

Name: DR. SARIT PAL

Department: ELECTRONICS & COMMUNICATIONS ENGINEERING

Contact Nos.: 9800765952, 9434132785

Qualifications: PhD

Designation: PROFESSOR

VIDWAN ID: 187479

Experience (Teaching / Research / Industry, in years):

TEACHIG: 21 YEARS 5 MONTHS

RESEARCH: 8 YEARS

Date of Joining at the Present Institution: 3rd AUGUST, 2007

Examinations Cleared: NET-CSIR/GATE

Qualifications Summary (Reverse chronological order):

Degree	Institute	From - To	Subjects
PhD	Institute of Technology, Banaras Hindu University	1992-2000	Electronics Engineering
MSc	Banaras Hindu University	1989-1991	Physics Advanced Electronics Specialization
BSc	Ramakrishna Mission Vidyamandira, Belur Math University of Calcutta	1984-88	Physics (Honours) Mathematics (Pass) Chemistry (Pass) English (Compulsory Additional)
Higher Secondary	Ramakrishna Mission Vidyamandira, Belur Math West Bengal Council of Higher Secondary Education	1982-84	Bengali, English, Physics, Chemistry, Mathematics, Bio-Science (4 th Subject)
Madhyamik Pariksha	Ramakrishna Mission High School, Asansol West Bengal Board of Secondary Education	1972-82	Bengali, English, Mathematics, Physical Science, Life-Science, History, Geography, Mathematics (Additional), Physical Education, Work Education



Experience Summary (In chronological order):

Designation	Organization	Date From	Date To
Assistant Professor & HoD of Department of Information Technology	PSNA College of Engineering and Technology	18 th July,2000	5 th November, 2001
Assistant Professor & HoD of Department of Information Technology	Asansol Engineering College	9 th November, 2001	17 th July 2003
Assistant Professor	Jaypee University of Information Technology	22 nd July 2003	24 th July 2007
Associate Professor	Dr. B. C. Roy Engineering College, Durgapur	3 rd August, 2007	9 th February, 2010
Professor	Dr. B. C. Roy Engineering College, Durgapur	10 th February, 2010	Till Date

Specialization/Research Interest:

OPTICAL COMMUNICATIONS, FIBER OPTIC SENSORS, COMPUTER NETWORKS, NETWORK SECURITY, ADHOC NETWORK, INTERNET OF THINGS

Awards & Recognitions

Best paper/ scholarship/Position in university exam / awards while at industry/ other organizations etc.

- 1) Recipient of National Merit Certificate for 82nd rank in Board Examination at 10th level
- 2) Recipient of UNO certificate
- 3) Name included in "WHO'S WHO IN THE WORLD" IN 1999 for research contribution in Science and Technology

Courses taught:

B.Tech: Specify the name of the subject/s (Theory first and then practical)

Theory:

- 1) Computer communications and Networking
- 2) Computer Networks
- 3) Optical Networks
- 4) Optical communications
- 5) Optical Sensors
- 6) Telecommunication Transmission and Switching
- 7) Solid State Devices

- 8) Antenna Theory
- 9) Digital Electronics and Logic Design
- 10) Electronic Devices and Circuits
- 11) Basic Electronics
- 12) System Analysis and Design
- 13) Software Engineering
- 14) Physics

Practical

- 1) Computer communications and Networking
- 2) Computer Networks
- 3) Digital Electronics and Logic Design
- 4) Electronic Devices and Circuits
- 5) Analog communications
- 6) Digital communications
- 7) Basic Electronics
- 8) Design Laboratory
- 9) Physics

M.Tech: specify the name of the Subject/s

- 1) Computer communications and Networking
- 2) Cryptography and Network Security
- 3) Photonics and Optoelectronics
- 4) Optical communications
- 5) Satellite communications
- 6) Advanced Communication System

Online Mode of Teaching:

- Online classes have been held through Google Meet.
- Assignments have been provided and answers have been collected through Google Form.
- PPT and lecture notes have been provided to the students through email.

