

#### Dr. Imon Mukherjee

CONTACT INFORMATION Dept. of Computer Science & Engineering, Indian Institute of Information Technology, Block B 14, WEBEL IT Park, Kalyani, Dist. Nadia,

Block B 14, WEBEL II Park, Kalyani, Dist. Nadia,

West Bengal 741235, India

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imonmukherjee

**OBJECTIVE** 

To work in an academic/administrative position (i.e., faculty, postdoctoral, or research scientist, etc.) that allows for advanced research in information security (i.e., modeling, analysis, design, and verification) and helps the society in various aspects.

PRESENT STATUS

**Faculty Coordinator** 

&

Faculty in-Charge, Academics

 $Indian\ Institute\ of\ Information\ Technology,\ Kalyani$ 

(An "Institute of National Importance" under

MHRD,

Govt. of India)

RESEARCH INTERESTS Steganography, Visual Cryptography, Machine Learning, Data Analytics, Computer Vision.

ACADEMIC AND INDUSTRIAL APPOINTMENTS

**Assistant Professor (Grade - I)** 

Dept. of Computer Science & Engineering, Indian Institute of Information Technology WEBEL IT Park, Dist. Nadia, Kalyani,

West Bengal 741 235, India

**Assistant Professor** 

January 2012 - June, 2016

July 2016 - Present

Dept. of Computer Science & Engineering, St. Thomas' College of Engineering & Technology 4, Diamond Harbour Road Kolkata-700023, India

**Assistant Professor (Sr. Scale)** 

August 2006 - December 2011

Dept. of Computer Science & Engineering,

Institute of Technology & Marine Engineering, India.

(Presently known as The Neotia University)

NITMAS Campus

Jhinga, Diamond Harbour Road, P.O. Amira, South 24 Parganas

West Bengal 743368

Visiting Lecturer (Computer Science),

**Paper Setter and Examiner** 

MERI, Jadavpur University, Kolkata, India.

**Visiting Lecturer (Computer Science)** 

Indian Maritime University, Kolkata, India.

P - 19, Taratalla Road, Kolkata - 700 088

**Tutor** January 2006 - June 2006

August 2008 - December 2010

August 2008 - December 2011

July 2018 - Present

October 2017 - Present

Dept. of Computer Science & Engineering. St. Thomas' College of Engineering & Technology 4, Diamond Harbour Road Kolkata-700023, India

**Software Engineer** 

June 2005 - December 2005 Hi-O Solutions, Kolkata, India, 49/68 P.G.M.S Road,

Kolkata - 700 033, India

**Faculty Coordinator** ADMINISTRATIVE Indian Institute of Information Technology RESPONSIBILITIES

Faculty in-Charge, Ph.D. and Research Committee Indian Institute of Information Technology

**Member, Internal Compliance Committee (ICC)** February 2019 - Present

Indian Institute of Information Technology

Joint Coordinator, AI Center of Excellence (with Dr. Sanjay Chatterji February 2019 -

Indian Institute of Information Technology

Faculty in-Charge, Alumni Committee February, 2019 - Present

Indian Institute of Information Technology

**PAO, Institute Purchase Committee** July 2018 - September, 2018

Indian Institute of Information Technology

**Hostel Warden** July 2018 - September, 2018

Indian Institute of Information Technology

**Faculty Mentor** July 2018 - Present

Indian Institute of Information Technology

**NPTEL Local Chapter** July 2017 - Present Indian Institute of Information Technology **Faculty Member, DSIR Committee** July 2018 - September, 2018 Indian Institute of Information Technology **Faculty Member, Mess Committee** July 2018 - September, 2018 Indian Institute of Information Technology Member as Faculty Coordinator (Ex Officio), Routine Committee July 2018 - Present Indian Institute of Information Technology **Faculty Mentor** July 2018 - Present Indian Institute of Information Technology **Faculty In-Charge, Library** July 2016 - June 2018 Indian Institute of Information Technology Faculty In-Charge, Training and Placement January 2017 - June 2018 Indian Institute of Information Technology Professor in-Charge, Cultural Committee July 2016 - June 2018 Indian Institute of Information Technology Professor in-Charge, 2nd year IT July 2016 - June 2018 Indian Institute of Information Technology Nodal Officer, Visvesvaraya Scholarship July 2017 - Present Indian Institute of Information Technology July 2017 - Present Member, Anti-Ragging Committee Indian Institute of Information Technology Member, Syllabus Committee July 2017 - Present

Member and Ext. Expert, Doctoral Committee

Indian Institute of Information Technology

February 2018 - Present Dept. of Computer Science & Engineering, IIEST, Shibpur.

