Dr.Shruti K Dixit

Associate Professor

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Educational Qualification:

PhD(EC) UIT, RGPV, Bhopal,M.Tech(Digital Communication) UIT,BU, Bhopal, B.E(Electrical (Electronics and Power)) Govt. College of Engineering, Amravati, Maharashtra

Total Experience:18yrs

Areas of Interest:

WirelessCommunication,InternetofThings, NetworkSecurity, Optical Communication, Microprocessor and Microcontroller, Digital Communication

Brief Profile:

DrShrutiDixitholds Doctorate and Mtech Degree in Electronics and Communication Engineering from UIT, RGPV and UIT, BU, Bhopal respectively. She has18 years of experience in teaching and currently working as anAssociate Professor at School of Engineering and Technology. She has published more than 25 research papers in peerreviewedjournalsandconferencesof internationalrepute.Shehastwo patents and five copyrights in hername. Her research areas includeWirelessCommunication,InternetofThings, NetworkSecurity, Optical Communication, Microprocessor and Microcontroller, Ad- hoc networks.

Research publications in International Journal:

1) Rajeev Kumar and **Shruti Dixit**, "An Adaptive Clustering Approach Based on Neuro Fuzzy In 5G-IOT Wireless Sensor Networks", International Journal of All Research Education and Scientific Methods (IJARESM), ISSN: 2455-6211, Volume 11, Issue 5, May-2023.

2) Aakash Kumar and **Shruti Dixit**, "An Efficient Clustering and Routing Algorithm for Node Performance Improvement in Wireless Sensor Networks", International Journal of All Research Education and Scientific Methods (IJARESM), ISSN: 2455-6211, Volume 11, Issue 5, May-2023

3) VaishaliDeshmukh and **Shruti Dixit**, "Design and Analysis of Microstrip Patch Antenna forTerahertz Frequency Range Application", International journal of all research Education and Scientific Methods (IJARESM), FEB 2023.

4) VaishaliDeshmukh and **Shruti Dixit**, "Review of Micro-strip Patch Antenna Performance for Tera Hertz Frequency Range Applications" Journal of Emerging Technologies and Innovative Research (JETIR), August 2022.

5) Rajeev Kumar and**Shruti Dixit**,"Review of Routing Techniques for Wireless Sensor Networks" International Journal of Emerging Technologies and Innovative Research (JETIR), Nov 2022.

6) Aakash Kumar and**Shruti Dixit**,"Survey of Clustering Techniques for 5G IOT wireless Sensor Networks", International Journal of Emerging Technologies and Innovative Research (JETIR), Nov 2022.

7) RoshanBanbhariya and **Shruti Dixit**, "Deep Learning Based OHE Data Preparation System for Railways", Journal of Emerging Technologies and Innovative Research (JETIR), ISSN:2349-5162, Vol.8, Issue 11, page no.c528-c532, November-2021.

8) Navneet Kumar and **Shruti Dixit,** "Comprehensive Analysis of Underwater Image Enhancement: A Survey", International Journal of All Research Education and Scientific Methods (IJARESM), ISSN: 2455-6211 Volume 9, Issue 9, September -2021.

9) RoshanBanbhariya and **Shruti Dixit,** "Survey Paper on Automatic Vehicle Number Plate Detection System", International Journal of All Research Education and Scientific Methods (IJARESM), ISSN: 2455-6211 Volume 9, Issue 6, June -2021.

10) **Shruti Dixit** and RakeshSinghai**,** "Security Improvement of AODV Routing Protocol through IPSO-IDRS Mechanism for Mobile Ad-hoc networks", International Journal of Innovative Technology and Exploring Engineering (IJITEE), ISSN: 2278-3075, Vol.8 Issue-12, October, 2019.(Scopus Indexed)

11) **Shruti Dixit** and RakeshSinghai, "Particle Swarm Optimization Algorithm Based Intrusion Detection System (PSO-IDS) for Mobile Ad-hoc Network", International Journal of Autonomic Computing (IJAC), Inderscience, ACM digital library, Vol. 3, No. 2, pp. 114-129, 2018.

12) **Shruti Dixit** and RakeshSinghai, "A Novel Black Hole Attack Prevention System Based on Particle Swarm Optimization and Intrusion Detection System in MANET", International Journal of Research in Electronics and Computer Engineering (IJRECE), Vol.6, Issue 2, July-Sep. 2018.

13) Pallavi Sharma and **Shruti Dixit,** "Exposure and Avoidance Mechanism of Sybil Attack in Mobile Ad Hoc Network: A Literature", International Journal of Electrical and Computer Engineering Vol.6, No.1, 123-130, 2017.

14) Kruti Shukla and **Shruti Dixit,** "EnhancingQoS in DVB-RCS using CTS/RTS Mechanism", International Journal of Computer Application, Volume 7– No.3, 2250-1797May – June 2017.

15) Kruti Shukla and **Shruti Dixit,** "Survey: QoS measuring and enhancement of DVB-RCS in Satellite Communication", IJRASET, Vol. 4 Issue VIII, ISSN: 2321-9653, Pg 677-682, August 2016.

16) Kruti Shukla and **Shruti Dixit,** A Review of Second Generation of Terrestrial Digital Video Broadcasting System" at IISTE, Vol. 6, No 2, 2016.

17) Sandeep Thakre and **Shruti Dixit,** "An Adaptive Seamless Image Mosaicing Through Quad Tree Technique", International Journal Of Engineering Research-Online, Vol.4, Issue 4, July-August 2016.