Publications:

Journal:

1. **Sarit Pal** and S. K. Kak, "Surface image generation using local slope based mapping algorithm", Microwave and Optical Technology Letters, 2000, 26, (2), pp. 127-132, ISSN 0895-2477.
2. **Sarit Pal** and S. K. Kak, "Optical fiber array fiber optic sensors", Proceedings of the SPIE= International Society for Optical Engineering (USA), 1999, 3666, pp. 520-525, ISSN 0277-786X (print), 1996-756X (web). <http://doi.org/10.1117/12.347971>
3. **Sarit Pal**, Shubhra Verma and S. K. Kak, "Fiber optic sensor for angular displacement and surface slope measurement", Proceedings of the SPIE- International Society for Optical Engineering (USA), 2001, 4417, ISSN 0277-786X (print), 1996-756X (web). <http://doi.org/10.1117/12.441349>

4. **Sarit Pal**, Asish K. Mukhopadhyay, Partha Pratim Bhattacharya, "Defending mechanisms against sybilattack in next generation mobile adhoc network". IETE Technical Review, 2008, 25, (4), pp 209-215, ISSN 0256-4602.
5. **Sarit Pal**, Asish K. Mukhopadhyay, Sajal Saha, Subhasree Choudhury and Partha Bhattacharya, "Analysis of multi-tier overlay-based next generation wireless networks", International Journal of Information Technology and Knowledge Management, 2009, 1, (2).
6. Rumpa Mukherjee, Rajib Banerjee and **Sarit Pal** "Information Loss, Doppler Shift, and Fading Effect in MANET fordifferent Routing Protocols", International Journal of Frontier Computing, 2012, 1, (1), pp. 21-30.
7. Somnath Sinha, Aditi Paul and **Sarit Pal**, "Use of Spline Curve in Sybil Attack Detection based on Received Signal Power — New Approach", ACEEE International Journal of Recent Trends in Engineering and Technology, 2014, 11, (6), pp 602-611, ISSN 2158-5555 (print), 2158-5563(electronic)

Conference:

1. **Sarit Pal** and S. K. Kak, "Numerical aperture and intensity control by fiber end face shaping", International Conference on Fiber Optics and Photonics - PHOTONICS 96, December 9-13, 1996, International Conference, Tata McGraw Hill, ISBN 0-07-463355-4.
2. **Sarit Pal** and S. K. Kak, "Optical fiber array fiber optic sensors", International Conference on Fiber Optics and Photonics - PHOTONICS 98, December 16-18, 1998, International Conference, Viva Books Pvt. Ltd., ISBN 81-7649-073-3.
3. **Sarit Pal**, Shubhra Verma and S. K. Kak, "Fiber optic sensor for angular displacement and surface slope measurement", International Conference on Fiber Optics and Photonics - PHOTONICS 2000, December 18-20, 2000, International Conference, Allied Publishers Pvt. Ltd., ISBN 81-7764-103-4.
4. **Sarit Pal**, Rudrarup Naskar and S. K. Kak, "Surface image reconstruction using yapered optical fiber array", International Conference on Optoelectronics, Fiber Optics and Photonics - PHOTONICS 2002, December 16-18, 2002, International Conference, <http://ph2002.tifr.res.in/>.
5. **Sarit Pal**, Piyasi Choudhury and S. K. Kak, "Optical fiber array as a multipurpose sensor", International Conference on Fiber Optics and Photonics - PHOTONICS 2004, December 18-20, 2004, International Conference.
6. **Sarit Pal**, Pinakin Prabhakar, Rachit Jain and S. K. Kak, "Surface profile reconstruction using two-dimensional optical fiber array", International Conference on Fiber Optics and Photonics - PHOTONICS 2006, December 13-16, 2006, International Conference, Allied Publishers Pvt. Ltd.
7. Priyadarshini, **Sarit Pal** and S. K. Kak, "Algorithm to determine rms surface slope and roughness using fiber optic scanner", International Conference on Broadband Optical Fiber Communication Technology, December 5-7, 2001, International Conference.
8. P.P. Bhattacharya, **Sarit Pal** and R. N. Ghosh, "Propagation, environment and user velocity dependent fuzzy controlled call handoff for cellular system", International Conference on Recent Advances in Microwave Theory and Appications, 2008, International Conference., IEEE.
9. **Sarit Pal**, Arindam Chakraborty and S. K. Kak, "Intensity modulation based fiber optic sensor for surface roughness measurement", International Conference on Sensors and Related Networks - SENNET '09, December 8-10, 2009, International Conference. Allied Publishers Pvt. Ltd., ISBN 81-8424-541-7.