**Examination Supervisor** Even Semester, 2011

West Bengal University of Technology, Kolkata, India (Presently known as Maulana Abul Kalam Azad University of Technology, West Bengal)

# **University Station Supervisor**

Odd Semester, 2010

West Bengal University of Technology, Kolkata, India

(Presently known as Maulana Abul Kalam Azad University of Technology, West Bengal)

#### **EDUCATION**

#### Doctor of Philosophy (Ph.D.) in Engineering

Thesis Submission August 2014
Awarded on July 2015

- Thesis Title: Design and Analysis of Steganographic Algorithms
- Dept.: Computer Science & Engineering
- University: Jadavpur University
- Supervisor:

Dr. Goutam Paul,

Assistant Professor,

Cryptology and Security Research Unit,

R. C. Bose Centre for Cryptology and Security,

Indian Statistical Institute,

Kolkata - 700 108, India.

WWW: http://www.isical.ac.in/ goutam.paul/

#### Master of Technology (M.Tech.),

August 2009

- Dept.: Computer Science & Engineering
- University: Jadavpur University
- Division/Class: First
- Thesis Title: Java based Simulator for Wireless Networking
- Supervisors:

Dr. Nandini Mukherjee, Professor

and

Dr. Sarbani Roy, Assistant Professor,

Dept. of Computer Science & Engineering,

Jadavpur University, Kolkata - 700 032.

*Mobile:* +91-99030-39536 *Fax:* +91-033-2413-1766

E-mail: nmukherjee@cse.jdvu.ac.in

sarbani.roy@gmail.com

WWW: http://www.jaduniv.edu.in/

#### Bachelor of Technology (B.Tech.),

August 2005

- Dept: Dept. of Computer Science & Engineering,
- University: West Bengal University of Technology,
- Division/Class: First

#### Higher Secondary (Std. XI-XII),

July 2000

- Stream: Science,
- From: New Alipore Multipurpose School, Kolkata, India.
- Division/Class: First

# Secondary Examination (Std. IX-X),

July 1998

- Stream: General,
- From: Behala Aryya Vidyamandir, Kolkata, India.
- Division/Class: First

EXAMINATION

NATIONAL LEVEL Graduate Aptitude Test in Engineering (GATE) in Computer Science & Engineering/Information Technology

LIST OF **PUBLICATIONS** 

## **Refereed International Journals**

- [1] Biswas, R., Mukherjee, I., Bandopadhyay, S.: "Image Feature Based High Capacity Steganographic Algorithm", Multimedia Tools and Applications, 2018, Springer-US, (Accepted) [SCI(E) indexed]
- [2] Das, I., Khan, M., Bakshi, S., Mukherjee, I., Sa, P.K., Sangaiah, A.K., Bruno, A.: "Lip Biometric Template Security Framework Using Spatial Steganography", Pattern Recognition Letters, 2018, ISSN 0167-8655, DOI: 10.1016/j.patrec.2018.06.026 [SCI indexed]
- [3] Mukherjee, I., Ganguly, R.: "Multiple video clips preservation using folded back audiovisual cryptography scheme", Multimedia Tools and Applications, Vol. 77, Issue 5, pp. 5281-5301, 2018, Springer-US, DOI: 10.1007/s11042-016-3319-0 [SCI(E) indexed]
- [4] Paul, G., Davidson, I., Mukherjee, I., and Ravi, S, S., "Keyless Dynamic Optimal Steganography using Energetic Pixels", Multimedia Tools and Applications, Vol. 76, Issue 5, pp. 7445–7471, 2017, Springer-US, DOI: 10.1007/s11042-016-3319-0 [SCI(E) indexed]
- [5] Mukherjee, I., and Paul, G., Altrin, J, "Defeating Steganography with Multibit Sterilization using Pixel Eccentricity", IPSI BgD Transactions on Advance Research IPSI BgD Transactions on Advance Research (IPSI BgD Internet Research Society), vol. 11, no. 1, pp. 25-34, 2015, DOI: 10.1109/GLOCOM.2010.5684216
- [6] Mukherjee, I., Mandal, P., Bakshi, S.: "Computation and Analysis of Image for Secure Reversible Data Hiding with High Capacity using Interpolation and Difference Expansion", IET Image Processing, 2019 (Communicated)[SCI indexed].
- [7] Mukherjee, I., and Paul, G.: "Multi-bit Steganography in Spatial Domain using Fibonacci Base of Pixel Intensities", IEEE Transactions on Computation Imaging (Communicated), 2018 [SCI indexed]
- [8] Mukherjee, I., Ghosh, U., and Maity, S., "UCW Based Highly Secured Multibit Steganography in Spatial Domain", IET Journal of Information Security (Communicated), 2018 [SCI indexed]

