I am a Former Full Professor (HAG), in the department of Computer Science & Technology, former Dean (Academic)(2018-2020) of the Indian Institute of Engineering Science and Technology, Shibpur (Institute for National Importance). My administrative and academic experiences are rooted from the Indian Institute of Engineering Science and Technology, Shibpur (Former BESUS), Jadavpur University, University of Kalyani and University of Calcutta. I served as the former Dean (Academic), IIEST, Shibpur acting Director (absence of Director) and former Dean of Engineering, Technology and Management, faculty of Kalyani University (2005). I have been the Executive Council member of the University of Kalyani and BESUS, Chairman Senate Standing Committee and others of Indian Institute Engineering Science and Technology, Shibpur (IIESTS). I served as the Head four times in the Department of Computer Science and Engineering at Kalyani University and once as the Head, Department of Computer Science and Technology, IIESTS (BESUS), Shibpur also Head, different research centre of IIESTs. I have evaluated NBA accreditation appox forty- five (45) Engineering Colleges since 2005.

I am acting as a Chairman of the National Board Accreditation (Gov of India) Visiting team and Advisor Centre for ML, NIT Silchar. Director, School of Computing, Techno University at present.

During last 34 years, my research works have been concerned with various topics of Machine learning application in Medical Sciences, Big Data analysis, Social Network, Test-pattern generation, Video image processing, Low power design and Quantum Computing, Cyber Physical Micro-fluidic Bio-chip, VLSI Testing with the collaboration of Scientist Prof. Bhargab B Bhattacharya from Advance Computing Units, Indian Statistical Institute.Professor. H. Fujiwara, *NAIST*, Japan and with Professor M. Goessel, University of Potsdam, Germany *and* Professor John P. Hays, Shannon Professor of Engineering Science, University of Michigan, Advanced Computer Architecture Lab, USA.

My Ph.D thesis is highly appreciated by the Professor M. Goessel and University of Potsdam, Germany. Many of my research papers have been published in International Journals including IEEE Transaction on CAD, other IEEE Transactions and Conferences of repute.

Thanks and regards

Susanta Chakraborty
(**Susanta Chakraborty**)

 Date:
 Place: Kolkata

<p style="text-align: center;">__Curriculum vitae:__</p>

1. General Information of Applicant

Name(in Capital Letters)	SUSANTA CHAKRABORTY
Date of Birth (Day/Month/Year)	01/01/1959
Correspondence Address	EE-182/6, Sourav Abasan, Salt Lake, Kolkata 700091
Phone no:	Mobile No:9433503748 Landline No:
Email:	sc@cs.iiests.ac.in /susanta.chak@gmail.com

2. Present & Former Position:

Designation	Dean(Academic) and Dir(SOET) Adamas University. Former Full Professor (HAG), Former Dean (Academic) & Former acting Director (Retired) At present Advisor Centre for ML, NIT Silchar, Chairman NBA Visit. Fellow IETE Director & Professor School of Computing, Techno University.
Organization(Former)	Indian Institute of Engineering Science & Technology, Shibpur (IIESTS). (An Institute For National Importance)
Pay Scale	Pay Band-IV Grade Pay: INR 10500/- Present Basic Pay: INR 2,24,200/ (level :15) : Gross: Rs 3lakh ninty thousands.
Total Experience as a Full Professor	19years 3months

3. International academic Exposure :

i) INVITATED FELLOWSHIP FROM GERMANY AS A GUEST SCIENTIST

I was invited from **Institute of Information Technology**, *University of Potsdam*, *Germany with invited German Gov Fellowship and* **worked as a** *Guest scientist* **with** *Proessor. M. Gossel* **who is internationally renowned in the area of** *VLSI testing and fault diagnosis* from September 2000, to 27 December, 2000 **as my research work was considered of** *high International standard*. The recommendation given by him attached later on herewith.

ii) JSPS FELLOWSHIP Of INDIAN NATIONAL SCIENCE ACADEMY(INSA)

Indian National Science Academy nominated me as *a JSPS* **Scientist in the session 2003-2004 and worked with** *Professor H. Fujiwara of Nara Institute of Science and Technology, Japan,* **University of National Importance in the area of** *Test Generation of Sequential Circuits and Low Power Design*.

iii) INVITATION from UNIVERSITY OF MICHIGAN, ANN ARBOR, USA

I was invited from University Michigan, Advanced Computer Architecture Lab, deptt of Electrical Engineering and Computer Science and research worked with Professor John P. Hays, Shannon Professor of Engineering Science in the area of " Test pattern generation of Quantum circuit" and " Testable Design of Nano-Circuit during the year 2007.

iv) Collaboration with Prof. T-Yi_HO, National Tsing Hua University, Taiwan to work in the area of Cyber Physical Micro-fluidic Bio-chip through Gov of India (SPARC) project during the year (2017-2020)

v) Invitation from ICTP, ITALY and Ateneo De Manila University

I was invited to attend a *21 days workshop on Advanced VLSI Design Techniques using a Hardware Description Language* **ot Ateneo De Manila University, Phillippines organised by** *The Abdus Salam International Center for Theoretical Physics and School of Computer Science and Engineering, Ateneo de Manila University.*

4.Details of experience possessed :

Sl. no	Post Held	Pay Scale	Organization	Nature of duties	Total Experience
1.	Professor (HAG) and Full Professor, in the department of Computer Science and Technology of the Indian Institute of Engineering Science & Technology, Shibpur	Grade Pay: INR10500/ Present Basic Pay: INR 2,24,200/ (level:15)	Indian Institute of Engineering Science & Technology, Shibpur, India	i)Teaching(Theory and lab) of B.Tech, M.Tech students including final year thesis, Course work of Ph.D students ii)Research(To supervise research scholars and to look after sponsored research projects and academic projects iii)Chairman of different committee	18years 1 and half months
2.	Full Professor in the department of Computer Science and Engineering, University of Kalyani	Pay Band-IV Rs37000-67000/ Grade Pay: INR 10000/-	University of Kalyani, West Bengal, India (State University)	Teaching (Theory and lab) of MCA, M.Tech students including final year thesis, Course work of Ph.D students ii)Research(To supervise research scholars and to look after sponsored research projects and academic projects, Administrative duties	1 years 1and half months.
3.	Associate Professor Department of Computer Science, Engineering, University of Kalyani.	pre-revised scale of pay Rs12000-18300/(Pay Band-IV Rs37000-67000/)	University of Kalyani, West Bengal, India (State University)	Served as a Chairman (Head) 4 times. Teaching (Theory and lab) of MCA, M.Tech students including final year thesis, , Research((To supervise research scholars and to look after sponsored research projects and academic projects,	9years 8months
4.	Assistant Professor, University of Calcutta	As per UGC scale pre-revised scale of Rs2200-4000/	University of Calcutta, West Bengal, India	Teaching, Research	4years 3months
5	Research Scientist(jr)	As per UGC scale pre-revised scale of Rs2200-4000/ (contractual)	Jadavpur University, deptt of ECE	Research on CAD VLSI	1 year

Field/Area of Specialisation: **Machine learning, Social network, Intelligent system design, Big Data analysis, Test-pattern generation, Video-image processing, Low power design and Quantum Computing, Cyber Physical Micro-fluidic Bio-chip.**

During the last 35 years, I have taught a variety of courses (M.Tech, MCA and B.Tech level) : Soft Computing, Big Data Analysis, Machine learning, Data Mining, Quantum Computing, VLSI CAD, Computer organisation, Cyber Physical Micro-fluidic Bio-chip in B.Tech and M.Tech of Computer Science and Technology .Data Analysis and Soft Computing in M.Tech (Bio-Medical Engineering) of the Centre for Health care Science and Technology