10. Arindam Chakraborty, A. Das Sharma and **Sarit Pal**, "Low cost automation for field irrigation", International Conference on Sensors and Related Networks - SENNET '09, December 8-10, 2009, International Conference. Allied Publishers Pvt. Ltd., ISBN 81-8424-541-7.
11. Rumpa Mukherjee, Rajib Banerjee and **Sarit Pal** "Information Loss, Doppler Shift, and Fading Effect in MANET for different Routing Protocols", International Conference on Communications and Industrial Applications, December 26-28, 2011, International Conference.
12. Somnath Sinha, Aditi Paul and **Sarit Pal**, "The Sybil Attack in Mobile Adhoc Network: Analysis and Detection", International Conference on Recent Trends in Communication and Computer Networks - ComNet 2013", November, 2013, International Conference, IET.
13. Aditi Paul, Somnath Sinha and **Sarit Pal**, "An Efficient Method to Detect Sybil Attack Using Trust Based Model", International Joint Conference on Advances In Engineering and Technology AET-ACS-2013", December, 2013, International Conference, ACEEE.
14. Sumanta Das and **Sarit Pal**, "Analysis of Energy Efficient Routing Protocols in Mobile Adhoc Network", International conference on Emerging trends on Engineering and Science (ETES 2018), March 23-24, 2018, International Conference, Asansol Engineering College,
15. **Sarit Pal**, Shubhra Verma and S. K. Kak," Fiber optic profilometer for surface slope measurement", National System Conference - NSC 99, December 9-11, 1999, National Conference, Allied Publishers Pvt. Ltd., ISBN 81-7023-996-6
16. **Sarit Pal** and S. K. Kak, "Fiber optic sensors in surface metrology", Symposium on Advances in Electronics - ELECTRO 2001, January 4-6, 2001, National Conference, Mahaveer Press, Varanasi.
17. **Sarit Pal**, Piyasi Choudhury and S. K. Kak, "Optical fiber array sensor for surface topology as well as displacement and velocity measurement", National Conference on Sensors - NCS-05, November 25-26, 2005. National Conference, Allied Publishers Pvt. Ltd., ISBN 81-7764-931-0.
18. Amol Vasudeva, **Sarit Pal**, Kanishk Kumar, Pankaj Tripathi, "Two-phase detection of Sybil attack in adhoc network", National Conference, 2008, National Conference.
19. Amol Vasudeva, **Sarit Pal**, Nitin Nigam, Siddharth Dev, Nitin Gupta and Chetan Malhotra, "Design of low interaction honeypot to track distributed denial service of attack", National Conference, 2008, National Conference.
20. S. K. Kak and **Sarit Pal**, "Optical fiber based surface roughness measurement", 5th Annual Conference of Purvanchal Academy of Science, December 23-25, 1993, National Conference.
21. S. K. Kak and **Sarit Pal**, "Cleaving angle effect on fiber numerical aperture", 5th Annual Conference of Purvanchal Academy of Science, December 23-25, 1993, National Conference.
22. **Sarit Pal** and S. K. Kak, "Fiber optic geometry effect on radiation pattern", All India Seminar on Optoelectronics - Education, Research and Technology - OPERATE -93, December 18-19, 1993.

Book Chapter:

1. **Sarit Pal** and S. K. Kak, "Surface reconstruction using reflection based mapping algorithm", pp. 1202-1205, "Optics and Optoelectronics- Theory, Devices and Applications", Narosa Publishing House, 1998, ISBN 81-7319-285-5.
2. Anand Mohan Sinha, Debojyoti Saha, Sanatya Singh, **Sarit Pal**, Achyut Sharma, Amol Vasudeva and S. K. Kak, "Defence mechanisms against distributed denial of service attack", pp. 117-124, "Information Technology", Vitasta Publishing Pvt. Ltd., 2007, ISBN 81-89766-74-0.
3. Anand Mohan Sinha, Debojyoti Saha, Sanatya Singh, **Sarit Pal**, Achyut Sharma, Amol Vasudeva and S. K. Kak, "Sybil Attack detection techniques in Mobile Adhoc Networks", pp. 335-342, Vitasta Publishing Pvt. Ltd., 2007, ISBN 81-89766-74-0.
4. Sumanta Das and **Sarit Pal**, "Analysis of Energy-Efficient Routing Protocols in Mobile Ad Hoc Network", Advances in Computer, Communication and Control. Lecture Notes in Networks and Systems, vol 41. Springer, Singapore, 2019, ISBN978-981-13-3121-3 (print) ISBN 978-981-13-3122-0 (online) DOI: https://doi.org/10.1007/978-981-13-3122-0_27