# **Chapters**

- [9] Mukherjee, I., Dutta, B., Banerjee, R., Das., S., "DWT Difference Modulation Based Novel Steganographic Algorithm", Jajodia, S., Mazumdar, C. (Eds.): Lecture Notes, Chapter 36, pp. 1-10, vol. 9478, Springer, (2015), ISBN: 978-3-319-26960-3.
- [10] Mukherjee, I., Podder, A., "DCT Based Robust Multi-bit Steganographic Algorithm", Advanced Computing, Networking and Informatics- Volume 2, Kundu, M.K., Mohaptra, D.P., Konar, A., Chakraborty, A. (Eds.): Chapter 41, pp. 375-382, Springer, (2014), ISBN: 978-3-319-07349-1.
- [11] Mukherjee, I., and Paul, G., "Efficient Multi-bit Image Steganography in Spatial Domain", Bagchi, A., and Ray, I. (Eds.): Lecture Notes, Chapter 21, pp. 270-284, vol. 8303, Springer, (2013), ISBN: 978-3-642-45203-1.
- [12] Paul, G., Davidson, I., Mukherjee, I., and Ravi, S, S., "Keyless Steganography in Spatial Domain using Energetic Pixels", Venkatakrishnan, V., and Goswami, D. (Eds.): Lecture Notes, Chapter 10, pp. 134-148, vol. 7671, Springer, (2012), ISBN: 978-3-642-35129-7.

#### **Refereed International Conferences**

- [13] Banerjee D., Ghosal A., **Mukherjee I.**: (2019) Prediction of Gold Price Movement Using Discretization Procedure. In: Behera H., Nayak J., Naik B., Abraham A. (eds) Computational Intelligence in Data Mining. Advances in Intelligent Systems and Computing, vol 711. Springer, Singapore
- [14] Das S, Sharma S, Bakshi S, Mukherjee I.: (2018) A framework for pixel intensity modulation based image steganography. In: Progress in advanced computing and intelligent engineering. Springer, Singapore, pp 3-14. https://doi.org/10.1007/978-981-10-6872-0 1
- [15] Ghosh U., Burman D., Maity S., **Mukherjee I.** (2018) Adaptive Multi-bit Image Steganography Using Pixel-Pair Differential Approach. In: Saeed K., Chaki N., Pati B., Bakshi S., Mohapatra D. (eds) Progress in Advanced Computing and Intelligent Engineering. Advances in Intelligent Systems and Computing, vol 563. Springer, Singapore
- [16] Dutta, S., Das, X., Ganguly, R., Mukherjee, I., "A Novel Approach to E-Voting using Multi-Bit Steganography", To appear in Proceedings of International Conference on Intelligent Computing and Communication - 2016 (ICIC2- 2016), Springer, February 18-19, 2016, Kalyani, India.
- [17] Halder, P., **Mukherjee, I.,** "A Novel Double Layered Image Steganography in Spatial Domain using Triangular Number System", In Proceedings of 2015 IEEE International Conference on Research in Computational Intelligence and Communication Networks (ICRCICN), pp. 411-416, November 20-22, 2015, Kolkata, India.
- [18] **Mukherjee, I.,** Ganguly, R., "Privacy Preserving of Two Sixteen-Segmented Image using Visual Cryptography", In Proceedings of 2015 IEEE International Conference on Research in Computational Intelligence and Communication Networks (ICRCICN), pp. 417-422, November 20-22, 2015, Kolkata, India.
- [19] Ghosh, U., Maity, S., and Mukherjee, I. "Statistical Attack Resistant Multi-Bit Steganog-raphy Using Mobile Keypad Character Encoding", In Proceedings of International Conference on Telecommunication Technology & Management (ICTTM-2015), pp. 19, April 11-12, 2015, IIT-Delhi, India.
- [20] Dutta, S., Das, X., Ganguly, R., Mukherjee, I., and Bhattacharjee, S., "A Novel Distant E-Voting Mechanism Using Dual Layer Security", In Proceedings of International Conference on Telecommunication Technology & Management (ICTTM-2015), pp. 20, April 11-12, 2015, IIT-Delhi, India.
- [21] Paul, G., Mukherjee, I., "Image Sterilization to Prevent LSB-based Steganographic Transmission", CoRR abs/1012.5573 (2010). Later appeared in Proceedings of the 11-th International Conference on Security and Management (SAM), July 16-19, 2012, Las Vegas, U.S.A., pp. 448-454 under the title "Sterilization of Stego-images through Histogram Normalization".
- [22] Mukherjee, N., Mukherjee, I., Bhattacharyya, D., and Kim, T., "Context Based Speech Analysis of Bengali Language as a Part of TTS Conversion", In Proceedings of the 13th International Conference on Signal Processing and Image Processing and Pattern Recognition (SIP-2011), December 14 - 16, 2011, Dallas, USA, pp. 204-214, vol. 0260, Lecture Notes in Communications in Computer and Information Science, Springer, 2011. doi:10.1007/978-3-642-27183-0\_22
- [23] **Mukherjee, I.,** and Paul, G., "Double Bit Sterilization of Stego-images", In Proceedings of the 10th International Conference on Security and Management (SAM), July 18-21, 2011, Las Vegas, U.S.A., pp. 743-746.

