

Name of Faculty Dr. Nitul Dutta
Designation Professor, AI&DS
Nature of Job/Appointment Regular



Date of Joining 04-11-2024

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Education Qualifications	Name of the Degree	Class
Ph. D	Doctor of Philosophy (Engg.) Jadavpur University, WB, India	Awarded
PG	M. Tech. (IT)	First with Distinction
UG	B. E. (CSE)	Second

Work Experience	
Teaching	16 Years
Research	01 years (as Post Doctoral Fellow @ UJW Poland)
Industry	Nil
Others	09 years (as Technical Officer @Central University Tezpur)

Area of Specialization Game theory in network routing, Mathematical modeling of mobility management protocols.

Professional Memberships IEEE Senior Member 90702992

Responsibilities held at Institution Level Nil

Responsibilities held at Department Level Nil

Research Guidance 03 (2 completed, 1 on going)

Awards Received Nil

Courses Handled at Under Graduate / Post Graduate Level. Computer Networks, Operating systems, Data Structures, Design and Analysis of Algorithms

No. of Papers Published National Journals – 0 International Journals – 20
National Conference – 02 International Conference – 18

1. Title: *Test bed implementation of TLMIPv6, under RPS scheme*, AICTE, New Delhi, year. 2011 to 2013, Amount: **16.75 Lacs** (Completed). (File no. 8032/BOR/RID/RPS (NER)-29 /2011-12 (as PI)

2. Title: Performance studies of multilayer hierarchical MIPv6, **Amount: 9.50 Lacs** (Completed), **under RPS scheme**, AICTE, New Delhi, year. 2009 to 2011, File No. 8032/BOR /RID/RPS-234/2008-09 (as PI)

3. **National Seminar Grant**, 2008 Amount: 75K NSDC 2008 (as **Convenor**)

1. **An edge computing based automation system for dental services**, Patent grant ID. 396037, Date of grant. 02/05/2022.

2. **A System for Autism Spectrum Disorder Detection**, App. ID. 202441053505, Date of publication. 02/08/2024.

3. **Intelligent method for dynamic resource allocation in cloud environments**, Application ID. 202431058991, Date of publication. 23/08/2024.

Patents

Technology Transfer	<p>4. System for detecting adulteration in saffron using Federated Learning, Application ID. 202441074334, Date of publication. 11/10/2024.</p> <p>Nil</p>
Invited Speaker	<ol style="list-style-type: none"> 1. Cyber forensics of internet of things devices, in Sixth System Safety Security Workshop, in 10th ECAI conference, Iasi, Romania, June 2018. 2. Engineering education current trend, 1st Intel Conf on Innovative Teach Appr in Business Informatics, University of Economics, Warsaw, Poland, 2017. 3. A business model framework for IoT based applications, 15th Congress on Polish Association for Knowledge Management, Bydgoszcz, Poland, 2017.
No. of Books Published with details	<ol style="list-style-type: none"> 4. Research Trends in Computer Networks, Intl. Conference Advanced computing and communication for technologies, RCERT, Jaipur, India, 2014. 5. Research aspects in Cognitive radio networks, Intl. Conference on ACCIT, Kalinga Institute of Technology and Engg, Jaipur, India, 2013 6. Hands-on workshop on ns-2 in Network research, Workshop on Advances in Computing, Heritage Inst. of Tech., Kolkata, 2013. 1. Nitul Dutta, Nilesh Kr. Jadav, Hiren Kr. Deva Sarma, Sudeep Tanwar and Emil Pricop, Cyber Security: Issues and Current Trends (Reference book, 2022), Springer, ISBN. 978-981-16-6596-7. 2. Nitul Dutta, HKD Sarma, R.B. Jadeja, Krishna Dalvedia, and G. Ghenia, Information Centric Networks (ICN): Architecture & Current Trends (Reference book, 2021), ISBN. 978-3-030-46735-7. 3. E. Pricop, J. Fetahi, Nitul Dutta, M. Ibrahim, Recent developments on industrial control systems resilience (Edited volume, 2020), in Studies in Systems, Decision and Control, Volume 255, Springer, ISBN. 978-3-030-31327-2. 4. Hiren KD Sarma, Samar Borah, Nitul Dutta, Advances in communication, cloud, and big data (Proceedings, 2019), Studies in Systems, Decision and Control, Volume 255, Springer}{ISBN. 978-981-10-8910-7. 5. Hiren KD Sarma, Samar Borah, Nitul Dutta, Trends in Communication, Cloud, and Big Data (Proceedings, 2018), Lecture Notes in Networks and Systems, Springer, ISBN. 978-981-15-1626-9.
Details of Short-Term Training Programs/Faculty Development Programs/Seminars/Workshops. Other Training (Attended and/or Organized).	<ol style="list-style-type: none"> 1. Emerging research trends in computational Intelligence: theory and applications, 1-5 Mar 2016, Winter school, DAICT Gandhinagar, Gujarat. 2. Broadband Wireless Communication, 5 June–4 July 2009, Refresher Course, Jadavpur University, WB. 3. Embedded Systems, 2-15 July 2008, Refresher Course, IIT Kharagpur, WB.
Details of Journal Publications/Conferences (National and International)	

