *Journal of King Saud University - Computer and Information Sciences*, vol. 35, no. 7, p. 101609, Jul. 2023, doi: [10.1016/j.jksuci.2023.101609](https://doi.org/10.1016/j.jksuci.2023.101609). [SCIE (Q1), IF: 6.4]
- [J:14]. S. Kumar, **A. K. Pal**, S. H. Islam, and M. Hammoudeh, “Secure and efficient image retrieval through invariant features selection in insecure cloud environments,” *Neural Computing and Applications*, vol. 35, no. 7, pp. 4855–4880, Mar. 2023, doi: [10.1007/s00521-021-06054-y](https://doi.org/10.1007/s00521-021-06054-y). [SCIE (Q2), IF: 4.5]
- [J:15]. S. Kumar, S. Mukherjee, and **A. K. Pal**, “An improved reduced feature-based copy-move forgery detection technique,” *Multimedia Tools and Applications*, vol. 82, no. 1, pp. 1431–1456, Jan. 2023, doi: [10.1007/s11042-022-12391-4](https://doi.org/10.1007/s11042-022-12391-4). [SCIE (Q2), IF: 3.0]
- [J:16]. S. Prasad, **A. K. Pal**, and S. Paul, “A Block-Level Image Tamper Detection Scheme Using Modulus Function Based Fragile Watermarking,” *Wireless Personal Communications*, vol. 125, no. 3, pp. 2581–2619, Aug. 2022, doi: [10.1007/s11277-022-09675-1](https://doi.org/10.1007/s11277-022-09675-1). [SCIE (Q3), IF: 1.9]
- [J:17]. J. Pradhan, **A. K. Pal**, and H. Banka, “A CBIR system based on saliency driven local image features and multi orientation texture features,” *Journal of Visual Communication and Image Representation*, vol. 83, p. 103396, Feb. 2022, doi: [10.1016/j.jvcir.2021.103396](https://doi.org/10.1016/j.jvcir.2021.103396). [SCIE (Q2), IF: 2.8]
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- [J:19]. V. Rathore and **A. K. Pal**, “An image encryption scheme in bit plane content using Henon map based generated edge map,” *Multimedia Tools and Applications*, vol. 80, no. 14, pp. 22275–22300, Jun. 2021, doi: [10.1007/s11042-021-10719-0](https://doi.org/10.1007/s11042-021-10719-0). [SCIE (Q2), IF: 3.0]
- [J:20]. J. Pradhan, **A. K. Pal**, H. Banka, and P. Dansena, “Fusion of region based extracted features for instance- and class-based CBIR applications,” *Applied Soft Computing*, vol. 102, p. 107063, Apr. 2021, doi: [10.1016/j.asoc.2020.107063](https://doi.org/10.1016/j.asoc.2020.107063). [SCIE (Q1), IF: 7.8]

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- [J:22]. P. Mishra, C. Bhaya, **A. K. Pal**, and A. K. Singh, "A medical image cryptosystem using bit-level diffusion with DNA coding," *Journal of Ambient Intelligence and Humanized Computing*, vol. 14, no. 3, pp. 1731–1752, 2021, doi: [10.1007/s12652-021-03410-7](https://doi.org/10.1007/s12652-021-03410-7). [SCIE (Q2), IF: 3.662]
- [J:23]. M. Majhi, **A. K. Pal**, J. Pradhan, S. H. Islam, and M. K. Khan, "Computational intelligence based secure three-party CBIR scheme for medical data for cloud-assisted healthcare applications," *Multimedia Tools and Applications*, Feb. 2021, doi: [10.1007/s11042-020-10483-7](https://doi.org/10.1007/s11042-020-10483-7). [SCIE (Q2), IF: 3.0]
- [J:24]. M. Majhi, **A. K. Pal**, S. H. Islam, and M. Khurram Khan, "Secure content-based image retrieval using modified Euclidean distance for encrypted features," *Transactions on Emerging Telecommunications Technologies*, vol. 32, no. 2, p. e4013, 2021, doi: [10.1002/ett.4013](https://doi.org/10.1002/ett.4013). [SCIE (Q2), IF: 2.6]
- [J:25]. M. Majhi and **A. K. Pal**, "An image retrieval scheme based on block level hybrid dct-svd fused features," *Multimedia Tools and Applications*, vol. 80, no. 5, pp. 7271–7312, Feb. 2021, doi: [10.1007/s11042-020-10005-5](https://doi.org/10.1007/s11042-020-10005-5). [SCIE (Q2), IF: 3.0]
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- [J:27]. S. Kumar, J. Pradhan, and **A. K. Pal**, "Adaptive tetrolet based color, texture and shape feature extraction for content based image retrieval application," *Multimedia Tools and Applications*, vol. 80, no. 19, pp. 29017–29049, Aug. 2021, doi: [10.1007/s11042-021-10835-x](https://doi.org/10.1007/s11042-021-10835-x). [SCIE (Q2), IF: 3.0]
- [J:28]. T. Kaibartta, G. P. Biswas, **A. K. Pal**, and D. K. Das, "A Genetic Algorithm-Based Metaheuristic Approach for Test Cost Optimization of 3D SIC," *IEEE Access*, vol. 9, pp. 160987–161002, 2021, doi: [10.1109/ACCESS.2021.3131336](https://doi.org/10.1109/ACCESS.2021.3131336). [SCIE (Q2), IF: 4.2]
- [J:29]. K. Chowdhury, D. Chaudhuri, and **A. K. Pal**, "An entropy-based initialization method of K-means clustering on the optimal number of clusters," *Neural Computing and Applications*, vol. 33, no. 12, pp. 6965–6982, Jun. 2021, doi: [10.1007/s00521-020-05471-9](https://doi.org/10.1007/s00521-020-05471-9). [SCIE (Q1), IF: 4.5]
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- [J:33]. J. Pradhan, S. Kumar, **A. K. Pal**, and H. Banka, "Texture and colour region separation based image retrieval using probability annular histogram and weighted similarity matching scheme," *IET Image Processing*, vol. 14, no. 7, pp. 1303–1315, 2020, doi: [10.1049/iet-ipr.2018.6619](https://doi.org/10.1049/iet-ipr.2018.6619). [SCIE (Q3), IF: 2.4]
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- [J:49]. S. Roy and **A. K. Pal**, "A blind DCT based color watermarking algorithm for embedding multiple watermarks," *AEU - International Journal of Electronics and Communications*, vol. 72, pp. 149–161, Feb. 2017, doi: [10.1016/j.aeue.2016.12.003](https://doi.org/10.1016/j.aeue.2016.12.003). [SCIE (Q2), IF: 3.1]
- [J:50]. S. Prasad and **A. K. Pal**, "An RGB colour image steganography scheme using overlapping block-based pixel-value differencing," *Royal Society Open Science*, vol. 4, no. 4, p. 161066, Apr. 2017, doi: [10.1098/rsos.161066](https://doi.org/10.1098/rsos.161066). [SCIE (Q1), IF: 3.0]