5. **Administrative Experience / Post(s) & Responsibilities held**:

Sl. No.	Post	Organisation or University	Duration From	To	Number of years of Experience& responsibility
1	Dean (Academics) (Former)	IIEST, Shibpur	31st July, 2018	29th, July, 2020	2years All academic responsibility of the IIEST, Shibpur including set up new laboratory, new courses
2	Dean of Engineering, Technology& Management (Former)	Kalyani University	20-04-2005	16-11-2005	7 months Administrative and Academic responsibility of all Department of the Faculty and Set up new laboratory, New courses
3	Senate Member	IIEST, Shibpur	2005	Till date	All Academic responsibilities
4	Former Executive Council member	University of Kalyani and Bengal Engineering and Science University, Shibpur	2004	2005	Administrative and Academic responsibility of all Department of the University
5	Head 4 times of the department of Computer Science and Engineering	Kalyani University	1995 1997 1999	1997 1999 2001	6 years
6	Head, department of Computer Science and Technology	Indian Institute of Engineering Science & Technology, Shibpur	2011	2013	2years All Administrative and academic responsibility, of the department of CST, Shibpur
7	Post Graduate Faculty Council member	Bengal Engineering and Science University, Shibpur and University of Kalyani, Burdwan University and Central University Tripura	12/03/2002 21/04/16	12/03/2004 21/04/18	6 years To prepare Post graduate Course Structure and Syllabus of Postgraduate courses and to prepare expert list for Ph.D students for the Research board of studies KalyaniUniversit
8	Chairman, Under Graduate Board of studies of Computer Science	Kalyani University	2002	2004	
9	Research board of studies member	Burdwan University and Kalyani University and BESU, Shibpur.			To prepare expert list for Ph.D students for Bengal Engineering and Science University, University,Burdwan University and Kalyani University
10	Chairman Senate Standing committee	IIESTS	July, 18	29th, July, 2020	2yrs Responsibility to recommend all Academic administrative issues and placed before Senate
11	Chairman Ph. D admission Committee	IIESTS	05/08/18	29th, July,	2yrs

					2020	
12	Chairman Academic Committee TEQIP	IIESTS		31/07/18	29th, July, 2020	2yrs
13	Chairman UG and PG and Ph. D ordinance& regulation Committee	IIESTS		Nove, 2018	29th, July, 2020	2yrs
14	Chairman PG (CCMT) admission committee	IIESTS		Nov, 2018	29th, July, 2020	2yrs, Responsibilities for PG admission of all Academic departments and schools.
15	Chairman UG (CCMN) admission committee	IIESTS		Nov,18	29th, July, 2020	(2yrs)Responsibilities for UG admission of all Academic departments and schools
16	Head of the center for Healthcare Science and Technology(3 times)	IIESTS		Jan 10, 2021	Jun 10, 2021	
17	Expert of IT education and e-Governance Gov of West Bengal			Aug 25, 2001		Exchange of ideas and thought on IT education and E-Governance

6. Educational Qualification:

Sl. No.	Qualifications	University	Year	Subjects / Topics	class	Distinctions etc.
i).	Doctor of Philosophy (Tech.)	University of Calcutta *work done at Advanced Computing &Microelectronics Unit, Indian Statistical Institute.*	1999	**Ph.D(Tech) in Computer Science** **Title of Thesis** *:* **"STUDIES ON REDUNDANCIES AND ROBUSTLYTESTABLE DESIGN OF LOGIC CIRCUITS"**		*My Ph.D. work was considered of a high International standard, by Professor Michael Gossel, Institute of Computer Science, University of Potsdam, Germany.*
	Post Doctoral work	**Institute of Computer Science, University of Potsdam, Germany.**		Fault diagnosis and Testing of VLSI circuit		**Worked with Professor Michael Gossel as a Scientist with German Govt invited Fellowship**
ii)	Master of Technology	**University College of Science &Technology, University of Calcutta**	Session **1983-85 (1984-86)**	**M.Tech. dissertation***:* **Microprocessor Based Advanced Control System (P.I.D., Dead-Beat,Kalmal) and Robot Control Action**	1st class	
iii).	Bachelor of Technology	UCST, **University of Calcutta**	Session 1980-83 (1981-84)	.	1st class	

7. (a) Academic/ Teaching Experience & responsibilities

Sl. No.	Post	Organization/ University	Duration FROM TO	Experience Yrs/month	Responsibilities
1 i) ii	Full Professor Full Professors. (Open post)	Department of Computer Science and Technology of the Indian Institute of Engineering Sc& Technology, Shibpur Central Govt. Funded ii) Kalyani University, India State Govt.Funded	i) From 17th NOV, 2005 to present ii) From 30-09-2004 to 16thNov, 2005.	18years 1and half month. 1 years 1and half month	Dean (Academic), IIEST, Shibpur. (July,2018-29July, 2020) Head of Deptt CST from 2011-13, IIEST, Shibpur Former Dean of Engineering, Technology Management faculty of Kalyani University. Former Executive Council member of the University of Kalyani
2	Associate Professor or equivalent	Department of Computer Science, Engineering and Technology Faculty,University of Kalyani (State University)	From 1st March 1995 to 30th Sep.,2004	9years 8months	Served as a Head 4 times of the Department of Computer Science and Engineering of Kalyani University
3	Assistant Professor	University of Calcutta(IJT) State Govt.Funded	1st Dec 1990 to 1st March 1995	4years 3months	Teaching and research
4	Research Scientist(jr)	Jadavpur University	5th Jan, 1988 to 89	1 year	Research on CAD VLSI

(b) Participation and contribution in relevant areas in higher education:

	Organization	Area of Specialisation
Visiting Professor and resource person.	**Deptt of Computer Science and Engg, University of Calcutta** **Institute of Radio-Physics and Electronics.**	**i)Fault tolerant VLSI Testing** **ii)Information & Coding theory**
Resource Person	**Faculty development Program in Burdwan University and RCC Institute of Information Technology, Kolkata. Techno Main Engg College, IEM, Kolkata (detailed in Annexure-III)**	**Quantum Computing, Machine learning, Big Data , IoT, VLSI Testing, and many more.**

(c)Involvement in formulation of academic programme

Sl.No	Nomenclature of Innovative Academic Programmes Formulated	Date of Approval by academic council	Year of introduction
1	**Started M.Tech. in Computer Science & Engineering in University of Kalyani and prepared proposal for B.Tech course in CSE.**		**2001**
2	**Set up VLSI lab in IIEST (Dept of CST) and school of VLSI Technology, University of Kalyani**		**2008**

8. Scholarly achievements:

A. Contribution to Journals and Books:

	Details
Books Authored	**Book: 3, Book Chapter: 7 (Annexure I) International Publication by Springer Germany**
Editorships	**Editorial member of an International Journal**
Peer Review For	**IEEE Transactions and other peer-reviewed Journals and International Conferences(International conferences on VLSI Design, VDATS,Asian Test Symposium(ATS)) etc.**
Member of the International Advisory board	**Advisory Committee member, Asian Test Symposium (ATS), Kolkata, 2019.**
Others (specify)	**Fellow IETE**

B. **Publications (Total Number):103**

My 34 years of research experience in the area of Computer Science and Engineering is primarily focused on Machine learning, *Big data analysis and application*, Social network analysis, Internet of Things based security, data mining, Video Image Processing, Gene Regulatory Network, Quantum Circuit & cryptography and Cyber Physical Micro-fluidic Bio-chip & security, Synthesis and Testing of Quantum Circuit, Fault tolerant Computing, Low Power Design, These works have been done in collaboration with the scientists working at Prof. ArunK.Chowdhury, Deptt of Computer Science and Engg, Calcutta University, Prof. Bhargab B Bhattacharya *Advanced Computing Unit, Indian Statistical Institute, University of Potsdam, Germany*,Nara Institute of Science and Technology, Japan *and* Professor John P.Hays, Shannon Professor of Engineering Science, University of Michigan, Advanced Computer Architecture Lab.

