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Employment History

01/07/2024 – Till Date	**Associate Professor.** Computer Science & Engineering Department, NIT Rourkela, Odisha, India, 769008.
02/02/2018 – 30/06/2024	**Assistant Professor Grade-I.** Computer Science & Engineering Department, NIT Rourkela, Odisha, India, 769008.
01/07/2011 – 01/02/2018	**Assistant Professor.** Computer Science & Engineering Department, NIT Rourkela, Odisha, India, 769008 .
01/08/2010 – 30/06/2011	**Assistant Professor.** Computer Science & Engineering Department, ITER Bhubaneswar, Odisha, India, 751030.
02/05/2007(AN) – 31/07/2010	**Lecturer.** Computer Science & Engineering Department, ITER Bhubaneswar, Odisha, India, 751030.
21/07/2004 – 02/05/2007(FN)	**Lecturer.** Computer Science & Engineering Department, DRIEMS, Tangi, Cuttack, Odisha, India, 754022.

Education

2011 – 2016	**Ph.D.**, National Institute of Technology Rourkela, India in Optical Character Recognition. Thesis title: *Handwritten Character Recognition of a Vernacular Language: The Odia Script.* More details at https://www.nitrkl.ac.in/CS/~mohapatrark/
2008 – 2010	**M.Tech.**, Information Security, National Institute of Technology Rourkela, India in Cryptography. Thesis title: *Signcryption Schemes With Forward Secrecy Based on Elliptic Curve Cryptography.*
1999 – 2003	**B.E.**, Computer Science & Engineering, ITER Bhubaneswar, BPUT, India.
1996 – 1998	10 + 2, Council of Higher Secondary Education, Maharishi College of Natural Law, Bhubaneswar, Odisha, India.
1996	10th, Board of Secondary Education Odisha, Sri Aurobindo Institute of Integral Education, Bhubaneswar, Odisha, India.

Author IDs

Web of Science ResearcherID	Y-1419-2019
Scopus ID	57021074500
ORCID ID	0000-0002-3424-1465
Google Scholar ID	pY9mO6gAAAAJ

Areas of Interest

- Optical Character Recognition and Document Image Analysis
- Block Chain Technology
- Computer Vision and Video Processing
- Machine Learning
- Secure Computing

Research Group

- Intelligent Computing and Computer Vision Group

Books Edited

- The New Advanced Society: Artificial Intelligence and Industrial Internet of Things Paradigm. Sandeep Kumar Panda (Editor), Ramesh Kumar Mohapatra (Editor), Subhrakanta Panda (Editor), S. Balamurugan (Editor), ISBN: 978-1-119-82447-3, April 2022, 512 Pages.

Research Publications

Journal Articles

1. Debnath, S., Mohapatra, R. K., & Dash, R. (2023). Secret data sharing through coverless video steganography based on bit plane segmentation. *Journal of Information Security and Applications*, *78*, 103612.
2. Rout, S. & Mohapatra, R. K. (2023). Secure video steganographic model using framelet transform and elliptic curve cryptography. *Multimedia Tools and Applications*, 1–22. https://doi.org/10.1007/s11042-023-16531-2
3. Sahoo, S. R., Dash, R., & Mohapatra, R. K. (2023). A customized deep learning framework for skin lesion classification using dermoscopic images. *Computer Animation and Virtual Worlds*, *34*(5), e2132.
4. Sanyal, B., Mohapatra, R., & Dash, R. (2023). Indian tsr for partial occlusion using gdnn. *Multimedia Tools and Applications*, 1–16. https://doi.org/10.1007/s11042-023-16168-1
5. Singh, R. P., Dash, R., & Mohapatra, R. K. (2023). Lbp and cnn feature fusion for face anti-spoofing. *Pattern Analysis and Applications*, *26*(2), 773–782.
6. Sanyal, B., Mohapatra, R. K., & Dash, R. (2021). Real-time embedded tsr using mdeffnet: an efficient compact dnn on varied multi-resolution images across multiple databases. *International Journal of Wavelets, Multiresolution and Information Processing*, *19*(03), 2050082.
7. Das, B. B., Kumar, P., Kar, D., Ram, S. K., Babu, K. S., & Mohapatra, R. K. (2019). A spatio-temporal model for eeg-based person identification. *Multimedia Tools and Applications*, *78*(19), 28157–28177.
8. Mohapatra, R. K., Majhi, B., & Jena, S. K. (2017). Two-stage classification approach for the recognition of handwritten atomic odia character. *International Journal of Applied Pattern Recognition*, *4*(1), 44–63.
9. Panda, S. & Mohapatra, R. K. (2013). Stamped proxy blind signature scheme. *International Journal of Computer Applications*, *64*(15).