16. List of Selected Papers Published/Accepted in Conference

- [C:1]. A. M. Tripathi, S. Mondal, **A. K. Pal**, and M. Raj, "AGRT-Net: A Hybrid Attention-Guided Region Transformer for Osteoporosis Classification from Indian Femur Radiographs", *International Conference on Complex System Modelling and Artificial Intelligence (CSMAI 2026)* held at Aleksandër Moisiu University, Durrës, Albania, Europe, May 21-22, 2026. **(Received Best Paper Award)**
- [C:2]. S. Jaiswal, M. Chaurasia, and **A. K. Pal**, "Design of a Secure Medical Data Access Framework Using PKI and Blockchain Technology", *International Conference on Complex System Modelling and Artificial Intelligence (CSMAI 2026)* held at Aleksandër Moisiu University, Durrës, Albania, Europe, May 21-22, 2026.
- [C:3]. S. Mondal, **A. K. Pal**, P. Mishra, and M. Raj, "Deep Learning Approaches for Automated Osteoporosis Classification on Indian Hip X-Ray Data," *12th IBS Conference on Marketing & Business Strategy (ICOMBS 2026)* in Association with Centre of Sustainable Energy (IIT Roorkee), held at IBS Hyderabad, India, 13-14 March, 2026. **(Received Best Paper Award)**
- [C:4]. S. Mondal, S. H. Islam, **A. K. Pal** and D. Samanta, "GRASP-Former: A Lightweight Global-Random Sparse Attention for Domain-Aware Multi-Class Obscenity Detection," *2025 40th International Conference on Image and Vision Computing New Zealand (IVCNZ)* held at Wellington, New Zealand, 19-21 November 2025, pp. 1-6, doi: [10.1109/IVCNZ67716.2025.11281822](https://doi.org/10.1109/IVCNZ67716.2025.11281822). **(Core Rank Australasian C)**
- [C:5]. G. Roy, **A. K. Pal**, M. Raj, J. Pradhan, "Knee Osteoarthritis Detection and Categorization with Deep Learning Models", *Proceedings of the Second International Symposium on Artificial Intelligence. ISAI*