Supervision of Ph.D/M.Tech/ B.Tech Projects:

For Ph.D

1. **Aditi Paul, Dr. Sarit Pal**, "Detection of Sybil Attack in Mobile Ad Hoc Network Using Trust Based Model", 2015, Pacific Academy of Higher Education & Research University (compleed).
2. **Somnath Sinha, Dr. Sarit Pal**, "Sybil Attack Detection in Mobile Ad-Hoc Network based on Received Signal Power", 2015, Pacific Academy of Higher Education & Research University (completed).

Projects:

Thesis of M.Tech. (Since 2015)

1. **Sumanta Das (Universty Roll number 12013513008), Sarit Pal**, "Energy Optimize Routing Algorithm in Mobile Adhoc Network", 2015.

Project of B.Tech. (Since 2016)

1. **Annapurna Kumari (University Roll number 12000312020), Deepa Kumari Sah (University Roll number 12000312035), Debnita Ghosh (University Roll number 12000312034), Sarthak Paul (University Roll number 12000312087), Apurba Ghosh (Universty Roll number 12000312022), Sayak Sen (Universty Roll number 12000312091), Sarit Pal**, "Network security based on data encryption", 2016
2. **Rahul Kumar Gupta (University Roll number 12000313067), Hariom Kumar (University Roll number 12000313037), Rajeev Ranjan Prakash (University Roll number 12000313070), Ratan Soren (University Roll number 12000313073), Vishal Kumar Gupta (University Roll number 12000313115), Sarit Pal**, "Performance Analysis and Comparative Study of different Routing Protocols in Mobile Ad-Hoc Network", 2017

3. Avijit bhattacharya, (University Roll number 12000314020), Debanjan Chandra (University Roll number 12000314027), Goutam Gope (University Roll number 12000314035), Sarit Pal,” Data Encryption Technique using Modified Hill Cipher”, 2018.
4. Pratyush Mukherjee (University Roll number 12000314065), Sandeep Saha (University Roll number 12000314078), Sarit Pal,” Data Encryption Technique using Modified Playfair Cipher”, 2018.
5. Subham Rakshit (Universty Roll number 12000315110), Sruti Sukul (University Roll number 12000315109), Sourav Mahanty (University Roll number 12000315107), Anirban Chattaraj (University Roll number 12000315011), Raunak Basu (University Roll number 12000315080), Anubhav Roy (University Roll number 120003151017), Sarit Pal, “Indoor Navigation for Visually Impaired People Using Li-Fi”, 2019.
6. Gopi Satyam (University Roll number 12000316104), Priyanka Bose (Universty Roll number 12000316062), Sonali Mandal (University Roll number 12000316034), Richa Bibhuty (Universty Roll number 12000316054), Sarit Pal, “Smart irrigation system using distributed humidity sensors”, 2020.
7. Gourav chakraborty (University Roll number 12000316103), Pritam Ghosh (University Roll number 12000316063), (University Roll number 12000316009), Sarit Pal, “Smart irrigation system using distributed temperature sensors”, 2020.
8. Satabdi Gupta (University Roll number 12000317050), Meghna Shaw (University Roll number 12000317085), Romal Kumar (University Roll number 12000317057), Sarit Pal, “Smart Irrigation System using Soil Moisture Sensors”, 2021
9. Vikash Kumar (University Roll number 12000317012), Saurabh Kumar (University Roll number 12000317049), Ankit Singh (University Roll number 12000317123), Sarit Pal, “Temperature Sensor Based Smart Irrigation System”, 2021.