I. **List of scholarly publications in recognized professional and/or academic journals:**

Publications

Around 103 *research papers* now stand to my credit, which appeared in very reputed International Journals including IEEE Transactions on CAD and other IEEE transactions and refereed international Conference Proceedings of IEEE COMPUTER SCIENCE PRESS. Detail of Total Publications Attached Annexure 11.

b) **Details of Publications**		
c) **Paper Publication in National/ International Journal(s) (Attach list of Publication as Annexure:I)**	**In SCI**	**Published : 31 Communicate :5**
	Other than SCI	**1**
d) **Publication in National / International Conference(s) (Attach list of Publication as Annexure: II)**	**National**	**2**
	International	**70 (IEEE Proceedings)**

B. II. **Newspapers highly appreciated the research works:**

Total Articles:

Sl. No	Date	Title	Name of the Magazine or Newspaper
1.	**25/03/2018**	**The Science of finding a hero**	**The Times of India**

C. **Participation and scholarly presentations in Conferences**

C.II. International:

Sl. No	Date	Title of the conference	Title of the presentation
	January, 2005	**18th International Conference on VLSI Design**	
	December, 2005	*Fifteenth Asian test Symposium*, India,	
	January, India, 2010	**1st IEEE International workshop on Reliability Aware system Design and Test(RASDAT),**	
	January, 2011 and 2012.	**2nd 3rd and 4th IEEE International workshop on Reliability Aware system Design and Test(RASDAT), India,**	
	November 19 – 20, 2010, 2011, 2012 2013, 2014 and 2016.	**International Conference on Computing and Systems ,**	
	2013	**43rd IEEE International Symposium on Multivalued Logic(ISMVL), Toyoma, Japan,**	
	Nov, 2011	**IEEE WRTLT-2011 International Symposium**	
	Nov, 2015	**IEEE WRTLT-2015 International Symposium** at **IIT Bombay**	
	Nov, 2016	**IEEE WRTLT-2016 International Symposium** at **Japan**	
	November, 2015.	*Twenty-fifth Asian test Symposium*, **India,**	
	January, India, 2013, 2014, 2015, 2016 and 2017	**4th, 5th and 6thIEEE International workshop on Reliability Aware system Design and Test (RASDAT),**	
	2004, 2015, 2016	**19th, 20thand 22nd VLSI Design and Test Symposium**(*VDAT*),**Ahmedabad and IIT Guwahati.**	
	December, 2016.	**5th International Conference on Computer Science and Network Technology, Changchun, China 2016.**	
	July 4th -5th ,2011	*3rd Workshop on Reversible Computing*Gent, Belgium.	
	2017	**30th International Conference on VLSI Design,**	
	2018	**31st International Conference on VLSI Design, Pune**	
	2019	**Asian Test Symposium (ATS), Kolkata, 2019**	
	2023	**14th International Conference on Computing, Communication and Networking Technologies (ICCCNT 2023)**	

D. **Participation and contribution in National/ Internationals Forum in the area of your academic and professional expertise: Annexure-III**

		Numbers
Plenary Lectures/ Invited Talks	**National**	**Sixteen(20)**
	International	**Three(3)**
Congress attended	**National**	
	International	
Examinership etc.(Ph.D)	**National**	**IIT, Bombay, IIT KGP, Calcutta University, Jadavpur University and Anna University**

E. **No. of Patents awarded**:

(c)					
S.No.	**Title**	**Name of the co-authors**	**Patent No.**		**year**
i)	**"Low Cost Intelligent Colorimeter Using Color LEDs"**	S. Bhattacharyya, S. S. Mukherjee, P. Dutta	**Patent No. 886/KOL/2015**		**dated 14.08.2015**
ii)	**" System to Model and Control Diffusion of COVID '19 using Digital Microfluidic Biochip"**.	Dr.Sarit Chakraborty	Patent Filing No: 202231022359		**14/4/2022**

F. **Details of Membership of Societies**:

Sl. No	Name of the professional body	Grade of the body	Membership number	Valid upto
	IEEE Computer society and CAS, USA	**IEEE SENIOR MEMBER CSI and CAS**	**41412946**	**2024**
	IETE	**FELLOW**	**F-504504**	

9. **Honours/ Awards & Fellowship for outstanding works:**

Sl. No.	Name of the Award/ fellowship	Elected/ Honorary Fellow	Awarded by	Year of Award
1	**JSPS Fellowship**	**Honorary**	**INSA and JSPS**	**2003-2004**
2	**German Gov invited Fellowship**	**Honorary**	**University of Potsdam, Germany**	**2000**

10. Research Projects:

S.No.	Sponsored Agency	Title of the project/Patent	Period	Amount	Status
		Research Projects/ Sponsored Projects / Patents			
i	**AICTE**	**i) "Fault Diagnosis and Core Design in System on chip" (Completed)**	**3-years**	5 lakhs	Completed
ii	**AICTE**	**ii)"Fast Distributed Approximate Interval Cutting" (Completed)**	**3-years**	3lakhs Completd	
iii	**DST**	**iii) Co-ordinator of the "Special Manpower development project of India Chip Programme"**			Completed
Iv	**MHRD (SPARC)**	**iv)Design Optimization and Security Prediction of Real Time Cyber-physical Digital Microfludic Biochips**	**3-years** Collaboration with **Prof. T-Yi_HO, National Tsing Hua University, Taiwan.**	47 lakhs	Completed

11. No. of Research Scholars successfully guided

Name of the Programme	Awarded number and submitted
Ph.D.	**13 Ph.D Students Awarded, one thesis submitted and another one thesis will Submitted shortly**

12. Other informations:

Expert of selection Committee of **IIM**, **Different Universities, PSC(Gov. of W.B)**

Chairman and Expert, National Board of Accreditation (NBA) and Evaluated apporx Forty-five Engg Colleges.

Expert of selection Committee of Different Universities and College service Commission.

Served as a Referee for reviewing technical papers submitted to *International Conference proceedings and journals*.

Publicity Chair, **18th International Conference on VLSI Design, January, 2005.**

Publicity Chair, Fifteenth Asian test Symposium, December, India, 2005.

Publicity Chair& **Program Committee member of 1**st **IEEE International workshop on Reliability Aware system Design and Test(RASDAT)**, January, India, 2010.

Publicity Chair & Program Committee member of 2nd **3**rd **and 4**th **IEEE International workshop on Reliability Aware system Design and Test (RASDAT)**, January, India, 2011 and 2012.

Advisory Committee member of International Conference on Computing and systems , **November 19 – 20, 2010, 2011, 2012 2013, 2014 and 2016.**

Publication Chair, IEEE WRTLT-2011 International Symposium Nov, 2011

Program Chair, IEEE WRTLT-2015 International Symposium Nov, 2015 at **IIT Bombay**.

Program Committee member, IEEE WRTLT-2016 International Symposium Nov, 2016 at **Japan.**

Program Committee member, IEEE WRTLT-2017 International Symposium Nov, 2017 at **Taipei, Taiwan.**

Publicity Co-Chair and **Program Committee member** *Twenty-fifth Asian test Symposium*, November, India, **2015**.