- 2025, held at NIT Sikkim, 05-07 March, 2025, Lecture Notes in Networks and Systems, vol 1536. Springer. **(Received Best Paper Award)**
- [C:6]. L. Dinda, J. Pradhan, **A. K. Pal**, M. Raj, G. N. Patel, “Whirling Triangle-Based Geometric and Texture Feature Extraction with Attention-Driven Hybrid Models for Multiclass Osteoporosis Classification from Knee X-Rays”, *Proceedings of the 10th National Conference on Computer Vision, Pattern Recognition, Image Processing, and Graphics (NCVPRIPG 2025)*, held at IIT Jammu, 16-18 July 2025, Communications in Computer and Information Science, vol 2684. Springer, Cham.
- [C:7]. D. Karmakar, S. Mukherjee, and **A. K. Pal**, “A Reversible Fragile Watermarking Scheme for Tamper Localization and Content Recovery in Digital Images”, *5th International Conference on Machine Vision & Augmented Intelligence (MAI-2025)*, held at MMMUT Gorakhpur, 20-21 December 2025
- [C:8]. V. Mishra, S. K. S. Chaganti, P. Mishra, **A. K. Pal**, and S. K. Panda, “Multi-Modal Self-Supervised Learning for the Detection of Rare Diseases”, *6th International Symposium on Signal and Image Processing (ISSIP 2025)*, November 24-25, 2025, held at Rochester Institute of Technology Kosovo, Europe, Lecture Notes in Electrical Engineering, vol. 1626. Springer.
- [C:9]. K. Malaviya, P. Mishra, and **A. K. Pal**, “Lossless Medical Image Compression Using Block-Wise Burrows–Wheeler Transform and Modified Run Length Encoding,” *Fifth International Symposium on Signal and Image Processing (ISSIP 2024)*, 25-26 March, 2024, held at Rochester Institute of Technology Kosovo, Europe, Lecture Notes in Electrical Engineering, vol 1269. Springer.
- [C:10]. P. Kumar, **A. K. Pal**, and S. H. Islam, “LASKV: Lightweight Authenticated Session Key Agreement for Video Surveillance System,” *Fifth International Symposium on Signal and Image Processing (ISSIP 2024)*, 25-26 March, 2024, held at Rochester Institute of Technology Kosovo, Europe, Lecture Notes in Electrical Engineering, vol 1269. Springer. **(Received Best Paper Award)**
- [C:11]. B. Biswas, M. Chaurasia, **A. K. Pal**, and N. Kar, “A Blockchain-Based Secure Framework for Storage and Access of Surveillance Video Data,” *Fifth International Symposium on Signal and Image Processing (ISSIP 2024)*, 25-26 March, 2024, held at Rochester Institute of Technology Kosovo, Europe, Lecture Notes in Electrical Engineering, vol 1269. Springer.
- [C:12]. S. H. Islam, S. Kumar, V. J. Immanuel, P. Sonthalia, S. Mondal, and **A. Pal**, “Securing Connected Vehicles: An Evaluation Framework for CAN bus-enabled In-vehicle Communications,” *3rd International Conference on Computing Advancements (ICCA-24)*, held at American International University-Bangladesh (AIUB), Dhaka, October 17–18, 2024, pp. 162–168, Association for Computing Machinery.
- [C:13]. S. Gupta, B. Biswas, and **A. K. Pal**, “A Real-Time Framework for Secure Storage of Surveillance Video Data in Cloud Environment,” *3rd International Conference on Computing (ICCA-24)*, held at American International University-Bangladesh (AIUB), Dhaka, October 17–18, 2024, pp. 177–182, Association for Computing Machinery.
- [C:14]. M. Chaurasia, **A. K. Pal**, S. K. H. Islam, and J. Pradhan, “Secure Management of Patient Test Data Using Blockchain and IPFS,” *3rd International Conference on Network Security and Blockchain Technology (ICNSBT 2024)*, 06-08 June, 2024, held at Jalpaiguri Government Engineering College, West Bengal, Lecture Notes in Networks and Systems, vol 1158. Springer.
- [C:15]. J. Pradhan, **A. K. Pal**, S. H. Islam, and D. Samanta, “DNA Transcription and Translation Inspired Deep Features for Classification-Based CBIR,” *23rd International Conference on Intelligent Systems Design and Applications (ISDA-2023)*, 11-13 December 2023, Switzerland, Lecture Notes in Networks and Systems, vol 1050. Springer, Cham. **(Core Rank C)**
- [C:16]. L. Faheem, S. Mukherjee, M. S. Obaidat, **A. K. Pal**, S. H. Islam, and B. Sadoun, “DL-CMFD: Deep Learning-Based Copy-Move Forgery Detection Using Parallel Feature-Extractor,” *2023 International Conference on Computer, Information and Telecommunication Systems (CITS 2023)*, held at University of Genoa, Italy, 10-12 July, 2023, pp. 01–08, IEEE.
- [C:17]. S. Mondal, **A. K. Pal**, S. H. Islam, and D. Samanta, “Objectionable Image Content Classification Using CNN-Based Semi-supervised Learning,” *5th International Conference on Smart Vehicular Technology, Transportation, Communication and Applications (VTCA-2022)*, 24-26 December, 2022, Virtual Conference, Proc. of Advances in Smart Vehicular Technology, Transportation, Communication and Applications. Smart Innovation, Systems and Technologies, vol 347. Springer. **(Received Excellent Paper Award)**
- [C:18]. P. Soni, M. S. Obaidat, **A. K. Pal**, and S. H. Islam, “RFID-Based Authentication Scheme for Secure Access of Medical Data in IoT-Enabled Health Environments,” *Third International Conference on Advances in Distributed Computing and Machine Learning (ICADCML 2022)*, 15–16 January 2022,

