

## Bio sketch



Jyotsna Kumar Mandal  
Former Vice Chancellor, Raiganj University, West Bengal,  
Former Professor, Computer Science & Engineering, University of Kalyani,  
ISO World Convenor SC 36/WG 7,  
Former Dean, FETM, Former Director, IQAC, University of Kalyani,  
Governing Council Member Eastern Zonal Mentor, IETE, India

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## General information

<b>Name (in Capital Letters)</b>	JYOTSNA KUMAR MANDAL			
<b>Date of Birth (Day/Month/Year)</b>	08-08-1960			
<b>Correspondence Address</b>	A502 Green Valley Housing Complex, Kaikhali Chiriamore, Near New Basanta Sweets, Kolkata 700136, West Bengal, India.			
<b>Permanent Address</b>	Vill- Nerakopa, P.O. – Raskundu, PS-Garhbeta, Dist.- Midnapur West, West Bengal, Pin- 721127			
<b>Birth place</b>	Vill- Nerakopa, P.O. Raskundu, PS-Garhbeta, Dist.- Paschim Medinipur (Jangalmahal)			
<b>Phone. No</b>	Mobile No.	(0)9434352214, 8240323373	<b>Landline No.</b>	(033) 46056570
<b>Email:</b>	jkm.cse@gmail.com		<b>Alternate Email, if any</b>	<a href="mailto:jkmandal@klyuniv.ac.in">jkmandal@klyuniv.ac.in</a>
<b>Website</b>	http://jkmandal.com			

## About me

- Former Vice Chancellor, Raiganj University, University Road, College Para, Raiganj, West Bengal 733134
- Former Professor Department of Computer Science & Engineering, University of Kalyani  
Former Dean Faculty of Engineering Technology & Management (Two Consecutive Terms (2008-2012))  
ISO World Convenor SC 36/WG 7,  
Governing Council Member Eastern Zonal Mentor, IETE, India  
Former Director, IQAC, KU from 2014 to 2021  
Former Chairman, Centre for Information Resource Management, KU(2014-2022)  
**Former Chairman**, Placement Cell, KU, 2016-2020
- Former Jt. Director, Centre for Remote Sensing Applications, NBU(1998-2005)
- Former Coordinator, TEQIP I, KGEC (2005-2007)
- Former HoD, CSE KU, CSA KGEC, CSA NBU, Computer Centre NBU
- Former Coordinator, IIPC Cell KU (2009-2012)

## Academic Career

- Madhyamik from Raskundu High School, West Midnapur
- 10+2 from Ghatal Vidyasagar High School, West Midnapur
- Graduation B. Sc. (Hon.) in Physics from University of Burdwan in 1983
- Post-Graduation M. Sc. In Physics from Jadavpur University in 1985
- M. Tech. (CS) from Calcutta University in 1987
- Ph. D. (Engg.) from Jadavpur University in 2000
- More than 32 years of teaching and research experience,
- more than 500 publications in international/national journals/conferences out of which more than 49 SCI Publications in last ten years, 190 in international Journals and twelve books published from Springer Nature, LAP Germany, IGI Global and 55 edited volumes published from Springer Nature etc. (see <http://jkmandal.com> for details).
- Last 38 years working as faculty members/researchers and administrator in various capacities as Assistant Professor, Associate Professor, Professor, Vice- Chancellor(in-charge), Jt. Director, Director, Chairman, Head of the departments,
- Former Dean Faculty of Engineering, Technology & Management (two consecutive terms), Former Director, IQAC (2013-2021 at KU),
- Acted as Member of EC, Member of University Court, BOS Member of BHU, Andhra University etc.
- Thirty-one Scholars awarded Ph. D. degree under my direct supervision, three submitted and four are perusing.
- Received Two Silver Medals from Jadavpur University for Securing Highest Marks
- Received Shiksha Ratna Award from Govt. of West Bengal

## Teaching & Research Experiences

**Total Teaching experience 38 years, Research experience 5 years with administrative experience including as Vice Chancellor**

- As Vice Chancellor, Raiganj University since 09-03-2023
- As Professor 21 years
  - Professor in Computer Applications, KGEC 16.03.2005 to 27.03.2007
  - Professor in Computer Science & Engineering, KU 16.03.2007 to 31.08.2025(Superannuated).
- As Reader (Equivalent Associate Professor) 6 Years 5 Months (17.09.1998 to 15.03 2005) at North Bengal University.
- As Lecturer 9 Years.
  - Lecturer in NERIST 11 months from 06.09.1988 to 10.08.1989
  - Lecturer in the University of North Bengal from 11.07.1990 to 16.09.1998.
- **Research experience 1 yr.: 16.08.1989 to 09.07.1990**
- **Experience as IT expert(trainee): 8 months: 16.11.1987 to 31.08.1988**

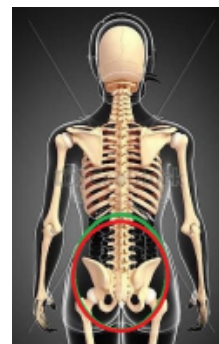
## **Administrative Experiences**

### **Contribution in terms of infrastructure development**

1. Expert for Academic Audit in various institutes.
2. Designed and implemented full campus networking consisting of 4KM fiber optic network and 4 KM UTP Network at the University of North Bengal during 1998-2000 from the project fund received from UGC (80 Lakhs).
3. Initiated to open Department of Engineering & Technological Studies, under Engineering Faculty and two streams of undergraduate studies, Information Technology and Electronics and Instrumentation Engineering as Dean Faculty of Engineering, Technology & Management, and University of Kalyani in 2008.
4. Actively involved in infrastructure development, networking, wireless communication between Main campus and Hostel situated at a distance of 2 km from main campus of Kalyani Government Engineering College as Coordinator of TEQIP I in Kalyani Govt. Engg. College, Govt. of West Bengal, during 2006-2007.
5. Domain Expert member of Uttarbanga Krishi Viswavidyalaya nominated by ICAR Govt. of India for planning, designing and implementation of networking and internetworking of Uttarbanga Krishi Viswavidyalaya campus, Coochbehar during my tenure as Head, Department of Computer Science & Application, University of North Bengal during 2002-2004.
6. Domain Expert member of West Bengal University of Animal and Husbandry, Belgachia for designing and implementation of Video Conferencing labs at Belgachia Campus and Haringhata Campus during 2009-10.
7. As Chairman of Center for Information Resource Management, University of Kalyani, implemented wireless connectivity between Central Park and Main Campus of the University of Kalyani.
8. Implemented web based Remote Library Resource Access at the University of Kalyani as Chairman, CIRM.
9. Setup the Centre for Remote Sensing Applications at the University of North Bengal with the aid of Rs. 38 Lakhs from ISRO and opened M. Phil. Course on Remote Sensing and GIS Application at North Bengal University during 1998-1999.
10. Arranged to open Computer Science Undergraduate courses in different colleges in the hilly areas of Darjeeling, Kalingpong during 1998-2005.
11. Expert for NAAC Peer team.
12. Expert for AICTE EVC
13. HPC Installation and Dissemination Policy as Chairman, CIRM, University of Kalyani.

## Contribution in current research

The development and social implication of the developed products by the candidate is many folds. Designed “Low Back Pain Management” software under the leadership of group of doctors as domain designed for Low Back Pain Diagnosis and Management. Research on satellite-based image processing mainly suggested different types of classification and change detection of the forest, shorelines, and future projection of forest and urban areas. Quickly deployable resilient architecture based on four tier communication networks for employment in a post calamity scenario will enhance the accessibility and monitoring of the situation in that area. Developed Morgue Software which has been implemented and successfully run by the authority of Nilratan Sirkar Medical College, Kolkata more than ten years which is secured and authentic information dissemination with provision of integrating same into the portal. 6, 5 and 4nm design of CMOS with enhanced performance compared to existing in terms of ITRA recommendation will enhance the computing power of the microprocessor system. Transform domain computation for authentication and steganographic applications will enhance the social system in telemedicine and banking technology. Compressed sensing-based reconstruction of signal has immense implication for societal need in terms of analytics of information processing.