Publicity Chair & Program Committee member of 4th, 5th and 6thIEEE International workshop on Reliability Aware system Design and Test (RASDAT), January, India**, 2013, 2014, 2015, 2016** and **2017**.

Program Committee member of 19th and 20th VLSI Design and Test Symposium*(VDAT-2015 and 2016),***IIT Guwahati.**

Program Committee member of 21st VLSI Design and Test Symposium*(VDAT-2017),***IIT Roorki, 2017and also member in 2021, 2022**.

Advisory Committee member, Asian Test Symposium (ATS), Kolkata, 2019.

Program Chair, Asian Test Symposium (ATS), , 2024.

PTO

Annexure I

13	Books/ Monograms/ Book ChaptersAuhored			
International Book	**Name of Book/Monograph/Book** Chapter(s)	Name of the Co-Author(s), if any	Year of Publication	**Publisher**
i	**"Hybrid Soft Computing Approaches"**	**S.Bhattacharyya and P.Dutta**	**2016**	**International Publication by Springer Germany.**
ii	**"Hybrid Soft Computing for Multilevel Image and data segmentation "**	**S. De, S. Bhattacharyya,**	**2017**	**International Publication by Springer Germany.**
iii	**"Quantam Machine Learning"**	**S. Bhattachary, I. Pan etc.**	**2019**	**De Gruyter, Germany**
International BookChapter i	*"Multilevel Image Segmentation by a Multiobjective Genetic Algorithm Based OptiMUSIG Activation Function"*,	S. De, S. Bhattacharyya	2012 doi.org/10.1018/978-1-4666-2518-1.ch005	*Handbook of Research on Computational Intelligence for Engineering, Science and Business, IGI Global, USA,2012*
ii	**Efficient Color Image Segmentation by a Parallel Optimized** (ParaOptiMUSIG) **activation Function**	S. De, S. Bhattacharyya	2013 doi: 10.4018/978-1-4666-4936-1.ch002	Global Trends in Knowledge Representation and Computational Intelligence, IGI Global
iii	**Multilevel and Color Image Segmentation by NSGA II Based OptiMUSIG Activation Function**	S. De, S. Bhattacharyya	2015 doi: 10.4018/978-1-4666-9474-3.c	Handbook of Research on Advanced Hybrid Intelligent Techniques and Applications, IGI Global, USA
iv	**Redundancy Elimination in Video Summarization**	H. Bhaumik, S. Bhattacharyya	2016 doi.org/10.1007/978-3-319-28854-3_7	Image Feature Detectors Foundations, Innovations, and Applications, ,pp 173-202 Springer International Publishing
v	**Detection of Gradual Transition in Videos: Approaches and Applications.**	H. Bhaumik, M. Chakraborty, S. Bhattacharyya	2016 doi.org/10.4018/978-1-5225-0498-6.ch011	Intelligent Analysis of Multimedia Information, pp 282-318, IGI global, USA
vi	**Content Coverage and Redundancy Removal in Video Summarization**	H. Bhaumik, S. Bhattacharyya	2016	Intelligent Analysis of Multimedia Information, pp. 352-374. IGI Global, USA
vii	**Key frame Selection for video Indexing using Approximate In Minimal Spanning tree.**	H. Bhaumik, S. Bhattacharyya	2019	Machine Learning for Big Data Analysis, pp 31-68,DeGruyter Germany

14. International Refereed Journals: (Annexure II)

8.a	Research Activities	Around *103research papers* now stand to my credit, which appeared in very reputed **International Journals including IEEE Transactions on CAD** and refereed international conference **proceedings of IEEE COMPUTER SCIENCE PRESS.**		
	Paper(s) Publication in SCI/Scopus indexed Journal(s): I am the corresponding/Main author/Supervisor of all the following papers			
Sl. No.	Title of the paper	Name of the co-authors	Name of the Journals / Pages	Vol and year
1	**Synthesis of Symmetric Functions for path delay fault testability**	Debesh.K. Das and Bhargab.B.Bhattacharya	**IEEE Transactions on Computer-Added Design (SCI)** / **1076-1081** https://doi.org/10.1109/43.863647	**Vol. 19, 2000**
2	**Logical Redundancies in irredundant combinational circuits.**	Debesh.K. Das and Bhargab.B.Bhattacharya ,	**Journal of Electronic Testing: Theory and applications, (JETTA), Kluwer Academic Publishers (SCI)** / **120-125,** https://doi.org/10.1007/BF00971641	**vol. 4, 1993**
3	**Analysis of Adapted Films and Stories based on SocialNetwork**	TapanChowdhury, SamyaMuhuri, ,Sabitri Nanda Chakraborty	**IEEE Transactions on Computational Social System (SCI)** / **858-869** doi.org/10.1109/TCSS.2019.2931721	**Vol.6 No. 5. 2019**
4	**Extracting Social Network and Character Categorization from Bengali Literature**	SamyaMuhuri and Sabitri Nanda Chakraborty	**IEEE Transactions on Computational Social Systems (SCI)** / **371-381** DOI 10.1109/TCSS.2018.2798699	**vol. 5, no.2, 2018.**
5.	**GPU Accelerated Drug Application on Signaling Pathways containing Multiple Faults using Boolean Networks**	TapanChowdhury, ArghaNandan	**IEEE Transactions on Computational Biology and Bioinformatic (SCI)** / **DOI** 10.1109/TCBB.2020.3014172	**Vol 19, issue 2, 2020**
6.	**Differentiate the Game Maker in Any Soccer Match Based on Social Network Approach**	SamyaMuhuri, and S. K. Setua	**IEEE Transactions on Computational Social System (SCI)** / **1399-1406** Doi:10.1109/TCSS.2020.3036546	**December 2020 Vol:7, issue:6**

7	"**Detailed Study on the Role of Nature and Distribution of Pinholes and Oxide Layer on the Performance of Tunnel Oxide PassivatedContact (TOPCon) Solar Cell**"	SouravSadhukhan, S. Maity, S. Chakraborty et	**IEEE Transactions on Electron Devices. (SCI)**	10.1109/TED .2022.319632 7	**VOL. 69, NO. 10, OCTOBER 2022**
8.	**Improvement in the Performance of P-Type Tunnel Oxide Passivated Contact Solar Cell with Selective TunnelingJunctions Underneath the Contacts on Front Side**	SouravSadhukhan, SantanuMaity	**IEEE Journal of Photovoltaics. (SCI)**		**Vol 13, No 2, March 2023**
9.	**Irredundant binate realization of unate functions.**	Debesh.K.Das, and Bhargab.B.Bhattacharya	**International Journal of Electronics, (SCI)**	**65-73 https://doi.org /10.1080/00207 219308907088**	**Vol. 25, no.1,1993**
10.	**Universal and Robust Testing of stuck-open faults in Reed-Muller canonical CMOS circuits**	Debesh.K.Das, and Bhargab.B.Bhattacharya	**International journal of Electronics, U.K (SCI)**	**1-11**: https://doi.org/ 10.1080/00207 210310001473 18	**Vol. 90, no.1, 2003**
11.	**Image thinning by Neural Network.**	A.Dutta, S.Pal	**International journal of Neural Computing & Applications, U.K, (SCIE)**	**122-128** https://doi.org/ 10.1007/s0052 10200024	**2002**
12.	**Universal Test Set for Bridging Fault Detection in Reversible Circuit**	Pradyut Sarkar	**International Journal of Computer Science and Engineering system, (SCIE)**	**197-202** **DOI: 10.1109/IDT. 2008.4802464**	**vol. 4, 2010.**
13.	"**Color image segmentation using parallel OptiMUSIG activation function**"	Sourav De , Siddhartha Bhattacharyya	**Applied Soft Computing Journal (SCI)**	**3228 – 3236** **Doi.org/10.10 16/j.asoc.201 2.05.011**	**vol-12, no-10, 2012**