- held at National Institute of Technology Warangal, Proc. of Advances in Distributed Computing and Machine Learning, Lecture Notes in Networks and Systems, Springer.
- [C:19]. C. Bhaya, M. S. Obaidat, **A. K. Pal**, and S. H. Islam, "Encrypted Medical Image Storage in DNA Domain," *ICC 2021 - IEEE International Conference on Communications*, Montreal, QC, Canada, 14-23 June 2021, pp. 1-7, IEEE (**Core Rank B**)
 - [C:20]. J. Pradhan, **A. K. Pal**, M. S. Obaidat, and S. K. H. Islam, "A Post Dynamic Clustering Approach for Classification-based Image Retrieval," *2020 International Conference on Communications, Computing, Cybersecurity, and Informatics (CCCI)*, Sharjah, United Arab Emirates, 2020, pp. 1-7, IEEE.
 - [C:21]. J. Pradhan, A. Raj, **A. K. Pal**, and H. Banka, "Multi-scale Image Fusion Scheme Based on Gray-Level Edge Maps and Adaptive Weight Maps," *3rd International Conference on Computer Vision and Image Processing (CVIP-2018)*, held at IIITDM in Jabalpur, September 29 - October 1, 2018, Proc. of Advances in Intelligent Systems and Computing, vol. 1024, Springer.
 - [C:22]. K. Chowdhury, D. Chaudhuri, and **A. K. Pal**, "Optimal Number of Seed Point Selection Algorithm of Unknown Dataset," *3rd International Conference on Computer Vision and Image Processing (CVIP-2018)*, held at IIITDM in Jabalpur, September 29 - October 1, 2018, Proc. of Advances in Intelligent Systems and Computing, vol. 1024, Springer.
 - [C:23]. R. Ali, P. Chandrakar, M. S. Obaidat, K.-F. Hsiao, **A. K. Pal**, and S. K. Hafizul Islam, "A Secure Authentication Mechanism for Wireless Sensor Networks," *2020 International Conference on Computer, Information and Telecommunication Systems (CITS)*, 05-07 October, 2020, Hangzhou, China, 2020, pp. 1-8, IEEE
 - [C:24]. P. Soni, **A. K. Pal**, and K. Khushboo, "A User Convenient Secure Authentication Scheme for Accessing e-Governance Services," *10th International Conference on Computing, Communication and Networking Technologies (ICCCNT 2019)*, 06-08 July, 2019, held at IIT Kanpur, IEEE.
 - [C:25]. S. Paul and **A. K. Pal**, "An Efficient Surveillance Video Coding Scheme for Static Camera Based Captured Video Data," *6th International Conference on Signal Processing and Integrated Networks (SPIN 2019)*, March 7-8, 2019, held at Amity University Noida, 2019, pp. 868-873, IEEE.
 - [C:26]. M. Majhi, J. Pradhan, and **A. K. Pal**, "An Efficient Content Based Image Retrieval Scheme with Preserving the Security of Images," *6th International Conference on Signal Processing and Integrated Networks (SPIN 2019)*, March 7-8, 2019, held at Amity University Noida, 2019, pp. 874-879, IEEE.
 - [C:27]. A. Raj, J. Pradhan, **A. K. Pal**, and H. Banka, "Multi-scale image fusion scheme based on non-sub sampled contourlet transform and four neighborhood Shannon entropy scheme," *4th International Conference on Recent Advances in Information Technology (RAIT 2018)*, 15-17 March, 2018, held at IIT(ISM) Dhanbad, pp. 1-6. IEEE.
 - [C:28]. V. Rathore, A. Verma, A. Kumar, and **A. K. Pal**, "A H'eron Map Based Cryptosystem for VQ Based Compressed Video Data," *3rd International Conference on Internet of Things and Connected Technologies (ICIoTCT 2018)*, 26-27 March, 2018, held at Malaviya National Institute of Technology, Jaipur, SSRN
 - [C:29]. S. Prasad and **A. K. Pal**, "Logistic map-based Image Steganography Scheme using Combined LSB and PVD for Security Enhancement," *International Conference on Emerging Technologies in Data Mining and Information Security*, 23-25 February, 2018, held at UEM Kolkata, Proc. *Advances in Intelligent Systems and Computing*, vol 814. Springer.
 - [C:30]. J. Pradhan, S. Kumar, **A. K. Pal**, and H. Banka, "Texture and color visual features based CBIR using 2D DT-CWT and histograms," *International Conference on Mathematics and Computing*, 09-11 January, 2018, 4th edition held at Indian Institute of Technology (BHU) Varanasi, Proc. in *Communications in Computer and Information Science*, vol 834. Springer
 - [C:31]. P. Soni, R. Ali, and **A. K. Pal**, "A Two-factor based Remote User Authentication Scheme using ElGamal Cryptosystem," in *Proceedings of the ACM Workshop on Internet of Things (IoT) Security: Issues and Innovations*, in *IoTSec'17*, 10 July 2017, held at IIT Madras, Association for Computing Machinery
 - [C:32]. J. Pradhan, **A. K. Pal**, and H. Banka, "A prominent object region detection based approach for CBIR application," *Fourth International Conference on Parallel, Distributed and Grid Computing (PDGC 2016)*, 22-24 December, 2016, held at Jaypee University, pp. 447-452. IEEE.
 - [C:33]. N. Varish and **A. K. Pal**, "A Content Based Image Retrieval using Color and Texture Features," *International Conference on Advances in Information Communication Technology & Computing (AICTC 16)*, 12 - 13, August 2016, held at Bikaner, Association for Computing Machinery
 - [C:34]. N. Varish and **A. K. Pal**, "Content based image retrieval using statistical features of color histogram," *3rd International Conference on Signal Processing, Communication and Networking (ICSCN 2015)*, 26-28, March 2015, held at Anna University Chennai, pp. 1-6, IEEE.