## Current area of research

- Automated Evaluation and Confidence Based Learning (CBL)
- Projected Urban Map of Kolkata 2031(Earth Science, IRS), Sundarban with future predictions
- Medical Expert System for Low Back Pain
- Compressed Sensing
- Nanoscale CMOS Device for Security Circuit Design

## Research outcomes

- 31 scholars Awarded Ph. D Degree under Direct Supervision
- Completed Five Research Projects from AICTE and Govt. of WB
- One Patent Granted in 2021

## SCI publications in last 11 years: 61

2025-2;2024-3;2023-4; 2022-5; 2021-8 and one Patent; 2020-8; 2019-6; 2018-10; 2017-4,2016-9;2015-1;2014-1

Highest Impact Factor: Artificial Intelligence in Medicine, Elsevier, IF 6.2 and Cite Score 12.2. Details of publication: Debarpita Santra, Subrata Goswami, Jyotsna Kumar Mandal and Swapan Kumar Basu, Low Back Pain Expert Systems: Clinical Resolution through Probabilistic Considerations and Poset”, Journal Artificial Intelligence in Medicine, Science Direct Elsevier, Volume 120,October 2021, 102163(SCI,IF:7.011)

(<https://www.sciencedirect.com/science/article/pii/S09333365721001561>), September, 2021.

## **Administrative Responsibilities shouldered**

- Vice Chancellor, Raiganj University during 09-03-2023 to 08-06-2023
- Vice- Chancellor (In Charge), Kalyani University, 08.04.2017 to 12.04.2017(5 days)
- NAAC Peer Team Expert as Member and Member Coordinator
- AICTE Expert Committee Member
- Former Chairman CSI Siliguri and Kolkata Chapter
- Former Chairman IETE Kolkata Centre (2020-2022)
- Head of the Departments
  - North Bengal University, CSA
  - Kalyani Gove Engineering College, CA
  - University of Kalyani, CSE
- Superintendent of Boys Hostel (Vivekananda), University of North Bengal for 8 Years
- Dean FETM for two consecutive terms (2008-2012)
- Joint Director, Centre for Remote Sensing Applications (NBU, 1998-2005)
- Member of Executive Council (EC) of University of Kalyani
- Member of the Court, University of Kalyani
- Director, IQAC, University of Kalyani (2013-2021)
- Chairman, Placement Cell, University of Kalyani(2016-2021)
- Chairman, Centre for Information Resource Management, KU, 2014-2022
- Ex BOS member, Andhra University and BHU, CS
- Academic Council Member of JIS College of Engineering(Autonomous) Contribution in terms of Infrastructure Development
- Expert of AICTE Peer Team for EVC.
- Expert of NAAC Peer Team.
- Expert for Academic Audit in various institutes.
- Designed and implemented full campus networking consisting of 4Km fiber optic network and 4Km UTP Network at the University of North Bengal during 1998-2000 from the project fund received from UGC (80 Lakhs).
- Initiated to open Department of Engineering & Technological Studies, under Engineering Faculty and two streams of undergraduate studies, Information Technology and Electronics and Instrumentation Engineering as Dean Faculty of Engineering, Technology & Management, and University of Kalyani in 2008.
- Actively involved in infrastructure development, networking, wireless communication between Main campus and Hostel situated at a distance of 2 km from main campus of Kalyani Government Engineering College as Coordinator of TEQIP I in Kalyani Govt. Engg. College, Govt. of West Bengal, during 2006-2007.
- Domain Expert member of Uttarbanga Krishi Viswavidyalaya nominated by ICAR Govt. of India for planning, designing and implementation of networking and internetworking of Uttarbanga Krishi Viswavidyalaya campus, Coochbehar during my tenure as Head, Department of Computer Science & Application, University of North Bengal during 2002-2004.
- Domain Expert member of West Bengal University of Animal and Husbandry, Belgachia for designing and implementation of Video Conferencing labs at Belgachia Campus and Haringhata Campus during 2009-10.
- As Chairman of Center for Information Resource Management, University of Kalyani, implemented wireless connectivity between Central Park and Main Campus of the University of Kalyani
- Implemented web based Remote Library Resource Access at the University of Kalyani as Chairman, CIRM.

## **Implementation of Infrastructures**

- Campus LAN at NBU (1998-2000).
- 4KM FO and 300 nodes
- Campus LAN at Uttar Banga Krishi Viswavidyalaya(2000-2002) nominated by ICAR as Expert.
- Establishment of Remote Sensing Centre at NBU from the aid of ISRO
- Video Conferencing Lab of University of Animal & Husbandry, WB through FO(WBSWAN)
- Wireless Connectivity(Point to Point) in KGEC ADM and Hostel
- WiFi at the University of Kalyani
- Web Gateway for Library Access of KU Library from anywhere.
- HPC Installation and Dissemination Policy as Chairman, CIRM

### Achievements

1	Siksha Ratna award	2018	Department of Higher Education, Government of West Bengal, India
2	Highest Scopus Index based Journal Publications during 2013-2022 from Kalyani University	2013-2022	Highest 203 Scopus based publication in last ten years among all faculty members (220) of the University of Kalyani.
3	<a href="#">Member of ISO – International Organization for Standardization</a>	2020-cont.	<a href="#">ISO/IEC JTC 1/SC 36WG8: Learning Analytics Interoperability</a>
4	<a href="#">Distinguish Membership</a>	2020-cont.	<a href="#">Member of BIS -Bureau of Indian Standard</a> <a href="#">LITD 17 Panel 6 : Information System Security and Privacy</a> <a href="#">LITD 19 Panel 2: e-Learning “User Interface”</a> <a href="#">LITD 36: Computer Hardware, peripherals equipment and</a>

### Honors/Awards & Fellowships

Sl. No.	Name of Award/Fellowship etc.	Year of Award	Awarded by
1	A. M. Bose Memorial Silver medal for securing highest marks in the paper “Nuclear Physics and Cosmic Rays” at M. Sc	1985	Jadavpur University
2	Kali Prasanna Dasgupta Memorial Silver medal for securing highest marks in the paper “Nuclear Physics and Cosmic Rays” at M. Sc	1985	Jadavpur University
3	“Bharat Jyoti Award” for meritorious services, outstanding performances and remarkable role in the field of Computer Science & Engineering on 29 <sup>th</sup> August, 2012	2012	International Friendship Society(IIFS), New Delhi
4	“The Best Citizen of India Award 2012”	2012	The International Publishing House, Delhi, India
5	Biography in Marquis Who’s Who in the World 2014(31st Edition), USA (published in November 2013)	2014	
6	Chapter Patron Award, CSI Kolkata Chapter, 2014	2014	CSI Annual Convention at JNTU, Hyderabad during 14-16 December, 2014
7	Vidyasagar Award	2016	International Society for Science Technology and management in the fifth International Conference on Computing, Communication and Sensor Network, on 25 <sup>th</sup> December, 2016 at Hotel Golden park, Kolkata, India
8	Rashtriya Pratibha Award	2017	Indo Socio Development Association, Delhi
9	<b>Siksha Ratna award</b>	<b>2018</b>	<b>Department of Higher Education, Government of West Bengal, India</b>
10	<b>Highest Scopus Index based Journal Publications in 2013-2022 from Kalyani University</b>	<b>2013-2022</b>	<b>Highest 203 Scopus based publication in last ten years among all faculty members (220) of the University of Kalyani.</b>
11	Fellow, IETE	2012	Institution of Electronics and Telecommunication Engineers, India
12	Research ICON Award	2023	University of Engineering and Management
13	Prof. Satyajit Chakraborty Memorial Award for Research and Academic Excellence 2025	2025	University of Engineering and Management
14	Excellence Award for Academics-Individual Category	2025	Computer Society of India Kolkata Chapter

#### No. of Research Scholars (Ph. D) successfully guided:

Ph. D. Supervision	Affiliated University/Institute	Awarded/ under guidance by	Main Guide
25 in Computer Science & Engineering and 6 in Computer Science	University of North Bengal and University of Kalyani	31	31