10 Panda, S., Sahu, S. K., Mohapatra, J., & Mohapatra, R. K. (2013). An application of time stamped proxy blind signature in e-voting. *International journal on computer science and engineering*, *5*(6), 547.

11 Pradhan, S. & Mohapatra, R. (2011). Proxy blind signature scheme based on ecdlp. *International Journal of Engineering Science & Technology*, *3*(3), 2244–2248.

Conference Proceedings

1 Behera, G., Mohapatra, R. K., & Bhoi, A. K. (2023). A mixed collaborative recommender system using singular value decomposition and item similarity. In *International conference on machine learning, iot and big data* (pp. 259–267). Springer Nature Singapore Singapore.

2 Biswas, S., Debnath, S., & Mohapatra, R. K. (2023). Coverless image steganography based on dwt approximation and pixel intensity averaging. In *2023 7th international conference on trends in electronics and informatics (icoei)* (pp. 1554–1561). IEEE.

3 Chandel, A., Debnath, S., Kumar, J., & Mohapatra, R. K. (2023). An ecc-based lightweight cpabe scheme with attribute revocation. In *International conference on machine learning, iot and big data* (pp. 505–515). Springer Nature Singapore Singapore.

4 Debnath, S., Mohapatra, R. K., & Kulkarni, T. S. (2023). Bit plane segmentation and lbp-based coverless video steganography for secure data transmission.

5 Ekka, F. D., Debnath, S., Kumar, J., & Mohapatra, R. K. (2023). Verifiable secret image sharing with cheater identification. In *International conference on machine learning, iot and big data* (pp. 493–503). Springer Nature Singapore Singapore.

6 Kulkarni, T., Debnath, S., Kumar, J., & Mohapatra, R. K. (2023). Dct based robust coverless information hiding scheme with high capacity. In *2023 7th international conference on trends in electronics and informatics (icoei)* (pp. 358–364). IEEE.

7 Rani, S., Shukla, V., & Mohapatra, R. K. (2023). Recognition of high-security registration plate for indian vehicles. In *2023 3rd international conference on artificial intelligence and signal processing (aisp)* (pp. 1–5). IEEE.

8 Shukla, V., Rani, S., & Mohapatra, R. K. (2023). A new approach for leaf disease detection using multilayered convolutional neural network. In *2023 3rd international conference on artificial intelligence and signal processing (aisp)* (pp. 1–5). IEEE.

9 Singh, G., Kumar, J., & Mohapatra, R. K. (2023). Physical backdoor attack using multi-trigger to same class. In *2023 3rd international conference on artificial intelligence and signal processing (aisp)* (pp. 1–5). IEEE.

10 Biswal, P. R., Sanyal, B., & Mohapatra, R. K. (2022). Building damage detection using discrete wavelet transforms and convolutional neural networks. In *Proceedings of 2nd international conference on artificial intelligence: advances and applications: icaiaa 2021* (pp. 743–753). Springer Nature Singapore Singapore.

11 Debnath, S. & Mohapatra, R. K. (2022). A study on secret data sharing through coverless steganography. In *2022 2nd international conference on artificial intelligence and signal processing (aisp)* (pp. 1–6). IEEE.

12 Rout, S. & Mohapatra, R. K. (2022). Hiding sensitive information in surveillance video without affecting nefarious activity detection. In *2022 2nd international conference on artificial intelligence and signal processing (aisp)* (pp. 1–6). IEEE.

13 Sanyal, B., Padhy, A., Mohapatra, R. K., & Dash, R. (2022). Real-time indian tsr using mdeffnet. In *2022 2nd international conference on artificial intelligence and signal processing (aisp)* (pp. 1–5). IEEE.

14 Tirkey, A., Mohapatra, R. K., & Kumar, L. (2022a). Policing android malware using object-oriented metrics and machine learning techniques. In *Edge analytics: select proceedings of 26th international conference—adcom 2020* (pp. 307–319). Springer Singapore Singapore.

15 Tirkey, A., Mohapatra, R. K., & Kumar, L. (2022b). Sniffing android malware using deep learning. In *Edge analytics: select proceedings of 26th international conference—adcom 2020* (pp. 489–505). Springer Singapore Singapore.