[24] Das, S., Sharma S., Bakshi, S., and **Mukherjee, I.,** "A Framework for Spatial Domain Modulation Based Steganography", International Conference on Advanced Computing and Intelligent Engineering (ICACIE2016), Odisha, India, Springer, 2016 (Accepted).

#### FUNDED PROJECTS

[1] Principal Investigator of the on going project, entitled "Implementation of Security in e-Governance through Steganography", funded by Department of Science & Technology (DST), Govt. of West Bengal, India (2013-2016).

# RESEARCH SUPERVISION

#### 1. **Ph.D.:**

- (a) Pratap Kumar Mandal, M.Tech., Enrolled at IIIT Kalyani in January, 2018
- (b) **Abhishek Mukhopadhyay**, M.Tech., Enrolled at IIIT Kalyani in July, 2018 [Cosupervisor: Dr. Pradipta Biswas,IISc Bangalore]
- (c) **Tanmoy Bera**, M.Tech., Enrolled at IIIT Kalyani in July, 2018 [Co-supervisor: Dr. Sanjay Chatterji, IIIT Kalyani]
- (d) **Nayan Ranjan Das**, M.Tech., Enrolled at IIIT Kalyani in January, 2019 [Co-supervisor: Dr. Goutam Paul, ISI Kolkata]
- (e) **Sugam Kumar Bhunia**, Enrolled at IIIT Kalyani in January, 2019 [Co-supervisor: Dr. Sambit Bakshi, NIT Raipur]

#### 2. **M.Tech.:**

## (a) Anjan Kumar Payra

Supervised M.Tech. Thesis on "Steganology for The Computer Forensics Examiners" by Anjan Kumar Payra, Dept. of Computer Science & Engineering, Kalyani Government Engineering College, Nadia, West Bengal, India, 2011.

#### 3. **B.Tech.:**

- (a) **Atul Sahay**, Thesis title: "EyeGaze Tracking System based on Image Processing", Dept. of Computer Science & Engineering, India Institute of Information Technology, Kalyani 741 235, West Bengal, India, 2018.
- (b) **Abhishek Mishra, Shubham Kumar**, Thesis title: "Real Time Heart Beat Monitoring System", Dept. of Computer Science & Engineering, Indin Institute of Information Technology, Kalyani 741 235, West Bengal, India, 2018.
- (c) Shubham Kumar Rajput, Thesis title: "Face Detection and Recognition for E-Voting Applications", Dept. of Computer Science & Engineering, India Institute of Information Technology, Kalyani 741 235, West Bengal, India, 2018.
- (d) Debanjan Barman, Uttiya Ghosh, Smritikana Maity, Thesis title: "Novel Approaches for Multi-bit Steganology in Spetial Domain", Dept. of Computer Science & Engineering, St. Thomas' College of Engineering & Technology, Kolkata 700 023, West Bengal, India, 2015.
- (e) **Aritro Banerjee, Swagatam Chakraborti, Sayantan Mukherjee**, Thesis title: "Implementation of e-Governance Security", Dept. of Information Technology, St. Thomas' College of Engineering & Technology, Kolkata 700 023, West Bengal, India, 2016. **Co-Supervisor:** Biswajita Dutta
- (f) **Aayush Aishwani, Suryatapa Banerjee, Santosh Kumar**, Thesis title: "Study and Implementation of Cryptographic Algorithms", Dept. of Computer Science & Engineering, St. Thomas' College of Engineering & Technology, Kolkata 700 023, West Bengal, India, 2015.