- [C:35]. K. Rahul, R. Agrawal, and **A. K. Pal**, “Color Image Quantization Scheme Using DBSCAN with K-Means Algorithm,” *International Conference on Advanced Computing, Networking, and Informatics (ICACNI 2013)*, 12-14 June, 2013, held at the Central Institute of Technology (CIT) Raipur, *Advances in Intelligent Systems and Computing*, vol 243. Springer.
- [C:36]. K. Naik and **A. K. Pal**, “A Partial Image Cryptosystem Based on Discrete Cosine Transform and Arnold Transform,” *2nd International Conference on Recent Advances in Information Technology*, 13-15 March, 2014, held at IIT(ISM) Dhanbad, *Advances in Intelligent Systems and Computing*, vol 266. Springer.
- [C:37]. **A. K. Pal**, and T. Pramanik, “Design of an Edge Detection Based Image Steganography with High Embedding Capacity”, *9th International Conference on Heterogeneous Networking for Quality, Reliability, Security and Robustness, (QShine 2013)*, 11-12 January, 2013, held at Greater Noida, India, *Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering*, vol 115. Springer. **(Core Rank B)**
- [C:38]. K. Naik and **A. K. Pal**, “An image cryptosystem based on diffusion of significant bit-planes of a scrambled image with generated binary key matrices,” in *2013 IEEE International Conference on Computational Intelligence and Computing Research*, Dec. 2013, pp. 1–4. doi: [10.1109/ICCIC.2013.6724201](https://doi.org/10.1109/ICCIC.2013.6724201).
- [C:39]. S. Mukherjee and **A. K. Pal**, “A DCT-SVD based robust watermarking scheme for grayscale image,” in *Proceedings of the International Conference on Advances in Computing, Communications and Informatics*, in ICACCI '12. New York, NY, USA: Association for Computing Machinery, Aug. 2012, pp. 573–578. doi: [10.1145/2345396.2345490](https://doi.org/10.1145/2345396.2345490).
- [C:40]. **A. K. Pal**, G. P. Biswas, and S. Mukhopadhyay, “An Efficient Compression-Encryption Scheme for Batch-Image,” in *Technology Systems and Management*, K. Shah, V. R. Lakshmi Gorty, and A. Phirke, Eds., in *Communications in Computer and Information Science*. Berlin, Heidelberg: Springer, 2011, pp. 85–90. doi: [10.1007/978-3-642-20209-4_12](https://doi.org/10.1007/978-3-642-20209-4_12).
- [C:41]. **A. K. Pal**, G. P. Biswas, and S. Mukhopadhyay, “Designing of High-Speed Image Cryptosystem Using VQ Generated Codebook and Index Table,” in *2010 International Conference on Recent Trends in Information, Telecommunication and Computing*, Mar. 2010, pp. 39–43. doi: [10.1109/ITC.2010.46](https://doi.org/10.1109/ITC.2010.46).
- [C:42]. **A. K. Pal**, G. P. Biswas, and S. Mukhopadhyay, “A hybrid DCT-VQ based approach for efficient compression of color images,” in *2010 International Conference on Computer and Communication Technology (ICCCT)*, Sep. 2010, pp. 177–181. doi: [10.1109/ICCCT.2010.5640445](https://doi.org/10.1109/ICCCT.2010.5640445).

17. Books/Reports/Chapters/General articles etc.

A. List of Books/Chapters Published

Edited Books:

- [B:1]. S. H. Islam, D. Samanta, **A. K. Pal**, and U. Iqbal, “IoT Security: Fundamentals and Key Enabling Technologies”, Academic Press, 2025.
- [B:2]. S. H. Islam, **A. K. Pal**, D. Samanta, and S. Bhattacharyya, “*Blockchain Technology for Emerging Applications: A Comprehensive Approach*”, Academic Press, 2022.
- [B:3]. S. Tripathi, **A. K. Pal**, and D. Ramesh, *Proceedings of the 4th ISEA International Conference on Security and Privacy (ISEA-ISAP2021)*, IEEE, 2021.
- [B:4]. S. Tripathi and **A. K. Pal**, *Proceedings of 4th International Conference on Recent Advances in Information Technology (RAIT)*, IEEE, 2018.
<https://ieeexplore.ieee.org/xpl/conhome/8376941/proceeding>

Book Chapters:

- [Bc:1]. Bhaya, **A. K. Pal**, and S. H. Islam, “Chapter Four - A novel image encryption and decryption scheme by using DNA computing,” in *Advances in Computers*, vol. 129, S. Namasudra, Ed., in *Perspective of DNA Computing in Computer Science*, vol. 129., Elsevier, 2023, pp. 129–172. doi: [10.1016/bs.adcom.2022.08.010](https://doi.org/10.1016/bs.adcom.2022.08.010).
- [Bc:2]. Sheikh, J. Pradhan, A. Dhuriya, and **A. K. Pal**, “Medical Image Fusion Using Deep Learning,” in *Deep Learning for Biomedical Data Analysis: Techniques, Approaches, and Applications*, M. Elloumi, Ed., Cham: Springer International Publishing, 2021, pp. 129–152. doi: [10.1007/978-3-030-71676-9_6](https://doi.org/10.1007/978-3-030-71676-9_6).
- [Bc:3]. J. Pradhan, **A. K. Pal**, and H. Banka, “Medical Image Retrieval System Using Deep Learning Techniques,” in *Deep Learning for Biomedical Data Analysis: Techniques, Approaches, and*

Applications, M. Elloumi, Ed., Cham: Springer International Publishing, 2021, pp. 101–128. doi: [10.1007/978-3-030-71676-9_5](https://doi.org/10.1007/978-3-030-71676-9_5).

- [Bc:4]. S. Paul and **A. K. Pal**, “Active Forgery Detection in Grayscale Images using CRC-8-based Fragile Watermarking,” in *Cloud Security*, CRC Press, 2021.
- [Bc:5]. S. H. Islam, **A. K. Pal**, S. Prasad, S. Roy, R. Rungta, and S. Verma, “Digital watermarking algorithms for multimedia data,” *Authentication Technologies for Cloud Computing, IoT and Big Data*, pp. 107–123, Mar. 2019, doi: [10.1049/PBSE009E_ch5](https://doi.org/10.1049/PBSE009E_ch5).

B. List of Papers Published/Accepted in Scopus Journals

- [Sc:1]. **A. K. Pal**, B. Biswas, M. Digamber Jichkar, A. Nandan Jena, and M. Kumar, “Object detection driven composite block motion estimation algorithm for surveillance video coding,” *Multimedia Tools and Applications*, Mar. 2025, doi: [10.1007/s11042-025-20722-4](https://doi.org/10.1007/s11042-025-20722-4). [Scopus (Q1)]
- [Sc:2]. S. Mukherjee and **A. K. Pal**, “A hybrid SWT-SVD based multiresolution features for robust image copy-move forgery detection,” *Multimedia Tools and Applications*, vol. 83, no. 16, pp. 48141–48163, May 2024, doi: [10.1007/s11042-023-17279-5](https://doi.org/10.1007/s11042-023-17279-5). [Scopus (Q1)]
- [Sc:3]. K. Chowdhury, D. Chaudhuri, and **A. K. Pal**, “A faster SVM classification technique for remote sensing images using reduced training samples,” *J Ambient Intell Human Comput*, vol. 14, no. 12, pp. 16807–16827, Dec. 2023, doi: [10.1007/s12652-023-04689-4](https://doi.org/10.1007/s12652-023-04689-4). [Scopus (Q1)]
- [Sc:4]. S. Prasad and **A. K. Pal**, “Stego-key-based image steganography scheme using edge detector and modulus function,” *IJCVR*, vol. 10, no. 3, p. 223, 2020, doi: [10.1504/IJCVR.2020.107245](https://doi.org/10.1504/IJCVR.2020.107245). [Scopus (Q3)]
- [Sc:5]. S. Prasad and **A. K. Pal**, “A Secure Fragile Watermarking Scheme for Protecting Integrity of Digital Images,” *Iran J Sci Technol Trans Electr Eng*, vol. 44, no. 2, pp. 703–727, Jun. 2020, doi: [10.1007/s40998-019-00275-7](https://doi.org/10.1007/s40998-019-00275-7). [Scopus (Q2)]
- [Sc:6]. S. Roy and **A. K. Pal**, “A Hybrid Domain Color Image Watermarking Based on DWT–SVD,” *Iran J Sci Technol Trans Electr Eng*, vol. 43, no. 2, pp. 201–217, Jun. 2019, doi: [10.1007/s40998-018-0109-x](https://doi.org/10.1007/s40998-018-0109-x). [Scopus (Q2)]
- [Sc:7]. S. Roy and **A. K. Pal**, “A robust reversible image watermarking scheme in DCT domain using Arnold scrambling and histogram modification,” *International Journal of Information and Computer Security*, vol. 10, no. 2–3, pp. 216–236, Jan. 2018, doi: [10.1504/IJICS.2018.091469](https://doi.org/10.1504/IJICS.2018.091469). [Scopus (Q3)]
- [Sc:8]. **A. K. Pal** and S. Roy, “A robust and blind image watermarking scheme in DCT domain,” *International Journal of Information and Computer Security*, vol. 10, no. 4, pp. 321–340, Jan. 2018, doi: [10.1504/IJICS.2018.095296](https://doi.org/10.1504/IJICS.2018.095296). [Scopus (Q3)]
- [Sc:9]. K. Naik and **A. K. Pal**, “A cryptosystem for lossless/lossy grayscale images in IWT domain using chaotic map-based generated key matrices,” *Int. J. Wavelets Multiresolut Inf. Process.*, vol. 16, no. 04, p. 1850024, Jul. 2018, doi: [10.1142/S0219691318500248](https://doi.org/10.1142/S0219691318500248). [Scopus (Q3)]
- [Sc:10]. S. Trivedy and **A. K. Pal**, “A Logistic Map-Based Fragile Watermarking Scheme of Digital Images with Tamper Detection,” *Iran J Sci Technol Trans Electr Eng*, vol. 41, no. 2, pp. 103–113, Jun. 2017, doi: [10.1007/s40998-017-0021-9](https://doi.org/10.1007/s40998-017-0021-9). [Scopus (Q2)]
- [Sc:11]. R. Ali and **A. K. Pal**, “A Secure and Robust Three-Factor Based Authentication Scheme Using RSA Cryptosystem,” *International Journal of Business Data Communications and Networking (IJBDCN)*, vol. 13, no. 1, pp. 74–84, 2017, doi: [10.4018/IJBDCN.2017010107](https://doi.org/10.4018/IJBDCN.2017010107). [Scopus (Q4)]
- [Sc:12]. N. Varish and **A. K. Pal**, “Content-based image retrieval using SVD-based Eigen images,” *International Journal of Image Mining*, vol. 2, no. 1, pp. 68–83, Jan. 2016, doi: [10.1504/IJIM.2016.079117](https://doi.org/10.1504/IJIM.2016.079117).
- [Sc:13]. R. Sharma, N. K. Agrawal, A. Khare, and **A. K. Pal**, “An Improved Size Invariant (n, n) Extended Visual Cryptography Scheme,” *International Journal of Business Data Communications and Networking (IJBDCN)*, vol. 12, no. 2, pp. 80–88, 2016, doi: [10.4018/IJBDCN.2016070105](https://doi.org/10.4018/IJBDCN.2016070105). [Scopus (Q4)]
- [Sc:14]. K. Naik and **A. K. Pal**, “Design of a cryptosystem for DCT compressed image using Arnold transform and fractional Fourier transform,” *International Journal of Computational Vision and Robotics*, vol. 5, no. 3, pp. 335–346, Jan. 2015, doi: [10.1504/IJCVR.2015.071337](https://doi.org/10.1504/IJCVR.2015.071337). [Scopus (Q3)]