16 Das, B. B., Ram, S. K., Pati, B., Panigrahi, C. R., Babu, K. S., & Mohapatra, R. K. (2021). Svm and ensemble-svm in eeg-based person identification. In C. R. Panigrahi, B. Pati, P. Mohapatra, R. Buyya, & K.-C. Li (Eds.), *Progress in advanced computing and intelligent engineering* (pp. 137–146). Singapore: Springer Singapore.

17 Gauttam, H. K. & Mohapatra, R. K. (2020). Speed prediction of fast approaching vehicle using moving camera. In *Computer vision and image processing: 4th international conference, cvip 2019, jaipur, india, september 27–29, 2019, revised selected papers, part ii 4* (pp. 423–431). Springer Singapore.

18 Rout, S. & Mohapatra, R. K. (2020). Video steganography using curvelet transform and elliptic curve cryptography. In *2020 11th international conference on computing, communication and networking technologies (icccnt)* (pp. 1–7). IEEE.

19 Sanyal, B., Mohapatra, R. K., & Dash, R. (2020). Traffic sign recognition: a survey. In *2020 international conference on artificial intelligence and signal processing (aisp)* (pp. 1–6). IEEE.

20 Tirkey, A. & Mohapatra, R. K. (2020). Understanding android application masquerades (paper category: preliminary). In *Pie* (Vol. 28, pp. 10–4).

21 Gupta, S. & Mohapatra, R. K. (2019). Performance improvement in handwritten devanagari character classification. In *2019 women institute of technology conference on electrical and computer engineering (witcon ece)* (pp. 60–64). IEEE.

22 Mohapatra, R. K., Shaswat, K., & Kedia, S. (2019). Offline handwritten signature verification using cnn inspired by inception v1 architecture. In *2019 fifth international conference on image information processing (iciip)* (pp. 263–267). IEEE.

23 Tirkey, A., Mohapatra, R. K., & Kumar, L. (2019). Anatomizing android malwares. In *2019 26th asia-pacific software engineering conference (apsec)* (pp. 450–457). IEEE.

24 Naidu, R., Bharti, S. K., Babu, K. S., & Mohapatra, R. K. (2018). Text summarization with automatic keyword extraction in telugu e-newspapers. In *Smart computing and informatics: proceedings of the first international conference on sci 2016, volume 1* (pp. 555–564). Springer Singapore.

25 Panthi, V., Gardizy, A., Mohapatra, R. K., & Mohapatra, D. P. (2018). Functionality testing of object-oriented software using uml state machine diagram. In *2018 international conference on circuits and systems in digital enterprise technology (iccsdet)* (pp. 1–7). IEEE.

26 Besra, B. & Mohapatra, R. K. (2017). Extraction of segmented vein patterns using repeated line tracking algorithm. In *2017 third international conference on sensing, signal processing and security (icsss)* (pp. 89–92). IEEE.

27 Naidu, R., Bharti, S. K., Babu, K. S., & Mohapatra, R. K. (2017). Sentiment analysis using telugu sentiwordnet. In *2017 international conference on wireless communications, signal processing and networking (wispnet)* (pp. 666–670). IEEE.

28 Patil, D., Mohapatra, R. K., & Babu, K. S. (2017). Evaluation of generalization based k-anonymization algorithms. In *2017 third international conference on sensing, signal processing and security (icsss)* (pp. 171–175). IEEE.

29 Vishwakarma, R. & Mohapatra, R. K. (2017). A secure three-party authentication protocol for wireless body area networks. In *2017 third international conference on sensing, signal processing and security (icsss)* (pp. 99–103). IEEE.

30 Mohapatra, R. K., Majhi, B., & Jena, S. K. (2016). Printed odia digit recognition using finite automaton. In *Proceedings of 3rd international conference on advanced computing, networking and informatics: icacni 2015, volume 1* (pp. 643–650). Springer India.

31 Mohapatra, R. K., Majhi, B., & Jena, S. K. (2015). Classification performance analysis of mnist dataset utilizing a multi-resolution technique. In *2015 international conference on computing, communication and security (iccs)* (pp. 1–5). IEEE.

32 Mohapatra, R. K., Mishra, T. K., Panda, S., & Majhi, B. (2015). Ohcs: a database for handwritten atomic odia character recognition. In *2015 fifth national conference on computer vision, pattern recognition, image processing and graphics (ncvpripg)* (pp. 1–4). IEEE.

Books and Chapters

1 Sanyal, B., Biswal, P. R., Mohapatra, R., Dash, R., & Agarwalla, A. (2022). *Automated tsr using dnn approach for intelligent vehicles*. John Wiley & Sons, Inc. Hoboken, NJ, USA.