	Title	Authors	Journal	ISSN/DOI	Volume/Issue
14.	**A Comprehensive Fault Diagnosis Technique for reversible Logic Circuit.**	Bikromadittya Mondal	**Computer and Electrical Engineering Journal, (Elsevier) (SCI)**	**2259-2272 doi.org/10.10 16/j.compele ceng.2014.08. 003**	**Vol-40, Issue:7 2014**
15.	**Optimized Routing and Pin-Constrained design of digital Micro-Fludic Bio-Chip**	Nabanita Das, and ParthaSarathi Dasgupta	**International Journal on Information Theory(IJIT) (SCIE)**	**19-31** https://www.do i.org/10.5121/ij it.2014.3103	**Vol3, No1, January, 2014**
16.	**Hybrid Soft Computing Approaches to Content based Video Retrieval: A Brief Review**	Hrishikesh Bhaumik, Siddhartha Bhattacharyya, Mausumi Das Nath	**Journal of Applied Soft Computing (SCI)**	**1008-1029** doi.org/10.1 016/j.asoc.2 016.03.022	**vol-46, 2016**
17.	**Efficient Two Phase Heuristic Routing Technique for Digital Microfluidic Biochip**	Sarit Chakraborty, Chandan Das, Partha P Dasgupta.	**Journal of IET Computers& Digital Techniques, U.K, (Former IEE Proceedings). (SCI)**	**233-242** DOI : **10.1049/iet-cdt.2015.0161**	**vol-10, issue:5 2016**
18.	**Content-based image retrieval based on multiple extended fuzzy-rough framework**	Sk. Mazharul Islam, Minakshi Banerjee, Siddhartha Bhattacharyya	**Journal for Applied Soft Computing, (SCI)**	**102-117 Doi.org/10.10 16/j.soc.2017. 03.036**	**Volume 57, August 2017**
19.	**A Vague Set Approach for Shot Transition Detection in Videos Using Multiple Feature Amalgamation.”**	H. Bhaumik, S. Bhattacharyya	**Applied Soft Computing. Journal (SCI)**	**633-651** doi.org/10.1 016/j.asoc.2 018.10.053	**2019 Vol-75**

20.	Detection of Constant members and Overlapping Community from Dynamic Literature Network.	SamyaMuhuri and Debasree Das	**Social Network Analysis and mining**	SCI(mago) Doi.org/10.1007/s13278-021-00788-2	Vol-11, issue:1 2021
21.	**AnEfficient Module-less Synthesis Approach for Digital Microfluidic Biochip**	SaritChakraborty	**SN Applied Sciences, SPRINGER– NATURE**, 1442(2), Online(SCIE)	2523-3971DOI: 10.1007/s42452-020-3173-6	2019
22.	**"A Novel Decision-Based Adaptive Feedback Median Filter for High Density Impulse Noise Suppression",**	Kamarujin, MousumiMitra	**Multimedia Tools and Applications, Springer. (Indexed: SCIE, Scopus, and IF-2.313**	**DOI:** 10.1007/s11042-020-09473-6	2020
23.	**"Relevant Word Determination from Dynamic Text Network"**	Susmita Das, Samit Biswas	**IETE Journal of Research (Indexed: SCIE)**	**DOI: 10.1080/03772063.2022.2060870**	2022
24.	**" Evaluation of dominant loss mechanisms of PERC cells for optimization of rear passivating stacks"**	SouravSadhukhan	**Journal of Surfaces and Interfaces(ELSEVIER), (SCI)**	**doi.org.10.1016/j.surfin.2021.101496).**	*v-27*, December, 2021
25.	**"Security Assesment for Routing-Based Synthesis on Cyber Physical MEDA-Based Digital Microfluidic Biochip"**	Chandan Das, SamyaMuhuri, SaritChakraborty	**SN Applied Science(Springer) (SCI)**	1-19 doi.org/10.1007/s42452-021-04647-9	Vol -3, Issue -8
26.	**"An Efficient Capacity Based Routing Technique on MEDA Based Biochip"**	Chandan Das	**IETE Journal of Research(SCIE,SCOPUS)**	**Accepted**	February,2023
27.	**"Generative model based video shot boundary detection for automated surveillance"**	BiswanathChakraborty Siddhartha Bhattacharyya	**International Journal of Ambient Computing and Intelligence (IJACI)**	DOI: 10.4018/IJACI.2018100105	August, 2018
28	*"TOPerc solar cell: An integral approach of TOPCon and PERC architectures for achieving efficiency beyond 25%",*	S.Sadhukhan, S.maity	**Energy Technology (2023) (SCI)**	*DOI:* https://doi.org/10.1002/ente.2023 00200.	2023

29.	"Exposure to misinformation in Communities on Social Network"	Susmita Das, Samit Biswas	Journal of Information Sciences, (ELSEVIER), SCI	Accepted	Dec, 2023
31	Influential Node Detection in Social Network for Epidemic Diseases	Sangita.Dutta, Sambhabi.Chakraborty,	Journal of Combinatorial Optimization (SCI)	Communicated	August, 2023
32	"Opinion Dynamics Based on Cognitive Biases in Social Networks."	Sangita Dutta, Susmita DAS	Soft Computing journal, (SCI),2023	Communicated	Sep, 2023
33	" Extraction of the Social Network from Women-Centric Literature"	Sangita Dutta	Advances in complex systems, (SCI), 2023	Accepted (Under revision)	2024
34	Dutta, S., Chakroborty, S Influence detection in dynamic networks : a novel overlapping community detection approach applied to COVID-19 spread analysis in India.		Journal of Social Network Analysis and Mining	https://doi.org/10.1007/s13278-024-01359-x	V 14 , 198, Published : 29 th September 2024

International Conferences

(b)	Papers publication in SCI/Scopus/ Web of Science indexed conference				
S.No.	Title of the paper	Name of the co-authors	Name of the conference	pages	Year
1	"Boolean algebraic properties of fault behavior in logic circuits,"	*D. K. Das, and B. B. Bhattacharya,*	Proceedings of the 4th International Workshops on Boolean problems, *Germany,*	**143-150.**	2000
2	**"New BIST techniques for universal and robust testing on CMOS Stuck-open faults"**	Debesh. K. Das, and Bhargab.B .Bhattacharya.	**Proceedings of the 10th International Conference on VLSI Design,**	**303-308**, DOI: 10.1109/ICVD.1997.568094	1996
3	**"Universal and Robust Testing of Stuck-open Faults in Reed-Muller canonical CMOS Circuits",**	Debesh. K. Das and Bhargab. B. Bhattacharya,	**Proceedings 3rd International Workshop on application of the Reed-Muller Expansion in Circuit design, Oxford University,**	**259-268 .** doi.org/10.1080/0020721031000147318	1997
4	**"Interchangeable Boolean functions and their effects on** redundancy in logic Circuits "	Debesh. K.Das, Bhargab. B. Bhattacharya,	**Proceedings of ASP-DAC, Japan, IEEE CS Press, USA.**	**469-474** DOI: 10.1109/ASPDAC.1998.669527	**1998**