18. Details of Ph.D Students (Guided and Ongoing):

S. N.	Name of Student	Title of the Dissertation	Sole or Joint	Status	Remarks
1.	Dr. Kshiramani Naik (2012DR0115)	Design of Some Transform Domain based Image Cryptosystem, Steganography, and Watermarking Schemes	Sole	Awarded (29-MAR-2017)	Assistant Professor VSSUT, Burla
2.	Dr. Naushad Varish (2013DR0252)	Content-Based Image Retrieval Techniques in Transform Domain	Sole	Awarded (15-FEB-2018)	Faculty at a Private University
3.	Dr. Soumitra Roy (2015DR1132)	Irreversible and Reversible Watermarking Schemes of Digital Images	Sole	Awarded (26-FEB-2018)	Faculty at a Private University
4.	Dr. Rifaqat Ali (2014DR0026)	Remote User Authentication Schemes Based on Cryptographic Approach	Sole	Awarded (09-OCT-2018)	Assistant Professor at NIT Hamirpur
5.	Dr. Jitesh Pradhan (2015DR0263)	Image Feature Extraction and Classification in CBIR	Joint	Awarded (17-AUG-2021)	Assistant Professor at NIT Jamshedpur
6.	Dr. Shiv Prasad (2013DR0157)	Data Hiding and Protection using Steganography and Fragile Watermarking Techniques	Sole	Awarded (18-SEP-2021)	Working at Govt. Organization
7.	Dr. Kuntal Chowdhury (2014DR1078)	Some Clustering and Classification Techniques for Images	Joint	Awarded (7-OCT-2021)	Faculty at a Private University
8.	Dr. Sumit Kumar (2015DR0056)	Design of Content-Based Image Retrieval Schemes and Their Applications	Sole	Awarded (25-JUL-2022)	Faculty at a Private University
9.	Dr. Pooja Mishra (2016DR1120)	DNA Coding for Error Correction, Data Storage, and Image Cryptosystem	Joint	Awarded (05-SEP-2022)	Assistant Professor at IIIT Vadodara
10.	Dr. Mukul Majhi (2015DR0082)	Design of Security Schemes for Content Based Image Retrieval	Sole	Awarded (17-OCT-2022)	Assistant Professor at NIT Hamirpur
11.	Dr. Preeti Soni (17DR000395)	Design of Attack-Resilience Authentication Protocols for Internet Applications	Joint	Awarded (09-FEB-2023)	Assistant Professor at NIT Warangal
12.	Dr. Soumya Mukherjee (18DP000411)	Design of Efficient Forgery Detection Techniques in Digital Images	Sole	Awarded (25-NOV-2024)	Assistant Professor at LNMIIT, Jaipur
13.	Ms. Vandana Rathore (16DR000109)	Development of Chaotic Maps Based Cryptosystems for Digital Images and Videos	Sole	Awarded (16-MAR-2026)	Assistant Professor at University of Allahabad
14.	Mr. Pramod Kumar (18DR0097)	Design and Analysis of Authentication Based Data Security Protocols for Securing Video Surveillance Systems	Sole	Thesis Submitted 21.05.2026	Faculty at a Private University
15.	Mr. Shukla Mondal (PhD/R/21007/655)	Design of Multi-Stage CBIR Framework with Feature Fusion for Objectionable Content Filtering	Joint	Thesis Submitted 24.06.2026	Part-Time Scholar
16.	Mr. Mahesh Chaurasia (21DR0088)	Currently working on Blockchain	Sole	Ongoing	Full-Time Scholar