Sponsored Project Details

2016-19 **Re-configurable Hardware To Detect Drowsy Operator From Eye Image Under Spectacles** by BRNS from 2016-17(3years)(Amount Rs 18,26,650) as Co-PI.

Membership of Professional Societies

Member
- **Institution of Engineers (India) (IEI)**, Membership# M-1699088.
- **International Association of Engineers (IAENG)**, Membership# 106526.
- **International Association of Computer Science and Information Technology (IACSIT)**, Membership# 80337617.

Senior Member
- **Institute of Electrical and Electronics Engineers (IEEE)**, Membership# 92347167.

Life Member
- **Computer Society of India (CSI)**, Membership# I1151348.
- **Indian Society for Technical Education (ISTE)**, Membership# 50698.

Fellow
- **International Society for Research and Development (ISRD)**, Membership# F3140900385.

Short-Term Course/Workshop/Conference Conducted

2023
- Short Term Course on *Cyber Safety and Security 2023* (CSS-2023) from 6th-10th October 2023 organized by Computer Science and Engineering Department, National Institute of Technology Rourkela.
- National Conference on "Artificial Intelligence and IoT in Agriculture and Food Industry 4.0" (AIIAF-23) from 12-13 August 2023 in collaboration with Department of Food Process Engineering and Department of Computer Science and Engineering, NIT Rourkela.
- One day workshop on Cyber-Security organized by Computer Science and Engineering, National Institute of Technology Rourkela, on 8th August 2023.

2020
- A *Short Term Course on Cybersecurity* conducted from 20 Aug 2020 to 20 May 2021 in the Department of Computer Science and Engineering, NIT Rourkela, India.

Short-Term Course/Workshop/Conference Conducted (continued)

2010
- A *Short Term Course on Ethical Hacking and Network Security* conducted from 08 Mar 2016 to 12 Mar 2016 in the Department of Computer Science and Engineering, NIT Rourkela, India.

Talk Delivered

2023
- On *AI and it's role in Robotics and other Emerging Areas* at Boot-camp on Applied Artificial Intelligence for Motion Control of Unmanned Aerial Systems from 02 - 06 September 2023, Mechanical Sciences Department, NIT Campus, Rourkela.
- On *AI and it's applications in Robotics* at National conference on Computing 4.0: *Empowering the next generation of technology* (NCCENGT-2023) organised from 22nd to 23rd of September by the department of computer science and engineering and department of MCA in Gandhi Institute of Excellent Technocrats, Bhubaneswar.

2020
- On *Security in IoT: issues, challenges, and solutions* at The Institution of Engineers (India), Rourkela Local Centre on 27th December, 2020 (Sunday) at 06.00 pm at A.N. Patel Memorial Seminar Hall, Local Center Building, NIT Campus, Rourkela.
- On *IoT Privacy and Security: Challenges and Solutions* in AICTE-STTP on "Smart Perspectives of IoT in Green Technologies" from 14th Dec to 19th Dec 2020 at Gandhi Institute For Technology (GIFT), Bhubaneswar, Odisha.
- On *Security in Cloud Computing* in AICTE-ISTE sponsored FDP on "Recent Trends in Cloud Computing" from 7th Dec to 12th Dec 2020 organized by Department of Computer Science and Engineering and Internal Quality Assurance Cell (IQAC), DRIEMS Autonomous Engg. College, Tangi Cuttack, Odisha.
- On *Data Science Learnathon :From Raw Data to Deployment* in National Webinar organized by Department of Computer Science & Engineering and MCA, Raajdhani Engineering College, Bhubaneswar in Collaboration with TEQIP-III, BPUT, ODISHA(ATU) Odisha on 14th November 2020. [*Click Here*]

2019
- On *Introduction to Cybercrime and its Prevention* at The Institution of Engineers (India), Rourkela Local Centre on 15th March, 2019 (Friday) at 07.00 pm at A.N. Patel Memorial Seminar Hall, Local Center Building, NIT Campus, Rourkela.
- On *Cyber Security and Social Media Awareness* at CISF unit RSP, Rourkela on 29th March 2019.

2018
- On *Technical Documentation using LaTeX* at the workshop organized by Department of Computer Science & Engineering, GIET, Gunupur, Odisha on 2-3rd November 2018.
- On *Technical Documentation using LaTeX* at the workshop organized by Department of Computer Science & Engineering, Govt. College of Engineering Kalahandi, Odisha on 24-25th August 2018.
- On *System Security* at EC Department, NIT Rourkela on 4th July 2018.