5	"Synthesis of Symmetric functions for path delay fault testability"	Sandip Das, Debesh.K. Das and Bhargab .B. Bhattacharya,	Proceedings of the 12th International Conference on VLSI Design, IEEE CS Press ,USA.	469-474, 10.1109/ICVD.1 999.745206	**1999**
6	"Boolean algebraic properties of fault behavior in logic circuits",	Debesh. K. Das, and Bhargab .B. Bhattacharya,	Proceedings of the 4th International Workshop on Boolean problems, Freiberg (Germany).	143-150,	2000
7	Graph Embedding Approach to solve the State Assignment Problem of FSMSynthesis	S.Roy, S. Bandyopadhyay, U. Mallick, B.K.Sikdar	Proceeding of the Conference on intelligent computing and VLSI.		2001
8	"Diagnosis by repeated application of specific test inputs and by output monitoring of the MISA"	M.Gossel, V.Ocheretnij	Proceedings of the 10th Asian Test symposium, IEEE CS Press, Japan .	57-62, DOI: 10.1109/ATS.20 01.990259	**2001**
9	"Fault Diagnosis by Spectral Pattern."	PradyutSarkar ,ArindamKarm akar	Proceedings of the 8th VLSI Design and Testing (VDAT), Mysore.	439-446,	2004
10	"Max-Testable Class of sequential circuits having Combinational test generation"	Debesh. K. Das, and Hideo Fujiwara,	Proceedings of thirteen Asian Test Symposium, IEEE CS Press, Taiwan,	342-347, DOI: 10.1109/ATS.20 04.57	2004
11	"Low power design by circuit partitioning."	PradyutSarkar ,Virendra Singh	Proceedings of the International Conference on Computer, Communication, Control and Information Technology, Kolkata.		2009
12	"Fault diagnosis of the reversible Circuits."	Bikramaditya Mondal and Bhargab.B.Bh attacharya,	Proceedings of the 11th IEEE VLSI Design and Testing(VDAT), Kolkata.	83-90	2007
13	"A Genetic algorithm based Automatic Image Clustering Technique validated by Fuzzy Intercluster Hostility Index"	S. De, S. Bhattacharya	Proceedings of the International Conference on Communication, Computers and Devices, (ICCCD2010), Kharagpur, India.		2010
14	"Universal test set for Bridging fault detection in the reversible circuit."	P. Sarkar	Proceeding of the 3rd International Design and Test Workshop Symposium at Monastir, Tunisi, IEEE	Doi.org/ 10.1109/IDT.2008 .4802464	2008

			Computer Science Press.		
15	**"True Color Image Segmentation by anoptimized multilevel activation function."**	S. De, S. Bhattacharya	Proceeding of the IEEE International Conference on Computational Intelligence and Computing research 2010(ICCIC2010),December, **Coimbatore,**	545-548. DOI: 10.1109/ICCIC.2010.5705833	**2010**
16	**"Determination of Optimal Threshold of a Gray level Image Using a Quantum Inspired Genetic Algorithm with Interference based on Random Map Model"**	S. Bhattacharya, P.Dutta, R.Chakraborty	**Proceeding of the Computational Intelligence and Computing research, Coimbatore.**	**DOI:** 10.1109/ICCIC.2010.5705806	**2010**
17	**"Bridging fault detection of the reversible circuit using unitary Matrix"**	P. Sarkar	**Proceeding of the 2nd International conference RASDAT, on reliability aware system Design and Test. January, Chenni.**		**2011**
18	**"Synthesis of Reversible Logic Circuit using Unitary Matrix"**	Pranay Kumar Saha ,PradyutSarkar	**Proceeding Of the 3rd Workshop on Reversible Computing, Gent, Belgium.**	Lecture Notes in Computer Science Springer	**2011**
19	**"A Comparative study of Unsupervised video shotboundary detection techniques using probalisticfuzzyentropymeasures.**	BiswanathChakraborty, Siddhartha Bhattacharyya	in Hand Book of research on computational intelligence in engineering, science and Business, IGI Global.		**2011**
20	**"Gray Scale Image Segmentation by NSGA-II based OptiMUSIG Activation Function"**	S.De, S. Battacharyya, B.Sarkar, P.Prabhakar	IEEE International Conference on Communication Systems and Network Technologies (CSNT2012), Rajkot,	104-108. DOI: 10.1109/CSNT.2012.32	**2012**
21	**"Color Image Segmentation by NSGA-II based Parallel OptiMUSIG (ParaOptiMUSIG) Activation Function"**	Sourav De, Siddhartha Battacharyya,	International Conference on Machine Intelligence Research and Advancement (ICMIRA-2013).	**105-109** DOI: 10.1109/ICMIRA.2013.27	**2013**
22	**" Synthesis of Balanced Ternary**	B.Mondal,	Proceeding of 43rd IEEE International Symposiumon	334 - 339doi.org/10.1	**2013**

		P.Saha, P.Sarkar	Multivalued Logic(ISMVL), Toyoma, Japan.	109/ISMVL.201 3.53	
23	**"A Quantum inspired time efficient OptiMUSIG activation function for multilevel image segmentation."**	Subhadip Chandra, SiddarthaBhatt acharya	IEEE INDICON (IIT), Bombay, Mumbai, India.	**DOI: 10.1109/INDCON. 2013.6725853** ·	**2013**
24	"**Structural Testing of Partitioned Digital Microfluidic Biochips**"	Somak Das	IEEE International Conference on VLSI & Signal Processing, IIT Kharagpur.		**2014**
25	"**Video Shot Segmentation Using Spatio-Temporal Fuzzy Hostility Index and Automatic Threshold**".	Hrishikesh Bhaumik, Siddhartha Bhattacharya	IEEE International Conference on Communication Systems and Network Technologies (CSNT),	501-506.doi.org/10.11 09/CSNT.2014.10 6	**2014**
26	**"An unsupervised method for real time video shot segmentation".**	Hrishikesh Bhaumik, S. Bhattacharyya,	Fourth International Conference on Digital Image Processing and Pattern Recognition (DPPR), ACM.	307-318, doi.org/10.5121/c sit.2014.4531	**2014**
27	**"A Novel Fault Diagnosis Technique in Reversible Logic Circuit"**	BikromadittyaM l.	**11th IEEE International Conferenceon Embedded Software and Systems (ICESS) Paris**	**709-712**doi.org/10.110 9/HPCC.2014.125	**2014**
28	**"Application of Pixel Intensity Based Medical Image Segmentation Using NSGA II Based OptiMUSIG Activation Function,"**	S. De, S. Bhattacharyya	The International Conference on Computational Intelligence and Communication Networks (ICCICN 2014)	**262-267.** https://doi.org/10. 1109/CICN.2014. 67	**2014**
29	**"Automatic Data Clustering by Genetic Algorithm Validated by Fuzzy Inter cluster Hostility Index,"**	S. De, S. Bhattacharyya	**Fourth International Conference of Emerging Applications of Information Technology (EAIT 2014),**	**58-63.** https://doi.org/10. 1109/EAIT.2014. 36	**2014**
30	**"Towards Redundancy Reduction in Storyboard Representation for Static Video Summarization."**	Hrishikesh Bhaumik, Siddhartha Bhattacharyya,	**In Proc. of IEEE International Conference on Advances in Computing, Communications and Informatics (ICACCI, 2014),**	**344-350.** doi.org/10.1109/I CACCI.2014.696 8601	**2014**
31	**"Symmetric Function Realization using Reversible Circuit Synthesis"**	P.Sarkar, B. Mondal, A. Pramanik	**34[th]IEEE TENCON-2014, Bangkok, Thailand.**	**1-6 doi.org/10.1109/ TENCON.2014.7 022446**	**2014**