- (g) Soumya Shankha Banerjee, Dipanjan Deb, Suparna Dutta, Thesis title: "Design and Implementation of Cryptographic Algorithms using PRNG", Dept. of Computer Science & Engineering, St. Thomas' College of Engineering & Technology, Kolkata - 700 023, West Bengal, India, 2015.
- (h) **Shibangee Bhattacharjee, Tanusree Malla**, Thesis title: "Comparative Study and Analysis of Image Steganographic Algorithms", Dept. of Computer Science & Engineering, St. Thomas' College of Engineering & Technology, Kolkata 700 023, West Bengal, India, 2015.
- (i) Rituraj Banerjee, Srijan Das, Thesis title: "Data Hiding for Secret Communication", Dept. of Computer Science & Engineering, St. Thomas' College of Engineering & Technology, Kolkata 700 023, West Bengal, India, 2015. Co-Supervisor: Biswajita Dutta
- (j) Arnab Mukherjee, Jarvish Altrin, Arunangshu Poddar, Thesis title: "Information Security through Data Hiding and Image Sanitization", Dept. of Information Technology, St. Thomas' College of Engineering & Technology, Kolkata 700 023, West Bengal, India, 2014.
- (k) Gaurav Kumar Rai, Piyush Jain, Jaydeep Aditya, Nabanita Nath, Pankaj Kumar Mahato, Thesis title: "Implementation of Image Processing Tools", Dept. of Computer Science & Engineering, St. Thomas' College of Engineering & Technology, Kolkata 700 023, West Bengal, India, 2014.
- (l) **Avirupa Basu, Subhojit Dutta, Gulistan Mahtab, Soumyodeep Raha**, Thesis title: "Protecting Privacy and Preventing Piracy", Dept. of Information Technology, St. Thomas' College of Engineering & Technology, Kolkata 700 023, West Bengal, India, 2013.
- (m) Subrato Roy Choudhury, Zishan Ahmed, Somak Bhattacharyya, Debasish Ballabh, Thesis title: "Image Steganography and LSB Sanitization", Dept. of Computer Science & Engineering, St. Thomas' College of Engineering & Technology, Kolkata 700 023, West Bengal, India, 2013.

# PROFESSIONAL ACTIVITY

# **Organizing Committee Member**

- Organizing Committee Member, International Conference on "Multidisciplinary Perspectives In Engineering & Technology", May 24-25, 2019, Markapur, Andhra Pradesh, India.
- Program Committee Member, 7-th International Conference on Computational Intelligence and Communication Networks, Sept. 12-14, 2015, Jabalpur, India.
- Program Committee Member, International Conference on Advanced Computing, Networking and Informatics, June 24-26, 2014, Kolkata, India.

#### Referee Service

- IEEE Transactions on Circuits and Systems for Video Technology, 2018, 2019.
- Journal of King Saud University Computer and Information Sciences, 2018.
- International Journal of Data Science and Analytics, 2018.
- International Journal on Neural Computing and Applications, Springer, ISSN: 0941-0643.
- 16th International Conference on Cryptology in India (INDOCRYPT 2015), December 6-9, 2015, IISC-Bangalore, India.
- International Conference on Computational Intelligence and Communication Networks, 2015.
- 2015 IEEE 2nd International Conference on Recent Trends in Information Systems (ReTIS-2015), July 9-11, 2015, Kolkata, India.
- 15th International Conference on Cryptology in India (INDOCRYPT 2014), December 14-17, 2014, New Delhi, India.
- 2nd International Conference on Advanced Computing, Networking and Informatics (ICACNI 2014), June 24-26, 2014, Kolkata, India.

• 12th International Conference on Applied Cryptography and Network Security (ACNS 2014), June 10-13, Lausanne, Switzerland.