Journal Publications

1. S. S. Beri, **Nitul Dutta**, "Efficient modeling of interest forwarding in information centric vehicular networks", *IEEE Open Journal of Vehicular Technology*, Accepted, 2024, **Q1, Impact Factor 5.3**.
2. S. S. Beri, **Nitul Dutta**, "Evolutionary game based interest forwarding in information centric vehicular networks", *Vehicular Communications* (Elsevier), Vol. 47, pg. 100779 2024, **Q1, Impact Factor 6.7**.
3. K Delvadia, **Nitul Dutta**, "Reinforcement learning inspired forwarding strategy for information centric networks using Q learning algorithm", *International Journal of Communication Systems (Wiley)*, Vol. 37 (6), pg. e5707 2024, **Q2, Impact Factor 2.1**.
4. **Nitul Dutta**, HKD Sarma, "Primary user supported routing protocol for cognitive radio ad hoc networks in search of higher throughput", *International Journal of Communication Systems (Wiley)*, Vol. 36(11), pg. e551, 2023, **Q2, Impact Factor 2.1**.
5. **Nitul Dutta**, "A bargain game theory assisted interest packet forwarding strategy for information centric network", *Journal of Network and Computer Applications* (Elsevier)}, Vol. 209, pg. 103546, 2023, **Q1, Impact Factor 7.7**.
6. K Pokhrel, **Nitul Dutta**, MK Ghose, HKD Sarma, "Performance evaluation of three layer MIPv6 architecture", *Wireless Personal Communication*, Vol. 128, pg. 1259-1285 2023, **Q2, Impact Factor 2.1**.
7. Krishna Delvadia, **Nitul Dutta**, "CTJIF-ICN: A coadjuvant trust joint interest forwarding mechanism in information centric networks", *IEEE Access* (IEEE), Vol. 128, pg. 1259-1285, Sep 2022, **Q1, Impact Factor 4.1**.
8. **Nitul Dutta**, SK Patel, OS Faragallah, M Baz, ANZ Rashed, "Caching scheme for information centric networks with balanced content distribution", *International Journal of Communication Systems (Wiley)*, Vol. 35(7), pg. e5104, 2022, **Q2, Impact Factor 2.1**.
9. **Nitul Dutta**, HKD Sarma, "A Scalable Mobility Management Scheme for PMIPv6 with Multiple Control and Data Plane", *Wireless Personal Communications (Springer)*, Vol. 123(3), pg. 2581-2606, 2022, **Q2, Impact Factor 2.1**.
10. **Nitul Dutta**, "An approach for FIB construction and Interest packet forwarding in information centric network", *Future Generation Computer Systems (Elsevier)*, Vol. 130, pg. 269-278, 2022, **Q1, Impact Factor 7.1**.
11. **Nitul Dutta**, Sudeep Tanwar, Shobhit K. Patel, Gheorghita Ghinea, "An SVM guided Interest packet forwarding strategy for Information Centric Networks", *Applied Artificial Intelligence* (Taylor and Francis), Vol. 36 2022, **Q2, Impact Factor 2.80**.
12. **Nitul Dutta**, HKD Sarma, "Efficient Mobility Management in IP Networks through Three Layered MIPv6", *Journal of Ambient Intelligence and Humanized Computing (Springer)*, Vol. 13, pg. 3209-3227 2021, **Q1, Impact Factor 7.10**.
13. **Nitul Dutta**, Shobhit K. Patel, Vadim Samusenkov, Vigneswaran D, "Deep Learning inspired Routing in ICN using Monte Carlo Tree Search algorithm", *Journal of Parallel and Distributed Computing, (Elsevier)*, Vol. 115, pp. 104-111, 2021, **Q1, Impact Factor 3.80**.
14. **Nitul Dutta** and HKD Sarma "A scheme for dynamic MAP selection in HMIPv6", *National Academy of Sciences (Journal), India Section A: Physical Sciences, (NASA), (Springer)*, vol. 90, pp.371-382, 2020, **Q2, Impact Factor 1.54**.
15. **Nitul Dutta**, HKD Sarma and Z. Polkowski, "Cluster based routing in cognitive radio adhoc networks: Reconnoitering SINR and ETT impact on clustering", *Computer Communications (Elsevier)*, pp. 10-20, vol. 115, 2018, **Q1, Impact Factor 6.00**.
16. **Nitul Dutta**, HKD Sarma, "A probability based stable routing for cognitive radio adhoc networks", *Wireless Networks (Springer)*, vol. 23(1), pp. 65-78, 2017, **Q2, Impact Factor 3.00**.
17. **Nitul Dutta** and IS Misra, "Multilayer hierarchical model for mobility management in IPv6: a mathematical exploration", *Wireless Personal Communication, (Springer)*, vol.78 (2), pp.1413-1439 2014, **Q2, Impact Factor 2.10**.

