



Suwendu Chandan Nayak, Ph.D.

Designation : Sr. Assistant Professor

Department : Department of Computer Science and Engineering
(JOINED THE INSTITUTE IN 2022)

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RESEARCH INTERESTS

- ✓ Resource management in cloud computing
- ✓ Deadline based task scheduling
- ✓ Study of MCDM techniques in cloud computing
- ✓ IoT based health care system
- ✓ Weighted ensemble clustering
- ✓ Data analysis using ML and AI

Academic Qualifications

Ph. D. (CSE), Veer Surendra Sai University of Technology, India

M.Tech (CSE), BPUT, India

B.Tech (CSE), BPUT, India

Specialisation: Cloud computing, IoT, ML, Cluster Computing

Teaching Experience/Industrial Experience/Research Experience

- ✓ Teaching Experience: 15+ Years
- ✓ Research Experience : 5 Years

PUBLICATIONS

JOURNAL ARTICLES

- [1]. Ashok Kumar Bhoi, Manas Ranjan Kabat, **Suwendu Chandan Nayak**, G Palai, "Energy Efficient Task Allocation and Consolidation in Multicast Cloud Network" *Wireless Networks*, Springer, Vol. 28, pp 3349–3366, 2022.
- [2]. Ashok Kumar Bhoi, Manas Ranjan Kabat, **Suwendu Chandan Nayak**, G Palai, "Renewable Energy Source Based Quality of Service (QoS)-Aware

- Routing Mechanism in Cloud Network" *Wireless Networks*, Springer, Vol. 28, pp 1703–1718, 2022.
- [3] Sasmita Parida, Bibudhendu Pati, **Suwendu Chandan Nayak**, "eMRA: An Efficient Multi-Optimization Based Resource Allocation Technique for Infrastructure Cloud" *Journal of Ambient Intelligence and Humanized Computing*, Springer, Vol. 4, pp 1267-1286, 2022.
- [4] Sasmita Parida, Bibudhendu Pati, **Suwendu Chandan Nayak**"PE-DCA: A Penalty Elimination Based Datacenter Allocation Technique Using Guided Local Search for IaaS Cloud" *ComSIS-Computer Science and Information Systems Journal*, Springer Vol. 19, Issue 2, pp 679-707, 2022.
- [5] Arko Banerjee, Arun K. Pujari, Chhabi Rani Panigrahi, Bibudhendu Pati ,**Suwendu Chandan Nayak** and Tien-Hsiung Weng "A new method for weighted ensemble clustering and coupled ensemble selection" *Connection Science*, Taylor & Francis, Volume 33, Issue 3, pp 623-644,2021.
- [6] Ashok Kumar Bhoi, Manas RanjanKabat, Purna Chandra Sethi, **Suwendu Chandan Nayak**, "An Efficient Qos-Aware Multi Objective Load Balancing and Optimized Routing in Cloud Data Center Networks" *Sambodhi*, Vol-44, No.-02, pp 128-138, 2021.
- [7] **Suwendu Chandan Nayak**, Sasmita Parida, Chitaranjan Tripathy, Bibhudendu Pati, Chhabi Rani Panigrahi "Multi-criteriaDecisionMaking Techniques for Avoiding Similar Task Scheduling conflict in Cloud Computing", *International Journal of Communication Systems*, Wiley, Volume 33, Issue 13, 2019.
- [8] **Suwendu Chandan Nayak**, Chitaranjan Tripathy, "An Improved Task Scheduling Mechanism Using Multi-criteria Decision Making in Cloud Computing", *International Journal of Information Technology and Web Engineering*, Volume 14 , Issue 2 , pp 92-117, 2019.
- [9] **Suwendu Chandan Nayak**, Sasmita Parida, Chitaranjan Tripathy, Prasant Kumar Pattnaik "Dynamic Back filling Algorithm to Increase Resource Utilization in Cloud Computing" *International Journal of Information Technology and Web Engineering*, Volume 14, Issue 1, pp 1-26, 2019.
- [10] **Suwendu Chandan Nayak**, Chitaranjan Tripathy "Deadline Based Task Scheduling Using Multi-criteria Decision-making in Cloud Environment" *Ain Sham Engineering Journal*, Elsevier, volume 9, issue 4, pp 3315–3324, 2018.
- [11] **Suwendu Chandan Nayak**, Sasmita Parida, Prasant Kumar Pattnaik "An enhanced deadline constraint based task scheduling mechanism for cloud environment", *Journal of King Saud University Computer and Information Sciences*,Elsevier,volume 34, issue 2, pp 282-294, 2019.
- [12] **Suwendu Chandan Nayak**, Chitaranjan Tripathy, "Deadline Sensitive Lease Scheduling in Cloud Computing Environment Using AHP", *King Saud University Journal of Computer and Infromation Sciences*, Elsevier, Volume 30, Issue 2, pp 152-163, 2018.
- [13] Sasmita prida, **Suwendu Chandan Nayak**, "Emperical Resource Allocation Using Dynamic Distributed Allocation Policy in Cloud Computing"