### Consultancy Experience as expert

S.No	Client `Organization's name	Nature of Assignment	Duration	Value (in Rs)
1.	Uttarbanga Krishi Vishwavidyalaya	Domain Expert member of Uttarbanga Krishi Vishwavidyalaya nominated by ICAR Govt. of India for planning, designing and implementation of networking and internetworking of Uttarbanga Krishi Vishwavidyalaya campus, Coochbehar during my tenure as Head, Department of Computer Science & Application, University of North Bengal during 2002-2004	Two Years	Honorary
2.	West Bengal University of Animal and Husbandry, Belgachia, Kolkata	Domain Expert member of West Bengal University of Animal and Husbandry, Belgachia for designing and implementation of Video Conferencing labs at Belgachia Campus and Haringhata Campus during 2009-10.	Two Years	Honorary

### Patents

Sl. No.	Title of Patent	Organization	Year	Names
1	Enhancing Cyber Security using Hybrid Authentication Technique	Patent Number 2021100948, Innovation Patent, Australian Government, Eight years from 19.02.2021	2021	Gaurav Gambhir, M Gambhir, J K Mandal

### Participation and contribution in National / International Fora in the area of academic and professional expertise:

		Numbers(s)
Plenary Lectures / invited talks delivered	International (See Annexure	5
	National	More than 100 lectures in last five years (For more information kindly see the website of Dr. J K Mandal, <a href="http://jkmandal.com">http://jkmandal.com</a> )
Congress attended	National	More than 30 (in last five years)
	International	
Ph.D Level Examinership, etc.,	International	4
	National	8-10 per year
Others (Specify)	International	International Academic Exposure (For more information kindly see the website of Dr. J K Mandal, <a href="http://jkmandal.com">http://jkmandal.com</a> )
	National	

## Research Projects

1. Modernization of Laboratory Facility (2000-2002) – Rs. 7 Lakhs, Funding Agency: AICTE, Government of India.
2. Microprocessor Based Encoder for Secured Transmission (2002-2005) – Rs. 2 Lakhs, Funding Agency: AICTE, Government of India.
3. GIS Anchored Integrated Plantation Management: Tea 2004- 2007) – Rs. 9.8 Lakhs. Funding Agency: AICTE, Government of India.
4. IIPC Cell - AICTE, Govt. of India (April 2009 to March 2012) – Rs. 10.00 Lakhs, Funding Agency: AICTE, Government of India.
5. MIT, Govt. of West Bengal, Basic Computer Training of School Teachers (July, 2010 to March, 2011) – Rs. 4 Lakhs, Funding Agency: Ministry of Information Technology, Government of West Bengal.

## Contributions to Journals and Book

S.No		Numbers already published / presented
1	Book authored ( <a href="http://jkmandal.com">For more information kindly see the website of Dr. J K Mandal, http://jkmandal.com</a> )	<a href="https://link.springer.com/book/10.1007/978-981-15-4397-5">In 2020 he has published a text book on Reversible Steganography and Authentication via Transform Encoding from Springer (https://link.springer.com/book/10.1007/978-981-15-4397-5)</a> This book is also translated and published in Chinese in 2021 and published separately by the Springer. Twelve
2	Editor in chief ( <a href="http://jkmandal.com">For more information kindly see the website of Dr. J K Mandal, http://jkmandal.com</a> )	one
3	Editorship ( <a href="http://jkmandal.com">For more information kindly see the website of Dr. J K Mandal, http://jkmandal.com</a> )	55 in Edited Books in International Conferences(Springer etc.)
4	Peer review for	Springer, Elsevier, IEEE journals and conferences(many)
5	Member of the Internationsl Advisory Board ( <a href="http://jkmandal.com">For more information kindly see the website of Dr. J K Mandal, http://jkmandal.com</a> )	Various Conferences(Springers etc.)(many)

## Publications

S.No	Category	Numbers already published / presented
1	International Journals (UGC approved list only)	190(For more information kindly see the website of Dr. J K Mandal, <a href="http://jkmandal.com">http://jkmandal.com</a> )
2	International Conference	228 (For more information kindly see the website of Dr. J K Mandal, <a href="http://jkmandal.com">http://jkmandal.com</a> )
3	National Journals (UGC approved list only)	
4	National Conference	54
5	Other articles	

## List of scholarly publications in recognized professional and/or academic journals

S. No		Web of Science	Scopus	Goolge Scholar
1	Publication (number as appeared)	200	340	510
2	Citations (Overall)	700	1313	4589
3	h-index	12	15	30

## Participation and Scholarly presentation in conference:

### National

S. No.	Date	Title of Conference or Institution	Title/Subject of Presentation(if made)
			55

### International

S.No	Category	Number of Presentations
1.	International Conference / Other Event held Abroad	5
2.	International Conference / Other Event held in India	224
	Total	229

### Technical Details of Ph. D Awarded under J K Mandal (Thirty one Scholars)

1. Ghosh Alok, Executive Director, Future Group of Institutions, Kolkata, "Towards Design and Implementation of An Approach on CMM(Capability Maturity Model) for the Quality Performance Measurement of Manufacturing Industries, Ph. D.(Engg.), Department of Computer Science & Applications, University of North Bengal, 2004
2. Mal, Satadal, Retired Professor, Department of Electrical Engineering, Kalyani Government Engineering College, Kalyani, Nadia-741235, India, now Principal, Future Institute of Technology, Kolkata "Development of Microprocessor Based Encoders for Secured Transmission", Ph. D.(Engg.), Department of Computer Science & Applications, University of North Bengal, 2004
3. Dutta, Saurabh, Principal, Dr. B. C. Roy Engineering College (WBUT 323), Durgapur, West Bengal, India, "An Approach Towards Development of Efficient Encryption Techniques", Ph. D.(Science), Department of Computer Science & Applications, University of North Bengal, 2005
4. Jha, Pawan, Associate Professor, Department of Computer Science & Technology, Purbanchasi University, Biratnagar, Nepal, "An Approach Towards Design and Implementation of Symmetric Encryption Techniques" Ph. D.(Science), Department of Computer Science & Applications, University of North Bengal, 2008
5. Sinha, Sarad, Assistant Professor, Department of Computer Science & Applications, University of North Bengal, Dist. Darjeeling, West Bengal, India, "An approach Towards Design and Implementation of Microprocessor Based Cryptosystems for secured Transmission", Department of Computer Science & Applications, University of North Bengal, 2008
6. Sarkar Souvik, Vice Principal, R.K.M Residential College, Narendrapur, Kolkata 700103, "Application of Soft Computing Tools for Better Nanodevice Modeling and their Application in Digital Circuits", Department of Computer Science & Engineering, University of Kalyani, submitted on August 31<sup>st</sup>, 2009(Report Accepted(Ref. No. Ph.D/BRS/Engg. Tech. Mang./2010, dated 15.02.2010 at 1 pm. In the BRS). Awarded on 03<sup>rd</sup> March,2010.
7. Das Swarup, Assistant Professor, Department of Computer Science & Applications, University of North Bengal, Dist. Darjeeling, West Bengal, India, "An approach Towards Design of a GIS-Anchored Decision Support System for Tea Management", Department of Computer Science & Applications, University of North Bengal, awarded on May, 2010.
8. Ghoshal Nabin, Scientific Officer, Department of Engineering & Technological Studies, University of Kalyani, Title: "Towards Design and Implementation of Image Authentication/Secrete Message Transmission Technique using Steganographic Approach" submitted for Ph. D.(Engg.), Department of Computer Science & Engineering, University of Kalyani, Submitted January 18<sup>th</sup>, 2011, awarded on July 4, 2011.(Ref. No. Ph. D./Comput. Sc. & Engg./NG/72/2011, dated 06.07.2011).
9. Som Subhranil, Associate Professor, Department of Information Technology, Amity University, Noida, Title: "Towards Design and Implementation of Cryptographic Techniques for Secured Transmission" submitted for Ph. D.(Engg.), Department of Computer Science & Engineering, University of Kalyani, December, 2011, awarded 3<sup>rd</sup>. September, 2012.
10. Haldar, Prasun, Associate Professor, Department of Computer Science & Engineering, Purulia Government Engineering College, Purulia, West Bengal: "Towards Design and Implementation of GIS Based Tools and Techniques for Various Applications" submitted for Ph. D.(Engg.), Department of Computer Science & Engineering, University of Kalyani, March 28, 2014.
11. Pal, Manas, Assistant Professor, Department of Computer Applications, JIS Engineering College, Kalyani, West Bengal, India, "Design and Implementation of Security Systems using Cipher Block Chaining(CBC) Mode" awarded for Ph. D.(Engg.), Department of Computer Science & Engineering, University of Kalyani, September, 26 2014.
12. Sarkar, Arindam, Assistant Professor, Belur Ramkrishna Mission Vidyamandir, "Towards Design and Implementation of Soft Computing based cryptographic techniques for Wireless Communication" submitted for Ph. D.(Engg.), Department of Computer Science & Engineering, University of Kalyani, November, 28 2014, awarded on July, 9<sup>th</sup>, 2015.
13. Mukhopadhyay, Somnath, Assistant Professor, Assam University, Silchar, "Estimation, Suppression and Optimization of Impulses in Digital Imagery", Department of Computer Science & Engineering, University of Kalyani, awarded Ph. D.(Engg.), November, 12 2014, Awarded, July 20, 2015.
14. Sengupta, Madhumita, Assistant Registrar, IIIT Kalyani, "Towards Design and Implementation of Discrete Transform Image Coding based Document Authentication Techniques" awarded Ph. D.(Engg.), Department of Computer Science & Engineering, University of Kalyani, February, 26 2015, awarded, December, 16, 2015.
15. Sudipta Kr. Ghosal, Assistant Professor, Future Institute of Technology, Boral Campus, Kolkata, India, "Design and Implementation of Transform Domain Watermarking Techniques for Color Image Authentication" awarded Ph. D.(Engg.), Department of Computer Science & Engineering, University of Kalyani, July 2016.