Conference Publications (Selected)

1. **Nitul Dutta**, R. Mahadev, R. Patole, G. Ghenea, "Federated learning framework for prediction based load distribution in 5G network slicing", **16th ACM IC3-24**, pp. 421-426, Noida, 2024.
2. Nilesh Jadav, **Nitul Dutta**, Hiren Kumar Deva Sarma, Emil Pricop, Supeep Tanwar, "A Machine Learning Approach to Classify Network Traffic", **IEEE 13th Inter. Conf. on Electronics, Computers and Artificial Intelligence (ECAI)**, pp. 1-6, Romania, 2021.
3. Krishna Delvariya, **Nitul Dutta**, "An Efficient Routing Strategy for Information Centric Networks", **IEEE ANTS, Goa, India, 2018**.
4. **Nitul Dutta**, Z. Polkowski and C. Savulescu, "Grid based routing in cognitive radio networks for concurrent communication", **IEEE 9th IC3**, pp. 1-6, Noida, India, 2016.
5. **Nitul Dutta**, HKD Sarma, AK Srivastava, S. Verma, "A SINR based clustering protocol for cognitive radio adhoc networks", **IEEE 14th ICIT**, pp. 69-75, Bhubaneshwar, 2014.
6. **Nitul Dutta** and IS. Misra, "Test Bed implementation of N-Layered MIPv6 based network architecture in search of optimal performance", **IEEE Globecom WHMWAMN**, Miami, USA, 2010.

7. **Nitul Dutta** and IS Misra, "Mathematical modelling of HMIPv6 based network architecture in search of an optimal Performance", *IEEE 15th ADCOM*, Guwahati, India, pp. 599-605, 2007.