17.	Mr. Chiranjeev Bhaya (23DP0051)	Currently working on DNA Computing and its Applications	Joint	Ongoing	Part-Time Scholar
18.	Mr. Ankur Mani Tripathi (24DP0125)	Currently Working on Medical Imaging	Sole	Ongoing	Part-Time Scholar
19.	Ms. Neha Srivastava (25DP0076)	Currently Doing Course Work	Joint	Ongoing	Part-Time Scholar
20.	Mr. Vibhav Kumar (25DP0093)	Currently Doing Course Work	Joint	Ongoing	Part-Time Scholar
21.	Mr. Arkaprabha Laha (25DR02980)	Currently Doing Course Work	Sole	Ongoing	Full-Time Scholar
22.	Mr. Bishad Shukla (25DR0303)	Currently Doing Course Work	Joint	Ongoing	Full-Time Scholar

19. Seminars/Short Term Courses/Summer Schools/Winter Schools organized:

Sl No.	From	To	Name of the course	Role	Number of Participants
1.	26-12-2014	30-12-2014	Short Term Course on Digital Image Processing and Its Applications (Consultancy No. CONS/2740/2014-15)	Coordinator	38
2.	13-06-2016	17-06-2016	Short Term Course on Image Processing: Algorithms and Applications (Consultancy No. CONS/3228/2016-2017)	Coordinator	14
3.	14-09-2016	18-09-2016	Short Term Course on Hands-on Session on MONOSEK-Real Time Network Packet Processing & Network Session Analysis (Consultancy No. CONS/3302/2016-2017)	Co-Coordinator	36
4.	19-12-2016	23-12-2016	Short Term Course on Mathematics of Cryptography with Image and Bluetooth Security Applications (Consultancy No. CONS/3387/2016-2017)	Co-Coordinator	13
5.	28-01-2016	30-01-2016	Workshop on Information and Cyber Security, supported by ISEA project Phase-II	Co-Coordinator	35
6.	09-02-2017	10-02-2017	Workshop on Communications and Multimedia Security, supported by ISEA project Phase-II	Co-Coordinator	55
7.	13-12-2017	17-12-2017	Short Term Course on Coding Theory and Cryptography: Fundamentals and Applications, supported by ISEA project Phase-II	Co-Coordinator	51
8.	10-02-2018	14-02-2018	GIAN Course on Security of E-Systems and Networks	Co-Coordinator	12
9.	15-03-2018	17-03-2018	4th IEEE International Conference on Recent Advances in Information Technology	Co-Coordinator	150 (Approx.)
10.	05-10-2020	09-10-2020	One Week Webinar on Cyber Security Techniques with Application, supported by ISEA project Phase-II	Coordinator	95

11.	27-10-2021	30-10-2021	4th ISEA International Conference on Security and Privacy (ISEA-ISAP2021), supported by ISEA project Phase-II	Co-Coordinator	100 (Approx.)
12.	10-12-2024	14-12-2024	Short Term Course on Cryptology and Its Practices: Securing the Digital World, supported by ISEA project Phase-III	Coordinator	19
13.	06-03-2025	08-03-2025	Tutorial Sessions on Information Security and Challenges supported by ISEA project Phase-III	Coordinator	50 (Approx.)
14.	07-07-2025	12-07-2025	FDP Course on Blockchain and Cybersecurity for Cyber Threat Prevention, supported by Malaviya Mission Teacher Training Programme (ORAC: 0217)	Coordinator	111
15.	27-01-2026	31-01-2026	Short Term Course on Underlying Mathematics and Some Applications of Cryptographic Techniques supported by ISEA project Phase-III	Coordinator	100

20. Professional Activities in Conference:

- **General Chair:** 7th International Conference on Advances in Distributed Computing and Machine Learning (ICADCML - 2026), Jan 15-16, 2026, NIT Jamshedpur, India
- **Session Chair:** IEEE ELEXCOM 2025, Dec 20-22, 2025, IIT(ISM) Dhanbad
- **Track Chair:** Big Data Analytics, Cloud Computing & Cyber Security at 7th International Conference on Recent Advances in Information Technology (RAIT 2027), March 12-13, 2027, IIT (ISM) Dhanbad, India.
- **Track Chair:** Security and Privacy at 3rd International Conference on Network Security and Blockchain Technology (ICNSBT 2024), June 06-08, 2024, Jalpaiguri Government Engineering College, West Bengal, India.

21. Editorial Board Members

- **Discover Computing**, Springer

(Arup Kumar Pal)