16. Rajdeep Chakraborty, Assistant Professor, Netaji Subhas Engineering College, Kolkata, "An Approach Towards Design and Implementation of Microprocessor and FPGA Based Symmetric Encoder for Embedded System" awarded Ph. D.(Engg.), Department of Computer Science & Engineering, University of Kalyani, March, 2017
17. Uttam, Kr. Mondal, Assistant Professor, Department of Computer Science, Vidyasagar University, "Towards Design and Implementation Of Authentication Techniques To Protect IPR of Quality Songs" awarded Ph. D.(Engg.), Department of Computer Science & Engineering, University of Kalyani, May, 2017.
18. Kousik Dasgupta, Assistant Professor, CSE, Kalyani Govt. Engineering College, Kalyani, "Design and Implementation of Steganographic Engine for Secret data sharing and Authentication of Videos: An Overture", awarded 23<sup>rd</sup> June 2017 from department of Computer science & Engineering, University of Kalyani, 2017.
19. M Marjit Singh, Assistant Professor, CSE, North Eastern Regional Institute of Science & Technology, Arunachal Pradesh, "Towards Design and Implementation of Reliability and Security Mechanism in Mobile Ad Hoc Network", 8<sup>th</sup> November 2017, Department of Computer Science & Engineering, University of Kalyani, 2017.
20. Utpal Nandi, Assistant Professor, Computer Science, Vidyasagar University, Midnapur, "A Study Towards Design and Implementation of Data / Image Compression Techniques", 31<sup>st</sup> January 2018, Department of Computer Science & Engineering, University of Kalyani, 2018.
21. Amrita Khamrui, Assistant Professor, CSE, Future Institute of Technology & Management, Kolkata, "Genetic Algorithm based Steganography for Image Authentication, 28<sup>th</sup> March 2018, Department of Computer Science & Engineering, University of Kalyani, 2018.
22. Parthajit Roy, Assistant Professor, Computer Science, Burdwan University, Burdwan, "Towards Design and Implementation of Graph based Clustering Techniques, Submitted July 2017, Department of Computer Science & Engineering, University of Kalyani, 2017, awarded 7<sup>th</sup> May 2018.
23. Anirban Chakraborty, Assistant Professor, Barrackpur Rastraguru Surendranath College, Barrackpur, "GIS Anchored Tools and Techniques for Social Utility Services", submitted January 2018, Department of Computer Science & Engineering, University of Kalyani, November, 2018
24. Amit Kumar Gupta, Central School, Silchar, "Efficient and secure routing in a DTN for a post disaster scenario", (30<sup>th</sup> June 2016), submitted 12<sup>th</sup> March, 2019, awarded 27<sup>th</sup> November, 2020
25. Rajeev Chatterjee, NITTTR, Kolkata, "A Novel Architecture for Confidence based Learning (CBL)", submitted 10<sup>th</sup> March 2021 and awarded 2<sup>nd</sup> February 2022.
26. Gaurav Gambhir, APIIT, Panipath, Hariyana, " Study on Shared Memory Implementation of Cryptographic and Steganographic Techniques", submitted 12<sup>th</sup> March 2021, awarded 24<sup>th</sup> March 2022.
27. Debarpita Santra, Research Scholar without Fellowship, University of Kalyani, Kalyani, "**Designing Medical Expert System for Assessment and Management of Low Back Pain with Uncertainty Handling**" (June, 2021 to 5<sup>th</sup> May 2022).
28. Khondekar Lutful Hassan, Assistant Professor, Aliah University, Kolkata, "**Towards Enhancement of Security and Efficiency in MANET**" (24<sup>th</sup> June, 2022)
29. Krishan Kundu, Assistant Professor, CSE, Govt. Engineering College, Srirampur, Hoogly, Title: Study on GIS Based Classification and Change Detection using Satellite Images for Social Services (awarded 13<sup>th</sup> March 2023)
30. Sujit Das, Assistant Professor, Bharat Institute of Engineering and Technology, Mangalpalle, 501510, Hyderabad, Telengana, Title: Towards Design and Implementation of Efficient Compressed Sensing Techniques.
31. Sadhu Prasad Kar, Senior Consultant, Tata Consultancy Services, Kolkata, Title: Design of an Intelligent Assessment Framework.

### **Thesis Submitted: Three**

1. Raktim Chakraborty, Assistant Professor, Surendranath College working on Nano scaled MOSFET and Security Circuit design.
2. Tamal Deb Assistant Professor, Barasat College as Assistant Professor, Computer Science working on Quantum Computing.
3. Shrabanti Kundu, Full time Kanyashree Scholar working on Nano scaled FINFET and Security Circuit design

### **Registered Scholar: One**

1. Bibek Ghosh, Assistant Professir, Ramkrishna Mission Vidyapith, Narendrapur, Kolkata under the University of Calcutta.

## List of 10 best publications

1. Santra, D., Basu, S. K., Mandal, J. K., & Goswami, S. (2019). Rough set based lattice structure for knowledge representation in medical expert systems: low back pain management case study. *Expert Systems with Applications*, Elsevier (Impact factor: 8.665 (2019)) [SCI], 145,113084, 19 citations.
2. Debarpita Santra, Subrata Goswami, Jyotsna Kumar Mandal and Swapan Kumar Basu, Low Back Pain Expert Systems: Clinical Resolution through Probabilistic Considerations and Poset”, *Journal Artificial Intelligence in Medicine*, Science Direct Elsevier, Volume 120, October 2021, 102163(SCI, IF:7.011) ( <https://www.sciencedirect.com/science/article/pii/S0933365721001561>), September, 2021.
3. Krishan Kundu, Prasun Halder & Jyotsna Kumar Mandal, Detection and Prediction of Sundarban Reserve Forest using the CA-Markov Chain Model and Remote Sensing Data”, *Earth Science Informatics* (2021), Springer Nature(17th July 2021( SCIE with IF: 2.878))2021, DOI: <https://doi.org/10.1007/s12145-021-00648-9>, 2021, 3 citation.
4. AK Gupta, I Bhattacharya, PS Banerjee, JK Mandal, A Mukherjee, DirMove: direction of movement-based routing in DTN architecture for post-disaster scenario, *Wireless Networks* (IF:2.701), 22(3), pp.723-740, 2016(389 download, 23 citation)(SCI)
5. Mandal, J K., Chakraborty, R, A 10nm MOS and Its Applications, *Microsystem technologies*, Springer (Microsyst Technol (Feb, 19,2020) (IF:2.012).
6. Krishan Kundu, Prasun Halder & Jyotsna Kumar Mandal (2022), Estimation and Analysis of Change Detection, Forest Canopy Density, and Forest Fragmentation: A Case Study of the Indian Sundarbans, *Journal of Sustainable Forestry*, SCIE(IF:1.595); DOI: 10.1080/10549811.2022.2059515, published 30<sup>th</sup> March 2022, link: <https://www.tandfonline.com/doi/full/10.1080/10549811.2022.2059515>
7. Kundu, K, Mandal, J K., Halder, P, Urban Change Detection Analysis during 1978-2017 in Kolkata, India using Multi-temporal Satellite Data, *Journal of the Indian Society of Remote Sensing* (Sept., 2020) (SCIE, IF: 1.894).
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9. Das, S, Mandal, J K., An enhanced block based Compress Sensing Technique using orthogonal matching pursuit, *Signal, Image and Video Processing*, Springer (2020) (SCI, IF 2.157), 1 citation.
10. Ghoshal, N., Mandal, J.K. & Khamrui, A. An Authentication Technique for Image/Legal Document (ATILD). *J Sign Process Syst* 67, 187–199 (2012). <https://doi.org/10.1007/s11265-010-0557-7> (SCI IF 1.813)