32	"Power optimization Technique of Logic Circuit Based on Distribution of Energy"	PradyutSarkar, B. Mondal, and Virendra Singh,	**Annual IEEE IndiaConference(INDICON), Pune, India.**	Doi.org/ 10.1109/INDICON.2014.7030407	**2014**
33	"A Novel Rules Optimizer with Feature Selection using Rough-Entropy-Coverage Partitioning based Reduct".	TapanChowdhury, Sanjit Kumar Setua,	**3rd International Conference on Computer, Communication, Control and Information Technology (C3IT), India.**	**1-7** DOI: 10.1109/C3IT. 2015.7060193	**2015**
34	"Enhancement of Perceptual Quality in Static Video Summarization Using Minimal Spanning Tree Approach"	HrishikeshBhaumik, Siddhartha**Bhattacharyy**	**In Proc. of IEEE International Conference on Signal Processing, Informatics, Communication and Energy Systems (IEEE SPICES 2014).**	**226-232** doi.org/10.1109/SPICES.2015.7091401	**2015**
35	"Real-Time Storyboard Generation in Videos Using a Probability Distribution based Threshold"	Hrishikesh Bhaumik, Siddhartha Bhattacharyya, Mausumi Das Nath	**In Proc. of Fifth IEEE International Conference on Communication Systems and Network Technologies (CSNT),**	**425-431.** doi.org/10.1109/CSNT.2015.169	**2015**
36	"An Unsupervised Approach to Video Shot Boundary Detection Using Fuzzy Membership Correlation Measure"	BiswanathChakraborty, Siddhartha Bhattacharyya	**2015 Fifth International Conference on Communication Systems and Network Technologies**	**1136-1141.** DOI: 10.1109/CSNT.2015.57	**2015**
37	"A Novel Two Phase Heuristic Routing Technique in Digital Microfluidic Biochip"	SaritChakraborty, Chandan Das, and Partha P Dasgupta	**Proceedings of the 19th International symposium on VLSI Design and Test (VDAT) Ahmedabad. (Best Paper Award: VDAT '15)**	**136-141** **DOI:** 10.1109/ISVDAT.2015.7208144	**2015**
38	"Dissolve Detection in Videos Using an Ensemble Approach"	H.Bhaumik, S. Bhattacharyya, M.Chakrabort	In Proceedings of Fourth IEEE International Conference on Advances in Computing, Communications and Informatics (ICACCI)	**1461-1467.** doi.org/10.1109/ICACCI.2015.7275818	**2015**
39	"A Improved synthesis of reversible Circuit"	Bikromadittya Mondal, PradyutSarkar	**Proceedings of the 24th Asian Test symposium and** 16th IEEE workshopon RTL and High level Testing, IEEE CS Press, IIT, Bombay.	**45-50**	**2015**
40	"Diagnosis of single faults in quantum	D.Bera,S.	**arXiv:1512.05051 [quant-ph].**		**2015**

	circuits"	Maitra, S. Roychowdhur			
41	"A Novel mixing Technique for low cost sample preparation in Digital Microfluidic Biochip"	SaritChakraborty, Chandan Das,	Proceeding of the 7th International conference on Reliability Aware System Design and Test. (RASDAT) ,Kolkata		2016
42	"A Novel Design of reversibleCrypographic Circuit"	Bikromadittya Mondal, P.Sarkar,	7th International conference on Reliability Aware System Design and Test. (RASDAT), Kolkata.		2016
43	"Redundancy Elimination in Video Summarization"	H. Bhaumik, S. Bhattacharyy	Image Feature Detectors Foundations, Innovations, and Applications, Springer Verlag.	173-202, doi.org/10.1007/978-3-319-28854-3_7	2016
44	"An Efficient Reversible Cryptographic Circuit Design"	Bikromadittya Mondal	20th VLSI Design and Test Symposium (VDAT-2016), IIT Guwahati.	234-239 doi.org/10.1109/ISVDAT.2016.8064874	2016
45	"An Unsupervised Modified Spatial Fuzzy C-mean Method for Segmentation of Brain MR Image"	Kamarujjaman MausumiMaitra	5th International Conference on Advances in Computing,Communicatioand Informatics, Jaipur, India.	DOI: 10.1109/ICACCI.2016.7732035	2016
46	" Knowledge Extraction from Big Data using MapReduce-based Parallel-Reduct Algorithm"	TapanChowdhury, S.K. Setua,	5th International Conference on Computer Science and NetworkTechnology, Changchun, China.	240-246 DOI: 10.1109/ICCSNT.2016.8070156	2016
47	"An Edge Contribution-Based Approach to identify Influential nodes from online Social Networks"	SamyaMuhuri, and S.K. Setua	2nd IEEE International Symposium on Nanoelectronic and Information Systems, India.	155-160 DOI 10.1109/iNIS.2016.39	2016
48	"A Novel Approach towards Biochemical Synthesis on Cyber physical Digital Microfluidic Biochip"	SaritChakraborty	Proceedings of the 30th International Conference on VLSI Design	355-360 DOI: 10.1109/VLSID.2017.44	2017
49	"An Automated Game Theoretic Approach for Cooperative Road Traffic Management in Disaster"	SamyaMuhuri, Debasree Das	3rd IEEE International Symposium on Nanoelectronic and Information Systems, India,	145-150 DOI 10.1109/iNIS.2017.38	2017
50	"An Efficient MapReduce-based	TapanChowdh	3rd IEEE International Symposium on	157-162, DOI:	2017

		ury, Arijit Mukherjee	Nanoelectronic and Information Systems, India,	10.1109/iNIS.2017.40.	
Adaptive K-Means Clustering for Large Dataset"					
51	Securing Module-less Synthesis on Cyberphysical Digital Microfluidic Biochips from Malicious Intrusions"	SaritChakraborty, Chandan Das	Proceedings of the 31st International Conference on VLSI Design, Pune, (VLSID '18),	467-468 DOI: 10.1109/VLSID.2018116	2018
52	"Routing Performance Optimization for Homogeneous droplets on MEDA based Digital Microfluidic Biochips"	Sarit Chakraborty	IEEE Computer Society Annual Symposium on VLSI Miami, Florida, U.S.A. 2019(Best paper nominee)	DOI: 10.1109/ISVLSI.2019.00082	2019
53	An Efficient Test and Fault Tolerance Technique for Paper-based DMFB	Chandan Das, Sarit Chakraborty	23rd International Symposium on VLSI Design and Test (VDAT-2019)	72-86 DOI: 10.1007/978-981-32-9767-8_7	2019
54	Drug Vector Minimization in Cancer Therapy based on Boolean Logic Model of Gene Regulatory Network.	SamyaMuhuri, AnanyaSarkar, SambhabiChakraborty	IEEE International Conference on Data Mining Workshops (ICDMW)	237-243 DOI 10.1109/ICDMW.2018.00042	2018
55	Line Encoding Based Method to AnalyzePerformance of Indian States in Road Safety.	SamyaMuhuri, and Debasree Das	Computational Intelligence in Pattern Recognition, Advances in Intelligent Systems and Computing	541-551 DOI 10.1007/978-981-13-9042-5_46	2018
56	A Statistical Method for Prediction of Liver Disease based on the Brownian Motion Model	S. Muhuri, A.Sarkar, SambhabiChakraborty	IEEE-TENSYMP, 2019,India	585-589 : 978-1-7281-0296-2.	2019
57	A Novel Spatial FCM-Based Method for Brain MRI Image Segmentation in the Presence of Noise &Inhomogeneity.	Kamarujjaman, M. Maitra	3rdInternational Conferenceon Computing and Communication Systems, Shillong	Doi/10.1007/978-981-334084-8-37	2019
58	Graph Based Keyword Extraction for Similarity Identification among Born-Digital News Contents"	Susmita Das, S.Muhuri, and S.Biswas	The 11th International Conference on Computing, Communication and Networking Technologies (ICCCNT).	10.1109/ICCCNT49239.2020.9225376	July 2020