International Journal of Computer Science and Information Technologies(IJCSIT), Vol. 5, issue 6, pp 8303-8308, 2014.

- [14] Sasmitaparida, **Suwendu Chandan Nayak** "Study of Deadline Sensitive Resource Allocation Scheduling Policy in Cloud Computing" in *International Journal of Computer Science and Mobile Computing (IJCSMC)*, Volume 3, Issue 12, pp 521-528, 2014.
- [15] **Suwendu Chandan Nayak**, Sasmita Parida "An Approach for secured data transmission at client end in cloud computing" *International journal of computer engineering & technology (IJCET)* Vol-4, Issue-4, 2013.
- [16] **Suwendu Chandan Nayak**, Sasmita Parida and Narendra Kumar Kamila, "End-user cloud security using RSA and authentication protocol", *International Journal of Computer Science & Informatics*, Volume II, Issue 3, pp 83-88, 2012.

CONFERENCE PAPERS

- [1] Subhashish DasMohapatra, **Suwendu Chandan Nayak**, Bibudhendu Pati, Chhabirani Panigrahi" COVTrac: COVID-19 Tracker and Social Distancing App", *Advanced Computing and Intelligent Engineering, Proceedings of ICACIE 2020*, Springer, Volume-1299, pp 607-619, 2020.
- [2] Sasmita Parida, Bibudendu Pati, **Suwendu Chandan Nayak**" Implementation of Jaya Optimization Technique for Cost Efficient Data Center Allocation in IaaS Cloud Model", *Advanced Computing and Intelligent Engineering, Proceedings of ICACIE 2020*, Springer, Volume-1299, pp 621-633, 2020.
- [3] Sasmita Parida, Bibudendu Pati, **Suwendu Chandan Nayak**, Chhabirani Panigrahi "OfferBased-Auction Mechanism for Virtual Machine Allocation in Cloud Environment" *Advanced Computing and Intelligent Engineering, Proceedings of ICACIE 2018*, Volume-2, Springer, pp 339-351, March-2020.
- [4] Sasmita Parida, **Suwendu Chandan Nayak**, Piyush Priyadarshi, Prasant Kumar Pattnaik., Gourav Ray, (2018) Petri Net: Design and Analysis of Parallel Task Scheduling Algorithm. In: Kalam A., Das S., Sharma K. (eds) *Advances in Electronics, Communication and Computing. Lecture Notes in Electrical Engineering*, vol 443. Springer, Singapore, pp 765-776, 2018.
- [5] **Suwendu Chandan Nayak**, Sasmita Parida, Chitaranjan Tripathy, Prasant Kumar Pattnaik (2018) Task Scheduling Mechanism Using Multi-criteria Decision-making Technique, MACBETH in Cloud Computing. In: Pattnaik P., Rautaray S., Das H., Nayak J. (eds) *Progress in Computing, Analytics and Networking. Advances in Intelligent Systems and Computing*, vol 710. Springer, Singapore, pp 381-392, 2018.
- [6] **Suwendu Chandan Nayak**, Sasmita Parida, Chitaranjan Tripathy, Prasant Kumar Pattnaik (2018) Modeling of Task Scheduling Algorithm Using Petri-Net in Cloud Computing. In: Saeed K., Chaki N., Pati B., Bakshi S., Mohapatra D. (eds) *Progress in Advanced Computing and Intelligent Engineering. Advances in Intelligent Systems and Computing*, vol 563. Springer, Singapore, pp 633-643, 2018.