# PROFESSIONAL MEMBERSHIPS

- Institute for Electrical and Electronics Engineers (IEEE) [Inst.], 2017-'18.
- Computer Society of India, 2002-2005

# CAREER DEVELOPMENT PROGRAMS

# Refresher Course/Summer School (Two or Three Weeks Program)

- [1] UGC sponsored Refresher Course on "Security in Wired & Wireless Networks" organized by Jadavpur University during 4th -23rd July, 2011 (Qualified the exam. with highest grade 'A').
- [2] MHRD/AICTE sponsored Summer School Training Program on "Design Issues for Information Systems-Software Engineering" organized by National Institute of Technical Teacher's Training & Research (NITTTR) during 14th -26th July, 2008.

# **STP/QIP** (One Week Program)

- [3] AICTE sponsored QIP on "Workshop on Medical Imaging" organized by IIT-KGP during January 2-8, 2011.
- [4] Seminar on "Intelligent Systems & Robotics" organized By St. Thomas' College of Engineering & Technology during 26-29 March, 2010.
- [5] AICTE sponsored QIP on "Image and Video Processing" organized by IIT-KGP during 23rd Nov-6th Dec, 2009.
- [6] MHRD sponsored STP on "Programming in JAVA" organized by National Institute of Technical Teacher's Training & Research (NITTTR) during 25th-29th May, 2009.
- [7] MHRD sponsored STP on "IP Networking" organized by National Institute of Technical Teacher's Training & Research (NITTTR) during 22nd -26th June, 2009.
- [8] MHRD sponsored STP on "Database Management System" organized by National Institute of Technical Teacher's Training & Research (NITTTR) during 14th -26th July, 2008.
- [9] Webel/SUN Microsystems sponsored workshop on "Training of Trainers" organized by Webel, 12th 16th February (40 hours), 2007.

# Workshops/Seminars/Others (Less than One Week Program)

- [10] Faculty Development Program on "Quality Engineering & Assurance Orientation" organized by Cognizant Technology Solutions on 28th June, 2013.
- [11] Seminar on "Computing & Informatics" organized by St. Thomas' College of Engineering & Technology during 11-14th June, 2013.
- [12] IEEE Seminar on "Computational Intelligence in Information Systems, Imaging and Security" organized by St. Thomas' College of Engineering & Technology during 03-04th August, 2012.
- [13] Awareness program on "Software Freedom with Google Summer of Code" organized by Jadavpur University, 22nd May, 2012.

- [14] JU-ISI Workshop on "Many Facets of Cryptology" jointly organized by Indian Statistical Institute and Jadavpur University during October, 14-15, 2011.
- [15] Workshop on "Quality Enhancement of Engineering Education through NPTEL" organized by IIT-KGP during 18th 19th January, 2011.
- [16] Seminar on "Machine Intelligence and Applications" organized By St. Thomas' College of Engineering & Technology on May 18, 2008.
- [17] IBM sponsored QIP on "Faculty Development Workshop on XML & DB2" organized by IBM Academic Initiative during 26th-28th July, 2007.
- [18] State level Seminar on "Machine Intelligence and Applications" organized by RCC Institute of Information Technology at Rang Durbar Hall, Swabhumi on 9th March, 2007.
- [19] Teachers Trainning Course on "Development of Entrepreneurial Sprit" organized by Jadavpur University during 12-13 January, 2007.
- [20] Symposium on "Recent Trends in Bio-informatics and Data Mining" organized by Department of Computer Science and Engineering, Jadavpur University, 2nd April, 2004.

# SUBJECT/LANGUAGES TAUGHT

- Data Analytics and Optimization Techniques
- Basic Computation & Principles of Computer Programming (using C)
- Database Management Systems
- Data Structure & Algorithms
- Formal Languages and Automata Theory
- Object Oriented Programming
- Operational Research & Optimization Techniques
- Programming Languages
- Software Engineering

## OTHER COMPUTER Editing and Productivity Software

 $S_{KILLS} \\$ 

- TEX (LATEX, BIBTEX, PSTricks)
- Office (Microsoft Office, OpenOffice.org, etc.)

Computer Programming tools for R&D work and Numerical Analysis

- MATLAB
- Mathematica

# AWARDS /SCHOLARSHIPS

- Scholarship from St. Thomas' College of Engineering & Technology, Kolkata, 2002-05.
- Award under National Scholarship Scheme, Ministry of Human Resource Development (MHRD), Govt. of India, 1998-99 for securing rank in the merit list of Madhyamik Examination (Std. X), 1998.
- Awards from AISTA, 1992-93, 1993-94, 1997-98.
- Awards from CPSM, 1992-1998.

REFERENCES	Available on request	
AVAILABLE TO		
CONTACT		
	Dated, Kolkata,	
	19-th February, 2019	(Signature)