### For citation and impact factor please see following links

- **Google Scholar Citation:** Document 510, Citation 4589, h-index 30, i10-index 117 ([http://scholar.google.com/citations?hl=en&user=Nllye4UAAAAJ&view\\_op=list\\_works&pagesize=20](http://scholar.google.com/citations?hl=en&user=Nllye4UAAAAJ&view_op=list_works&pagesize=20))
- **Research Gate:** Document 421, citation 3,497, h-index 27 ([https://www.researchgate.net/profile/Jyotsna\\_Mandal/](https://www.researchgate.net/profile/Jyotsna_Mandal/))
- **Scopus Citation:** Document 340, Citation 1313, h-index 15 (<http://www.scopus.com/authid/detail.url?authorId=24605629500>)
- **Web of Science Citation:** Document 188, Citation 620, h-index 12 (<https://www.mendeley.com/profiles/jyotsna-kumar-mandal/publications>)

## SCI Publications in last six years (2025-2014)

### 2025

1. Ghosh, P., Molla, M.J., Ghosh, L.J. et al. A Comprehensive Analysis on the Skill-Set of the Students to Improve Campus Drive Using Machine Learning Approaches. *Trans Indian Natl. Acad. Eng.* (2025). 04,2025 <https://doi.org/10.1007/s41403-025-00548-0>(Sept 04,2025)
2. Kundu, S., Mandal, J.K. Design of 6 nm double gate MOSFET and its circuit level applications. *Analog Integr Circ Sig Process* 124, 64 (2025). <https://doi.org/10.1007/s10470-025-02467-0> (August 2025).

### 2024

1. Kundu, S., Mandal, J. K., Design and analysis of logic circuits based on 8 nm double gate MOSFET. *Microsyst Technol* (2024). <https://doi.org/10.1007/s00542-024-05630-1>, 2024.
2. Krishan Kundu, Prasun Halder & Jyotsna Kumar Mandal (2024), "Shoreline Change Detection and Future Prediction of Sundarban Delta Using Remote Sensing Data and Digital Shoreline Analysis System", *Journal of the Indian Society of Remote Sensing*, SCIE(IF:2.5);, Accepted Feb, 1 2024.
3. Raktim Chakraborty and Jyotsna Kumar Mandal 2025 *Phys. Scr.* 100 015214, DOI 10.1088/1402 4896/ad963c (4th December, 2024).

### 2023

1. Sadhu Prasad Kar, Amit Kumar Das, Rajeev Chatterjee, Jyotsna Kumar Mandal, "Assessment of learning parameters for students' adaptability in online education using machine learning and explainable AI", *Education and Information Technologies Journal*, SCI indexed of Springer Nature(IF 5.5), DOI: <https://doi.org/10.1007/s10639-023-12111-x>, published on 16th August 2023, Springer Nature (2023). The link:<https://link.springer.com/article/10.1007/s10639-023-12111-x>
2. Ghorai, A., Nandi, U., Changdar, C. et al. Indian sign language recognition system using network deconvolution and spatial transformer network. *Neural Comput & Applic* (2023). <https://doi.org/10.1007/s00521-023-08860-y>, IF:6.0, SCIE.
3. Das, S., Mandal, J.K. A modified column block Toeplitz matrix for compressed sensing. *Signal, Image and Video Processing(SIViP)* (2023). <https://doi.org/10.1007/s11760-023-02529-8>, Springer Nature(SCIE, IF:2.3), March 4 2023, 17, pages 3083–3090 (2023)
4. Jyotsna Kumar Mandal, Srishti Dey, and Ajay Kumar, A Steganographic Approach for Secured Communication via Boustrophedon Transformation to Develop IoT Based Smart City, *IETE Journal of Research*, Taylor & Francis (SCI, IF: 1.877) (2023) (published on line).

### 2022

1. Bandyopadhyay, S., Thakur, S.S. & Mandal, J.K. Emotion Detection for online recommender system using deep learning: a proposed method, *Innovations Syst Softw Eng* 17<sup>th</sup> May, 2022. <https://link.springer.com/article/10.1007/s11334-022-00437-7>
2. Krishan Kundu, Prasun Halder & Jyotsna Kumar Mandal (2022) Estimation and Analysis of Change Detection, Forest Canopy Density, and Forest Fragmentation: A Case Study of the Indian Sundarbans, *Journal of Sustainable Forestry*, SCIE(IF:1.515); DOI: 10.1080/10549811.2022.2059515, published 30<sup>th</sup> March 2022, link: <https://www.tandfonline.com/doi/full/10.1080/10549811.2022.2059515>
3. Priyadarshini R, Chintalapati R, Nath V, Shylashree N, Sharma J B, Mandal, J K, "A Novel Approach for Node localization in Wireless Multimedia Sensor Network", *IETE Journal of Research*, communicated May 2, 2022.
4. Ghosh, S, Chakraborty, A, Mandal, J K, "Fusion: An EXOR Based Vertex Synthesis to Minimize Switching Functions", *Theory of computing Systems*, Springer Nature(SCI, IF:0.582)(communicated on 12<sup>th</sup> May,2022).(<https://www.springer.com/journal/224>).
5. Ghosh, P., Goto, T., Mandal, J.K. et al. View materialization using fuzzy MAX–MIN composition with association rule mining (VMFCA). *Innovations Syst Softw Eng* (2022). <https://doi.org/10.1007/s11334-022-00484-0>

### 2021

#### Patents:

**Patent Title:** Enhancing Cyber Security using Hybrid Authentication Technique, Gaurav Gambhir, M Gambhir, J K Mandal, Patent Number 2021100948, Innovation Patent, Australian Government, Eight years from 19.02.2021.

1. Santra, D., Basu, S. K., Mandal, J. K., & Goswami, S. (2019). Rough set based lattice structure for knowledge representation in medical expert systems: low back pain management case study. *Expert Systems with Applications*, Elsevier (Impact factor: 6.954 (2019)) [SCI], 145,113084
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- M Marjit Sing, Mandal, J K, A Novel Wide & Deep Transfer Learning Stacked GRU Framework for Network Intrusion Detection, Journal of Information Security Applications, ELSEVIER, Vol 91, SCIE (IF 3.872), June, 2021, <https://doi.org/10.1016/j.jisa.2021.102899>, <https://www.sciencedirect.com/science/article/pii/S2214212621001265>.
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- Arindam Sarkar, Moirangthem Marjit Singh, Jyotsna Kumar Mandal, Neural Synchronization guided Concatenation of Header and Secret Shares for Secure transmission of Patients' Electronic Medical Record: Enhancing Telehealth Security for COVID-19, Arabian Journal for Science and Engineering (SCIE, IF 2.334, Springer Nature, January 2021).
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- Bandyopadhyay, S., Thakur, S.S. & Mandal, J.K. Product recommendation for e-commerce business by applying principal component analysis (PCA) and K-means clustering: benefit for the society. Innovations Syst Softw Eng 17, 45–52 (2021). <https://doi.org/10.1007/s11334-020-00372-5>