Invited Lectures:

Topic of the lecture	Name of the event	Organized by	Date
Fiber optic sensors	Recent trends in Defence Research	Durgapur Vishwagandha Science Society	8 th July, 2008
Sybil attack in Mobile Adhoc Network	Faculty Development Program on Computer Network & Network Security	Pacific Academu of Higher Education and Research University, Udaipur	22 nd July, 2014
ICT Enterpren for Social Impact	Engineer’s Day	Institution of Engineers (India)	17 th May, 2016

Participation in seminar/conference/symposium/workshop/discussion meeting

Name of the event	Duration	Year	Organized by
International Conference on Fiber Optics and Photonics - PHOTONICS 96	3 Days	1996	Indian Institute of Technology, Madras
International Conference on Optics & Optoelectronics	4 Days	1998	Instruments Research and Development Establishment, Dehradun
International Conference on Fiber Optics and Photonics - PHOTONICS 98	3 Days	1998	Indian Institute of Technology, Delhi
International Conference on Fiber Optics and Photonics - PHOTONICS 2000	3 Days	2000	Indian Institute of Technology, Kharagpur and University of Calcutta
International Conference on Fiber Optics and Photonics - PHOTONICS 2002	3 Days	2002	Indian Institute of Technology, Mumbai
International Conference on Fiber Optics and Photonics - PHOTONICS 2004	3 Days	2004	Cochin University of Science and Technology
International Conference on Fiber Optics and Photonics - PHOTONICS 2006	3 Days	2006	University of Hyderabad
International Conference on Broadband Optical Fiber Communication Technology	3 Days	2001	North Maharashtra University, Jalgaon
National System Conference - NSC 99,	3 Days	1999	Institute of Technology, Banaras Hindu University, Varanasi
Symposium on Advances in Electronics - ELECTRO 2001	3 Days	2001	Institute of Technology, Banaras Hindu University
National Conference on Sensors - NCS-05	3 Days	2005	Thapar Institute of Engineering and Technology
5 th Annual Conference of Purvanchal Academy of Science	3 Days	1993	Udai Pratap College, Varanasi
All India Seminar on Optoelectronics - Education, Research and Technology - OPERATE -93	2 Days	1993	Institution of Engineers (India), Lucknow
Summer School on Recent Trends in Optoelectronics - Theory, Devices and Circuits	10 Days	1993	Birla Institute of Technology, Mesra
Workshop on Fiber Optics and Applications	5 Days	1994	Indian Institute of Technology, Delhi
Workshop on Fuzzy Logic and Neural Networks	2 Days	2000	Annamalai University,
Workshop on Relevance of Physics in Present Technological Scenerio	2 Days	2008	National Institute of Technology, Durgapur

Workshop on Wireless communications and Networking	2 Days	2008	National Institute of Technology, Durgapur
Workshop on Robotics	3 Days	2008	Central Mechanical Engineering Research Institute, Durgapur
Seminar on Advances in Nano-Satellite Technology	1 Day	2015	Dr. B. C. Roy Engineering College, Durgapur
Workshop on Microwave Engineering & Applications (MCA 2015)	2 Days	2015	Dr. B. C. Roy Engineering College, Durgapur

Participation in faculty development programmes

Name of the faculty development programmes	Online / Face-to-face	From Date - To Date	Duration	Year	Organized by
Recent trends in teaching methodology in Technical Education	Face-to-face	3 rd to 8 th July, 2006	6 Days	2006	Jaypee University of Information Technology, Wagnaghat
Students management and teaching skill development	Face-to-face	2 nd to 7 th July, 2007	6 Days	2007	Jaypee Institute of Information Technology,
Full custom VLSI design using mentor graphics	Face-to-face	15 th to 17 th May, 2019	3 Days	2019	Dr. B. C. Roy Engineering College, Durgapur

Organization of events (Dr. B. C. Roy Engineering College)

Name of the event	Date	Year
Seminar on "Teaching & Learning Skill Development"	22 nd August 2019	2019
IEEE Sponsored "National Conference on Emerging Trends on Sustainable Technology and Engineering Application 2020"	7 th to 8 th February, 2020	2020

Participation in administrative committees (selected)

Name of the post (Convener/Joint Convener/Member secretary/Co-ordinator etc.), Name of the committee, year

NO

Project Ideas Submitted to Govt. Agencies/ On-going Projects / Research Ideas under preparation & execution

Research idea under preparation: "IOT BASED SMART IRRIGATION SYSTEM AND AGRICULTURE"

Membership of professional bodies: IEEE, IETE, IEL, CSI, MGMI etc.

NO