- [7] Sasmita parida, **Suwendu Chandan Nayak**, Chitaranjan Tripathy "Truthful Resource Allocation Detection Mechanism for Cloud Computing" *ICACCI 2015(WCI)*, ACM, pp256-263.
- [8] Sasmita parida, Devpriya panda, Joyti Prakash Das, **Suwendu Chandan Nayak**", Study of DDAP2 for memory allocation in cloud computing", *ICHIPAC conference 2014, IEEE Explore*, ISBN:978-1-4799-5957-0, page 1-6.
- [9] SasmitaParida, **Suwendu C. Nayak** "An Algorithm that earning Users' Trust on Cloud" *ICoACConference* , *IEEE Explore*, ISBN:978-1-4799-3447-8 ,Page 576-584 Dec 2013.
- [10] **Suwendu Chandan Nayak**, Narendra Kumar Kamila, Alok Ranjan Tripathy "Long distance moving vehicle detection using rearlamp at night" *ELSEVIER proceedings*, ISBN 978-81-910691-8-3,Page 401-407,2012.

PATENTS:

- [1] Patent Title : A System for Road Traffic Prediction and Optimal Alternate Path Selection and a Method Thereof.
Patentee Names: Alok Kumar Pani, **Suwendu Chandan Nayak**
App. No: 2022/08929
Date of publication: 10-08-2022
Country: Republic of South Africa
- [2] Patent Title : Method and Process to Improve the Digital Education System.
Patentee Names: Priyanka Pitale, Puja Shrivastava, Pooja Rathi, Sharmistha Puhan, **Suwendu Chandan Nayak**, Sasmita Parida
App. No: 202221004893
Date of publication: 18-01-2022
Country: India
- [3] Patent Title : An IOT based child health monitoring system for rural area and method thereof.
Patentee Names: **Suwendu Chandan Nayak**, Sasmita Parida, Bibudhendu Pati, Chhabirani Panigrahi, Jitendra K. Rout, Ashok Kumar Bhoi
App. No: 202131052675,
Date of publication: 12-11-2021
Country: India

ANY OTHER

Book Chapter

- [1] Aisworya Mohanty, Sasmita Parida, Bibudhendu Pati, **Suwendu Chandan Nayak**, Chhabi Rani Panigrahi," Study and Analysis of Machine Learning Approaches for Mellitus Diabetes Prediction", *Smart Healthcare Analytics: State of the Art. Intelligent Systems Reference Library*, Vol 213. Springer, pp. 75-101, 2021

- [2] Sasmita Parida, Aisworya Mohanty, **Suwendu Chandan Nayak**, Bibhudhendu Pati, Chhabi Rani Panigrahi," Study and Impact Analysis of COVID-19 Pandemic Clinical Data on Infection Spreading" Data Science for COVID-19, Academic Press, pp. 225-242, Elsevier, 2022.
- [3] Sasmita Parida, **Suwendu Chandan Nayak**, Prasant Kumar Pattnaik, et al. "Design Model of Smart "Anganwadi Center" for Health Monitoring", Smart Healthcare Analytics in IoT Enabled Environment, Springer, pp. 67-76, 2020, DOI: 10.1007/978-3-030-37551-5_4
- [4] **Suwendu Chandan Nayak**, Sasmita Parida, Chitaranjan Tripathy, Prasant Kumar Pattnaik "Resource allocation policies in cloud computing environment", Advancing Cloud Database Systems and Capacity Planning With Dynamic Applications, IGI Global, pp. 115-132, 2017, DOI: 10.4018/978-1-5225-2013-9.ch005.

INVITED TALKS

- [1] "IoT in Textile Industry, Scope and Challenges", National Institute of Fashion Technology, Bhubaneswar, India on 25th Dec 2022.