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- Santra, D., Mandal, J. K., Basu, S.K. et al. Medical expert system for low back pain management: design issues and conflict resolution with Bayesian network. Med Biol Eng Comput (2020). <https://doi.org/10.1007/s11517-020-02222-9>, Springer (SCI, IF-2.6022), 7 September, 2020.
- Soma Bandyopadhyay, S. S. Thakur, J. K. Mandal, Product recommendation for e-commerce business by applying principal component analysis (PCA) and K-means clustering: benefit for the society, Innovations in Software and Systems Engineering (NASA Journal), Springer, SCIMago, June, 2020
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- Chakraborty, R. & Mandal, J.K. An FPGA based cascaded CBC block cipher through RPSNC and TE, Microsystem technologies, Springer (Microsyst Technol (2019) 25: 1669. <https://doi.org/10.1007/s00542-017-3458-x>) May 2019, Volume 25, Issue 5, pp 1669–1677 (IF:1.581).
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- Das, S., Mandal, J.K, An information Hiding scheme in wavelet domain using Chaos dynamics, Journal of scientific & industrial research, vol 77, May 2018, pp 264-267.
- Saha, S Ghoshal, S K Chakraborty A, Drargupta S, Sarkar, Mandal, J K, Improved exploiting modification direction-based steganography using dynamic weightage array, Electronica Letters, Vol. 54 No. 8 pp. 498-500, (IF:1.59) 19<sup>th</sup> April, 2018 (2018)
- R Chatterjee, R Chakraborty, J K Mandal (2018), Design of Cryptographic model for End-to-End Encryption in FPGA based systems Microsystems Technology, Springer (SCI) (online first), (IF:1.581)
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- Ghosal, S and Mandal, J., K., On the use of the Stirling Transform in Image Steganography, Journal of Information Security and Applications (IF:1.357), Elsevier (in Press), 2018
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- Chatterjee R, Mandal J. K., (2018), A Content Proposer System (CPS) based on deficiencies of Confidence Based Learning (CBL), Journal of Scientific and Industrial Research (IF:0.557), ISSN: 0022-4456. (SCI), Vol. 78(1), pp 35-38

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1. Chakraborty Rajdeep and Mandal J.K., Recursive Substitutions of Bits on Prime-Nonprime Detection of Sub-stream: FPGA Based Non-Feistel Block Cipher, *Microsystem Technology* (IF:1.581), Springer, 2017(SCI) (online first) (2017)
2. Amit Kumar Gupta, Jyotsna Kumar Mandal, Indrajit Bhattacharyal Tamal Mondal and Sourav Sanu Shaw(2017), "CTMR-collaborative time-stamp based multicast routing for delay tolerant networks in post disaster scenario", *Peer-to-Peer Netw. Appl.* (IF:1.514), Springer, DOI 10.1007/s12083-016-0533-5, 16th Nov.2017
3. Singh, M.M. and Mandal, J.K. (2017), "Reliability of MANET under the Influence of Black Hole Attack in Adhoc On Demand Distance Vector Routing Protocol", *Journal of Scientific and Industrial Research* (IF:537), vol 76(07), 2017, pp 423-426, ISSN: 0022-4456. (SCI)(2017)
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5. Utpal Nandi & Jyotsna Kumar Mandal (2016), Efficiency of adaptive fractal image compression with archetype classification and its modifications, *International Journal of Computers and Applications*, 38:2-3, 156-163; Taylor & Francis (SCIMago)link: <http://dx.doi.org/10.1080/1206212X.2016.1237130>
6. Singh, M.M. and Mandal, J.K. (2016), "Logistic Regression Based Reliability Analysis for Mobile Ad hoc Network with Fixed Maximum Speed and Varying Pause Times", *Journal of Scientific and Industrial Research*. (SCI, IF:537), ISSN: 0022-4456, Vol. 76, pp 81-84
7. Arindam sarkar, Jyotsna Kumar Mandal (2015), Cryptanalysis of Key Exchange Method in Wireless Communication, *International Journal of Network Security* (SCI Mago), Vol.17, No.4, PP.484-493, July 2015
8. AK Gupta, I Bhattacharya, PS Banerjee, JK Mandal, A Mukherjee, DirMove: direction of movement-based routing in DTN architecture for post-disaster scenario, *Wireless Networks* (IF:1.981), 22(3), pp.723-740,2016(389 download, 4 citation)(SCI)
9. D Acharya, A Mukherjee, J K Mandal, N Mukherjee (2016), Activity Recognition System Using Inbuilt Sensors of Smart Mobile Phone and Minimizing Feature Vectors. *Microsystem Technology* (IF:1.581), Springer, Volume 22 Issue 11, pp 2715-2722(SCI).

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1. Arindam Sarkar, Jyotsna Kumar Mandal(2015), Cryptanalysis of Key Exchange Method in Wireless Communication, *International Journal of Network Security*, Vol.17, No.4, PP.484-493(SCI Mago).

#### 2014

1. Mukhopadhyay, S and Mandal, J. K. (2014), A Fuzzy Switching Median Filter of Impulses in Digital Imagery (FSMF), *Circuits, Systems, and Signal Processing* (IF:1.998), February 2014, DOI:10.1007/s00034-014-9739-z,ISSN: 0278-081X, Springer US, <http://link.springer.com/article/10.1007%2Fs00034-014-9739-z>, Volume 33 Issue 7, pp 2193-2216.

### Publications in Journals (SCI Publications may be repeated)

1. Bandyopadhyay, S., Thakur, S.S. & Mandal, J.K. Emotion Detection for online recommender system using deep learning:a proposed method, *Innovations Syst Softw Eng* 17th May, 2022. <https://link.springer.com/article/10.1007/s11334-022-00437-7>
2. Ghosh, P, Sadhu, Deep, Mandal, J K, Mandal, J K and Sen, S, RHProphet: An Enhanced Sales Forecasting Model, *International Journal for Computers & Their Applications* . Dec2021, Vol. 28 Issue 4, p212-221. 10p. <https://doi.org/10.1145/3468081.3471064>
3. Debarpita Santra, Subrata Goswami, Jyotsna Kumar Mandal and Swapna Kumar Basu, Low Back Pain Expert Systems: Clinical Resolution through Probabilistic Considerations and Poset", *Journal Artificial Intelligence in Medicine, Science Direct Elsevier*, Volume 120, October 2021, 102163(SCI, IF:5.326) (<https://www.sciencedirect.com/science/article/pii/S0933365721001561>), September, 2021.
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6. Arindam Sarkar · Moirangthem Marjit Singh · Jyotsna Kumar Mandal, Neural Synchronization guided Concatenation of Header and Secret Shares for Secure transmission of Patients' Electronic Medical Record: Enhancing Telehealth Security for COVID-19, *Arabian Journal for Science and Engineering*(SCIE, IF 2.074), Springer Nature, January 2021.
7. Santra, D., Mandal, J. K., Basu, S.K. et al. Medical expert system for low back pain management: design issues and conflict resolution with Bayesian network. *Med Biol Eng Comput* (2020). <https://doi.org/10.1007/s11517-020-02222-9>, Springer (SCI, IF-2.022), 7 September,2020.
8. Soma Bandyopadhyay, S. S. Thakur, J. K. Mandal, Product recommendation for e-commerce business by applying principal component analysis (PCA) and K-means clustering: benefit for the society, *Innovations in Software and Systems Engineering*(NASA Jpurnal), Spinger, SCIMago, June, 2020
9. Santra D., Basu S.K., Mandal J.K., Goswami S. (2020) Lattice-Based Fuzzy Medical Expert System for Management of Low Back Pain: A Preliminary Design. In: Mandal J., Banerjee S. (eds) *Intelligent Computing: Image Processing Based Applications. Advances in Intelligent Systems and Computing*, vol 1157. Springer, Singapore. [https://doi.org/10.1007/978-981-15-4288-6\\_8](https://doi.org/10.1007/978-981-15-4288-6_8), pp.119-129
10. Mondal U.K., Debnath A., Mandal J.K. (2020) Deep Learning-Based Lossless Audio Encoder (DLLAE). In: Mandal J., Banerjee S. (eds) *Intelligent Computing: Image Processing Based Applications. Advances in Intelligent Systems and Computing*, vol 1157. Springer, Singapore. [https://doi.org/10.1007/978-981-15-4288-6\\_6](https://doi.org/10.1007/978-981-15-4288-6_6), pp. 91-101,2020