18) **Shruti Dixit** and RakeshSinghai, "A Survey Paper on Particle Swarm Optimization based Routing Protocols in Mobile Ad-Hoc Networks", International Journal of Computer Applications (IJCA), Vol. 119, No. 10, 2015.

Papers presented in International Conferences:

1. VishwajeetBarbudhe and **Shruti Dixit**, "Survey on Energy Optimization in Wireless Sensor Network", International Conference on Recent Advances in Science,Engineering and Technology, 2023.

2. ShalineeBhondekar, ShaliniSahay, Navneet Kaur, **Shruti Dixit**, M. Fatima, "Optimization of Diabetes Risk Prediction using Machine Learning", 2022 IEEE International Conference on Current Development in Engineering and Technology (CCET), 23-24 December 2022, DOI: 10.1109/CCET56606.2022.10079974

3. **Shruti Dixit** and RakeshSinghai**,** "Implementation of Bio-inspired Approach Based IDS in MANET", International Conference on Applied Sciences and Nanotechnology (ICAN),Gwalior, 27-29 Jan. 2019.

4. **Shruti Dixit** and RakeshSinghai, "A PSO Based Approach for Improvement in AODV Routing for Ad-hoc Networks", Springer 3rd International Conference on Advanced Computing and Intelligent Engineering, Bhuwaneshwar, Proceedings of ICACIE 2018, Volume 1089, pp. 379-389, 2018.

5. **Shruti Dixit** and RakeshSinghai, "Intrusion Detection System Based on Particle Swarm Optimization in Mobile Ad-hoc Network: A Survey", IEEE International conference on Electrical, Electronics, Computers, Communication, Mechanical, Computing (EECCMC-2018), Tamilnadu, published in IEEE Explorer, 28-29 Jan 2018.

6. **Shruti Dixit** and RakeshSinghai, "A Particle Swarm Optimization Based Approach for Ad-hoc On Demand Distance Vector Routing in Mobile Ad-hoc Network", International conference on Computing, Communication and Signal processing, Raigarh, 15-16 Jan 2018.

7. Kruti Shukla and Shruti Dixit, "DVB-T2: The Second Generation of Terrestrial Digital Video Broadcasting System", ICIREMPS, SIRT, Bhopal, 2015.

Papers presented in National Conferences:

1. Kruti Shukla and **Shruti Dixit,** " A Review of Second Generation of Broadcasting System", National Conference on Advancement in Science & Technology for Sustainable Future [NCASTSF-2015], TIT & Science, Bhopal, 2015

Patents and Copy Rights:

● An Australian Patent on "A METHOD FOR PREDICTION OF COVID-19 BASED ON MACHINE LEARNING ALGORITHM"

- Published one design patent on "GLASSES WITH AUGMENTED REALITY FOR VISUALLY IMPAIRED PEOPLE" (Design No. : 379394-001)
- Copyright No. 1: Diary No. 16343/2020-CO/L, Title of the work: COURSE FILE OF CNTL,
- Copyright No. 2: Diary No. 17858/2021-CO/L, Title of the work: COURSE FILE OF Digital Communication,
- Copyright No. 3: Diary No. 739/2021-CO/L, Title of the work: COURSE FILE OF COMPUTER SYSTEM ORGANIZATION
- Copyright No. 4: Diary No. 2635/2022-CO/L, Title of the work: COURSE FILE OF MICRO-CONTROLLER AND EMBEDDED SYSTEMS.
- Copyright No. 5: Diary No. 137959/2023-CO/L, Title of the work: AUTOMATED STOCK MANAGEMENT SYSYETM.

Book Chapters:
- Published book chapter manuscript entitled "Role of AI-aided IoT Technologies in Business and Production" ADVANCED IOT TECHNOLOGIES AND APPLICATIONS IN THE INDUSTRY 4.0 DIGITAL ECONOMY, CRC PRESS TAYLOR & FRANCIS GROUP BOCA RATON, FL 33487, UNITED STATES OF AMERICA, JUNE 2023.
- Book chapter in "Impacts and Challenges of Computation Intelligence in Software Engineering" of Apple Academic Press, CRC Press, Taylor & Francis Group On "An Overview of Computational tools"

Workshops/Seminars/ConferenceOrganized:

1. International Conference on Current Development in Engineering and Technology (CCET), 29th and 30th Dec 2023.

2. IEEE International Conference on Current Development in Engineering and Technology (CCET), 23rd and 24th Dec 2022.

3. Two weeks AICTE sponsored Staff Development Program on "Understanding Nano-electronics" from June 13 to 25, 2011 at Sagar Institute of Research and Technology, Bhopal, India.

4. Three days online faculty Development Program under Sage summer School on "ICT Enabled Teaching Learning" from June 23 to 25, 2020 at Sagar Institute of Research and Technology, Bhopal, India.

5. One week online AICTE sponsored STTP on "Embedded System design with IOT", from July 27 to 1 August 2020 at Sagar Institute of Research and Technology, Bhopal, India.

6. One week online AICTE sponsored STTP on "Raspberry Pi and Python Programming", from 24th Aug to 29th Aug 2020 at Sagar Institute of Research and Technology, Bhopal, India.

Membership of Professional Bodies:

Life member of Institution of Electronics and Telecommunication Engineers (IETE).

Other Achievements:

- Delivered Invited Talk on title "Mobile Communication" in SAGE UNIVERSITY INDORE, on 17/04/21.
- Chaired a Session Chair in International Conference on "Recent trends in IOT, Machine Learning, Artificial Intelligence and its Applications" on 13th May 2022.
- Received Best Faculty Award Srijan 2018 award for the subject Voice and Data Communication.
- Cleared NPTEL exam for Analog Circuits and Introduction to Internet of Things.