59	Efficient Traffic Routing Method at Busy Intersections	S.S.Roy, S Muhuri	The 11th International Conference on Computing, Communication and Networking Technologies (ICCCNT).	10.1109/ICCC NT49239.2020 .9225418	July 2020
60	Contextual Quality Assessment of the Newspaper Articles Based on Keyword Extraction	S.Muhuri,	International Advanced Computing(IACC) Conference.	DOI: 10.1007/978-3-030-95502-1_38	pp 504–518 Feb, 2022
61	Perception of United of United Nations Climate change Conference in Social Networks	Susmita Das	IEEE 19th India Council International Conference (INDICON)	DOI: 10.1109/I NDICON56171. 2022.10039781	November, 2022
62	An Adaptive Low Cost Single Target Sample Preparation on Digital Microfluidic Biochips	C. Das	IEEE India Council International Subsections Conference (INDISCON)	DOI: 10.1109/I NDISCON5460 5.2022.9862900	July, 2022
63	A Heuristic Approach to Identify Influential Nodes in Complex Social Networks	S. Dutta	14th International Conference on Computing, Communication and Networking Technologies (ICCCNT 2023), IIT, Delhi	Published	July 2023
64	Influence of Nodes in Complex Networks	R. Hansda	14th International Conference on Computing, Communication and Networking Technologies (ICCCNT 2023), IIT,Delhi	Published	July, 2023
65	Influence of Opinion formation on Polarization in Social Networks	S. Das	14th International Conference on Computing, Communication and Networking Technologies (ICCCNT 2023).	Published	July, 2023
66	"A Supervised Learning Algorithm for Disease Prediction using Complex Network and Machine Learning"	Sangita Dutta, Navnee Singh	5th CIPR, 2023	Published	2023
67	An Enhanced Network Density Based Centrality for Influential Node Detection in Complex Networks	Sourav Kumar Mitra	TENCON 2024 – 2024 IEEE Region 10 Conference (TENCON), Singapur	Published	2024

National Conferences:

(b)	Papers publication in SCI/Scopus/ Web of Science indexed conference				
S.No.	Title of the paper	Name of the co-authors	Name of the conference	pages	year
1	"Studies on the properties of faulty function in combinational network under stuck-at faults"		Prof.A.K.Chowdhur Commemoration Symposium on Circuits, System and Computer, Calcutta.		1990
2	"Design and test of irredundant binate Combinational Circuit realizingunatefunctions,"		Professor.A.K.Chowdhury symposium on Circuits, System and Computer, Calcutta.		1990

Patents:

(c)					
S.No.	Title	Name of the co-authors	Patent No.		year
1	"Low Cost Intelligent Colorimeter Using Color LEDs"	S. Bhattacharyya, S. S. Mukherjee, P. Dutta	Patent No. 886/KOL/2015		dated 14.08.2015
2	System to Model and Control Diffusion of COVID '19 using Digital Microfluidic Biochip.	Dr.Sarit Chakraborty	Patent Filing No: 202231022359		14/4/2022

Annexure-III

Invited Lectures

i) **Delivered a invitedkeynote Lecture on "Quantum Computing and Bio-Chip" in 22nd West Bengal State Science & Technology Congress held on 28th February, 2015.**

ii) **Delivered an invited Keynote address on "Machine Learning and Data Science" at NIT Silchar, 2023.**

iii) **Delivered an invited Lecture on "Machine Learning and Data Science Application in polarisation on social Networks and disease prediction" at FDP programme on Data Analytics challenges& opportunities'-organised by CSE department of Techno Mail Engg College, Saltlake on 13th May, 2024.**

iv) **Delivered an invited lecture on "Disease Prediction using Machine Learning" at AIIMS Guwahati, June, 2023.**

v) **Invited key Note speaker in the workshop on Applied Artificial Intelligence and Natural Language Processing(AAINLP-2022), 7th March, 2022.**

vi) **Delivered an invited keynote Lecture in FDP program on "Disease Detection and Data Science Using Machine learning" in J.C.Bose University of Science and Technology, Faridabad, Haryana March 23rd, 2021.**

vii) **Delivered a invited keynote Lecture on "Big Data , IoTand Machine learning application" in the workshop on** *Application of Machine Learning at NIT, Arunachal Pradesh***, November, 2017**

viii) **Delivered a invitedkeynote Lecture on "Machine learning application in Routing and Bio-chemical synthesis on Digital Microfluidic Biochip" and Big Data using Map Reduced based Parallel reduct Method" in the workshop on** *Application of Machine Learning at NIT, Silchar***, March, 2017.**

ix) **Delivered an invited keynote Lecture in FDP program on "IOT and Security" in MAKAUT, (Technical University of West Bengal), Haringhata West Bengal, November 8th, 2020.**

x) **Delivered an invited keynote Lecture on "Social Network analysis and application" in Government College of Engineering and Leather Technology, Kolkata, March 6th, 2019**

xi) **Delivered a invited keynote Lecture on "Routing Technique Biochemical Synthesis on CyberphysicalDigital Microfluidic Biochip (DMFB)" in 8th** *IEEE workshop on Reliability Aware System Design and Test (RASDAT), 2015, held with 30thInternational Conference onVLSI Design,* **IEEE CS Press,** Hyderabad, India, **12th January, 2017.**

xii) **Delivered a invited keynote Lecture in FDP on "Summarization of Video Image Processing"** *at Techno India College, Salt Lake***, 2018**

xiii) **Invited Lecture "Big Data analysis and application**" In a Central **University Tripura on September, 2016.**

xiv) **I was invited Nara Institute of Science and Technology Nara, Japan** to deliver a Lecture on **"Synthesis and Redundancy of Balanced Ternary Logic Function in Quantum Circuit**." On**22nd May 2013.**

xv) **Delivered a Lecture in theNational level Faculty Development Programme on "Hybrid Computational Intelligence**" from **17th July to 27th July**, **2017** organized **by NIT, Patna** and RCCIIT, Kolkata

xvi) **Invited from department** of **CSE IIT Guwahati** for delivering a Lecture on **"*Testing and Synthesis ofDigital Micro-fludic Bio-Chip*"**on 12th April **2014.**

xvii) Delivered a invited **keynote Lecture on Quantum Computing and Synthesis, Fault Diagnosis and Redundancy in reversible Circuit" in** *6th IEEE workshop on Reliability Aware System Design and Test (RASDAT), 2015, held with Twenty-eight, International Conference onVLSIDesign,***IEEE CS Press,** Bangalore, India, **8th January, 2015.**

xviii) **Invited Lecture"Digital Micro-fludic Bio-Chip Optimization**" In an International Conference organized by**Kalyani University on 9th January, 2015.**

xix) **Invited as a resource person** in **Refresher Course** held in **Burdwan University in 2007.**

xx) **Delivered a Lecture in the National level Faculty Development Programme on "Recent Trend in Research and Research Methodology" from 6th January to 10th January, 2014 organized by RCCIIT, Kolkata.**

xxi) Delivered a Lecture in the **National level workshop** on "Mathematical model for Scientific and Technological Application", from 17th June to 21st June, **2013** organized by **RCCIIT, Kolkata**.