11. Mandal, J.K., Chakraborty, R, A 10nm MOS and Its Applications, *Microsystem technologies*, Springer (Microsyst Technol (2020) 2020 (SCI IF:1.581).
12. Kundu, K, Mandal, J K., Halder, P, Urban Change Detection Analysis during 1978-2017 in Kolkata, India using Multi-temporal Satellite Data, *Journal of the Indian Society of Remote Sensing* (Sep., 2020) (SCIE, IF:1.102)
13. Das, S, Mandal, J K., An enhanced block based Compress Sensing Technique using orthogonal matching pursuit, *Signal, Image and Video Processing*, DOI :10.1007/s11760-020-01777-2, Springer (2020) (online first) (SCI, IF 1.824), pp. 1-8.
14. S Bandyopadhyay, S. S. Thakur and J. K. Mandal, Product Recommendation for E-Commerce Business by Applying Principal Component Analysis (PCA) and K-Means Clustering: Benefit for the Society Innovations in Systems and Software Engineering: A NASA Journal(2020)(August,25,2020)(SCIM/SCI)
15. Gambhir, G. & Mandal, J.K. Multicore implementation and performance analysis of a chaos based LSB steganography technique, *Microsystem technologies*, Springer (Microsyst Technol (2020) 25: 1669. <https://doi.org/10.1007/s00542-020-04762-4>) Feb. 2020 (SCI IF:1.581).
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### **Invited Talk / Key Note Address delivered**

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#### **2019**

1. Key Note Address on “Remote Sensing, GIS and GPS Applications”, CSI State Student Convention, JIS College of Engineering, 14th November 2019.
2. Key Note Address on Modeling and Analytics on Neural Cryptography and Authentication in Wireless Communications, CCSN 2019, Institute of Aeronautical Engineering, Hyderabad, Telengana, India, 19<sup>th</sup> October, 2019.
3. Keynote address on “Data Modeling and Analytics on Neural Cryptography and authentication for Wireless Communication”, Global AI Congress 2019, IEM, Kolkata 12<sup>th</sup> September 2019.
4. Keynote address on “Stratosphere Communication”, ISF, IETE program at Adamas University, ECE Department on 14.08.2019 on the eve of opening ISF at Adamas University.
5. Invited Lecture as Resource person and Domain Expert, “ICT for Higher Education”, Refresher’s Course at the University of Burdwan, 24<sup>th</sup> June 2019
6. Key Note Address on “Technical Writing, Similarity and Management”, in 7days workshop on Research Methodology at RML Avodhaya University, Ayodhya, Uttar Pradesh on 20th May 2019.
7. Key Note Address on “Quality of Service (QoS) Architecture for Software Defined Network(SDN), MCCS, Ranchi, 11-12 May 2019 on 11<sup>th</sup> May 2019.
8. Key Note Address on “Similarity in Technical Writing and Management”, in the five days workshop held during 22-26 April 2019 at the University of Kalyani.
9. Key Note Address in the Workshop “Writing Research articles and finding funding agencies” on 18.3.19 topic “Scientific writing and management of Similarities.”, Aliah University, Kolkata
10. Key Note Address “Authentication based on Transform Computation, on 24.3.19 in 3<sup>rd</sup> International Conference DevIC 2019 at KGEC, Kalyani
11. Key Note Address on the eve of National Conference NCETIST 2019 at Raiganj University on 19.3.19,” Transform Domain Computation for security and Authentication.
12. Expert lecture in the Refreshers Course on Computer Science & Application at North Bengal University during 22-23 January 2019, topic: Image processing and security.

#### **2018**

1. Key Note Address in the ISF, IETE program at NIT, Agartara on 12.10.2018, IETE Kolkata Centre.
2. Key Note address in ICICS 2018 at Burdwan University, 21-22 December 2018, “Transform Domain Steganography for Color images”
3. Key Note address in EDKCON 2018, “Nano Device Modeling” on 25<sup>th</sup> November 2018 at Hotel Pride, Kolkata
4. Key Note Address at Elite institute of Engineering on 24.11.18, topic: Transform domain security.
5. Special Lecture: Security, Authentication and related Analytics in Nonlinear Domain, at SV University, Tirupati on 22.10.2018
6. Keynote Address in the workshop “CSE EVENTS 2K18” at Budge Budge Institute of Technology on 11.09.2018,” Steganography and Audio Authentication to Protect IPR”
7. Keynote Address in the International Conference IEMGRAPH 2018, at IEM Saltlake Campus on 06-09-2018, “Authentication in Transform Domain for Color Images”.
8. Invited talk on the eve of opening of CSI Student Branch at JIS College of Engineering, on 18.08.2018, “Aspects of Security and Authentication in Public Networks”.
9. Key Note Address at MCCS 2018, at BSNL Auditorium, Ranchi, Chhattisgarh, India, IETE Zonal Seminar, Innovation Meet & ISF Congress-2018 on 12-05-2018, “Reliability Computation in Wireless Network”.

10. Invited talk for the workshop on Emerging Trends in Image Processing, Computer Vision and Pattern Recognition(IPCVPR-2018) on 29<sup>th</sup> March 2018 at Belur Ramakrishna Mission Vidyapeetham on “Image processing and authentication in Nonlinear domain”.
11. International Conference of advanced Computing and Big Data Analytics(ICACB'18), requested me to deliver key note address on ,”Nonlinear domain in security/authentication and related analytics” on the eve of ICAB'18 at Kingston Engineering College Vellore on 23rd March 2018,.
12. Invited talk on Chaos Assisted Security and Authentication in Public Domain Networks at Barackpur Rastraguru Surendra Nath College, one day seminar on Recent Trends in Computer Science, 6<sup>th</sup> March 2018.
13. Key Note Address at ICACCT 2018, at APIIT, Panipat, Haryana, on 17<sup>th</sup> February, 2018, on Chaos based authentication (to be published in AISC Series of Springer).
14. Key Note Address on Recent Trends of Security in Communication, State Student's Convention, Region II, Computer Society of India, 10<sup>th</sup> February, 2018.
15. IEEE, Young Professional organized lecture at Jadavpur University, on 8<sup>th</sup> February 2018 at the Department of Computer Science & Engineering, on “Chaos based security and Authentication”
16. Invited talk in an workshop at MAKAUT, Salt Lake, Kolkata, on 16<sup>th</sup> January 2018, on “Security and authentication in Transform Domain”

## 2017

1. Nature Inspired Cryptographic Techniques based on Neural Synchronization, ISCA, 8th January, 2017, Tirupati.
2. Security and Authentication of Digital Media, Special Lecture, Future Institute of Technology, Boral Campus, 28<sup>th</sup> February 2017.
3. Data Modeling and predictive Analysis in Soft Computing, National Workshop on Data Modeling and Predictive Analytics-PADAM-2017 at AUCE (A) during March 18-19, 2017 sponsored by TEQIP Phase II, Andhra University, Andhra Pradesh
4. “Data Modeling and Predictive Analytics on Neural Cryptography for Wireless Communication”, IEEE International Conference on Devices for Integrated Circuit (DevIC 2017), March 23-24, 2017,Kalyani Government Engineering College, Kalyani, West Bengal, India..
5. Data Modeling and Predictive Analytics on Neural Cryptography For Wireless Communication, National Seminar, Vidyasagar University, 31<sup>st</sup> March, 2017.
6. IEEE Expert Lecture at Kalyani Government Engineering College,Security and Authentication in Nonlinear Domain.
7. Wireless and Mobile Communication, Refresher Course, University of Burdwan,5<sup>th</sup> July, 2017.
8. Expert lecture on 10<sup>th</sup> October 2017 for the students of M Sc and MCA of Vidyasagar University, Security in wired and Wireless Domain.
9. Keynote Address in Regional Student's Convention, Region II, Eastern Region, at Haldia Institute of Technology, on 9th November, 2017
10. Security and Authentication in Mixed Domain, Invited talk, Modern Institute of Engineering, Bandel, West Bengal, 12th November 2017.
11. Chaos based security in wireless domain, Invited talk at CCSN 2017, Lalit Grate Eastern, Kolkata, 31st December 2017.
12. Invited Talk on “Reliability Computation in Wireless Domain”, on 22.12.2017, Techno India University on International Conference , ICCECE-2017.

## 2016

1. Neural Synchronization and Nature Inspired Algorithm based Cryptographic Techniques, National Conference of Computing Systems, Computer Science & Application, North Bengal University, 26<sup>th</sup> February, 2016.,
2. Recent Trends on Network Security, Expert lecture, The Pailan College of Management and Technology, 19<sup>th</sup> March 2016, Kolkata
3. ANN Anchored Soft Computing based cryptographic Techniques, National Seminar, Vidyasagar University, 29<sup>th</sup> March 2016
4. Embedded Systems and its Application,Expert Lecture under TEQIP II, department of applied electronic and Instrumentation, heritage Institute of Technology, 31<sup>st</sup> March, 2016
5. “Nature Inspired Cryptographic Techniques based on Neural Synchronization,National Seminar on Recent Trends in Computing 2016 (RTC 2016) on 4th May, 2016,Wednesday at JIS College of Engineering, Kalyani, India.
6. Scurity and Authentication, Expert Lecture for Ph. D Scholar workshop, radiophysice and Electronics, Calcutta, University,22<sup>nd</sup> june, 2016
7. “Nature Inspired Cryptographic Techniques based on Neural Synchronization”, Thirteenth International Conference on Wireless and Optical Communications Networks WOCN2016, 21st, 22nd and 23rd of July 2016, Gandhi Institute of Technology and Management GITAM School of Technology Hyderabad Campus Telangana State, INDIA.
8. Security & Authentication in Public Domain Networks, IEEE lecture Series, IEEE Young Professional Society, Kalyani Government Engineering College, 1<sup>st</sup> September, 2016

9. "Security in Cloud Computing", National Seminar on Recent Trends in IT" 26<sup>th</sup> September, 2016, Kolaghat Engineering College, Kolaghat, Midnapur, WB
10. "Security in Cloud ", Staff Development Program at MCKVIE, Howrah, 8<sup>th</sup> October, 2016,
11. Image Processing , Security and Authentication, Special Lecture Programme under TEQIP II, 5<sup>th</sup> November, 2016
12. "Chaos based Security & Authentication in Public Domain Networks", International Conference on Computing and Communication Systems - 2016 (I3CS-2016), November 11-13, 2016, North Eastern Hill University, Silchar
13. "Security & Authentication in Public Domain Networks", 10<sup>th</sup> International Conference on Advanced Computing and Communication Technologies (10<sup>th</sup> ICACCT 2015), 25-26<sup>th</sup> November 2016, Asia Pacific Institute of Information Technology, Panipat, Hariyana.
14. Transform Domain Watermarking Techniques for Color Image Authentication, IEEE International Conference, 16<sup>th</sup> December 2016, Techno India University, Kolkata.
15. Chaos based Security & Authentication", Micro 2016, 24-25<sup>th</sup> December, 2016, Kolkata.
16. "Invisible Steganography and related Applications", Expert Lecture and Interaction Programme with Faculty Members and Scholars of the Department of Computer Science & Engineering, Kathmandu University 27<sup>th</sup> December 2016, , Kathmandu, Nepal.

## 2015

1. Security & Authentication in Public Domain Network Anchored with Chaos, 9<sup>th</sup> International Conference on Advanced Computing & Communication Technologies (9<sup>th</sup> ICACCT 2015), 28-29<sup>th</sup> November 2015
2. Image Processing and its Application, Expert lecture for Ph. D. Scholars of Applied Physics Department, Calcutta University, 6<sup>th</sup> November, 2015.
3. Remote Sensing and Satellite Image Processing, National Seminar, Hijli College, 7<sup>th</sup> October, 2015
4. "Chaos based security and authentication in public domain Networks", Second International Conference on Computer and Communication Technologies, IC3T, 2015, CMR Technical Campus, Hyderabad, 24-26 July 2015, AISC Springer.
5. "Fundamentals of Image Processing in MatLab", MATLAB Application in Engineering Educations, West Bengal State Council of Technical Education assisted Faculty Development program for Polytechnique College Teachers organized by MCKV institute, Howrah, 6<sup>th</sup> July 2015.
6. "Chaos based Security and Authentication in public domain Communication, Staff Development program of "Opportunistic Social networks, 29<sup>th</sup> June to 4<sup>th</sup> July, 2015, KGEC, Kalyani, 29<sup>th</sup> June 2015
7. "ANN based Security in Wireless Communications", International Conference on Nano-electronics, Circuits & Communications Systems (NCCS 2015) on 9<sup>th</sup> and 10<sup>th</sup> May 2015 at ARTTC, BSNL, near Jumar River, Hazaribag Road, Ranchi organized by IETE & ISVE Ranchi Centre, 9<sup>th</sup> May, 2015
8. "Adaptive Image Encryption based on Chaos", National Conference on Computing, Communication and Information Processing", sponsored by AICTE-NEQIP , May 2-3, 2015, CSE, NERIST, Arunachal Pradesh.
9. "Chaos based Image Authentication", One day Seminar on "Current Trends in Image Processing" organized by Ramakrishna Mission Residential College (autonomous), Sarsuna College, in collaboration with Computer Society of India, Kolkata Chapter, 11<sup>th</sup> April, 2015 (Saturday).
10. "Chaos based Security and Authentication in Communication", "One day Workshop under TEQIP II Programme" organized by MCKV Engineering College, Howrah, 4<sup>th</sup> April, 2015.
11. "Information Security and quality Assurance", "NAAC Awareness Workshop" organized by Internal Quality Assurance Cell (IQAC), Vidyasagar University, Midnapur, 1<sup>st</sup> and 2<sup>nd</sup> April, 2015.
12. "Internet Technology and Image Processing in Open Source", UGC Sponsored Orientation Program conducted by Academic Staff College, Burdwan University, March, 17, 2015.
13. "Chaos based Image Authentication", National Conference on Computational Technologies 2015 (NCCT'15), 20<sup>th</sup> February, 2015, Department of Computer Applications, North Bengal University, 2015.
14. Security and Authentication using Chaos Theory, AICTE Sponsored National Conference at Kalyani Govt. Engg. College, 5-6 January 2015.

## 2014

1. Talk on "Networking", at "Reaching Out" program to the school children organized by CSI Kolkata Chapter and Sundarban Unnayan Nigam, at High School, Gosaba, Sundarban on 19.7.14
2. Talk on "Digital Systems and Networking", at "Reaching Out" program to the school children organized by CSI Kolkata Chapter and Sundarban Unnayan Nigam, at Kalidanga High School, Basanti, Sundarban on 5.7.14
3. Invited talk on "Chaos based Security and Authentication", Computational Intelligence in Data Mining (Published by Springer Volume 1 & 2), ICCIDM Department of Computer Science and Engineering, Veer Surendra Sai University of Technology (VSSUT), Burla, Sambalpur – 768018, Odisha, India, 20-21 December 2014.
4. Invited talk on, "ANN based Cryptographic Techniques in Wireless Communications", "Eleventh International Conference on Wireless and Optical Communications Networks WOCN2014 Next Generation Internet 11<sup>th</sup>, 12<sup>th</sup> and 13<sup>th</sup> of September 2014, Vijayawada, Andhra Pradesh, INDIA (<http://www.wocn2014.org>), on 11.09.2014, 2014
5. Expert Lecture on "Computer Science Honours Curriculum", At the Department of Computer Science, University of Burdwan on 6.8.2014.
6. Expert Lecture on "Image and Document Authentication and their use in Life Sciences", Staff Development Programme conducted by the Department of Botany, University of Kalyani on 30.6.2014

7. Invited talk on “State-of-the-art Invisible Communication for Authentication”, First National Conference on Microelectronics, Circuit & System Design(Micro-2014), 11-13th July, 2014, HOTEL HYATT REGENCY, Salt Lake, Kolkata, on 12.07.2014
8. Invited Talk on “Security & Authentication of Documents”, in the Workshop on Document Security and Telecom networking, at Techno Salt Lake Campus, on 29.03.2014
9. Invited Talk on “Steganography”, in the National Conference on Research Trends in Computer Science & Application(NCRTCSA – 2014), at SIT, Siliguri, on 08.02.2014.
10. Invited Talk on “Security and Authentication of Documents”, in the IETE Student Day at IETE, Kolkata, on 01.02.2014
11. Invited Lecture on “Data Authentication using Digital Signature and watermarking” in the Seminar of Haripal Vivekananda Mahavidyalaya, Haripal on 11.01.2014.
12. Invited Talk on “Authentication of legal Documents using Steganography” in the Seminar of Student day Celebration, IETE on 1.02.2014.