Curriculum Vitae

Brief Profile:

Dr. Kamalika Bhattacharjee is an Assistant Professor in the Department of Computer Science and Engineering, National Institute of Technology, Tiruchirappalli. She received her B.Tech (Information Technology) from Govt. College of Engineering & Textile Technology, Serampore in 2011 and M.E. (Information Technology) from Indian Institute of Engineering Science and Technology (IIEST), Shibpur (Erstwhile, Bengal Engineering & Science University Shibpur) in 2013. She was the college topper in her B.Tech and Gold Medalist in her M.E.. She completed her Ph.D. from her alma mater IIEST, Shibpur in 2019 as recipient of INSPIRE fellowship from the Department of Science and Technology, Govt. of India. Her research interests include cellular automata, randomness, artificial life and logic.

1. Name: **Kamalika Bhattacharjee**

2. Designation: Assistant Professor

3. Office Address: Room no. 309, Dept of CSE

4. Telephone (Direct) (Optional):

   Telephone :   Extn (Optional):

   Mobile (Optional):

5. Email (Primary):kamalika@nitt.edu   Email (Secondary) :

6. Field(s) of Specialization: Theoretical Computer Science

7.   Employment Profile

Job Title	Employer	From	To
Assistant Professor	NIT Trichy	29-June-2020	
Temporary Faculty	IIIT Ranchi	07-August-2019	23-June-2020
Associate System Engineer	IBM India Pvt Ltd	05-August-2013	10-March-2014

8. Academic Qualifications (From Highest Degree to High School):

Examination	Board / University	Year	Division/ Grade	Subjects
PhD	IIEST, Shibpur	2019		Theoretical Computer Science (Cellular Automata)
M.E.	BESU, Shibpur	2013	First	Information Technology

B.Tech	WBUT	2011	First	Information Technology
H.S.	WBCHSE	2007	First	Science

9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/Institution	From	To
Member	Academic Reform Committee	18-03-2021	
Member	Anti Ragging Committee	26-02-2021	
Faculty Advisor	Life Style Club	28-07-2021	

10. Academic/Administrative Responsibilities outside the University

Position	Institution	From	To
Moderator	Cellular Automata India	August, 2020	

11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization

12. Fellowships

Year of Award	Name of the Fellowship	Awarding Organization	From (Month/Year)	To (Month/Year)
2014	INSPIRE	DST, Govt of India	Jan/2014	Dec/2018
2011	GATE Fellowship	MHRD, Govt of India	July/2011	June/2013
2007	Peerless Platinum Jubilee Scholarship	Peerless Group	May/2007	April/2008

13. Details of Academic Work
   (i) Curriculum Development: BTech CSE BOS coordinator in IIIT Ranchi
   (ii) Courses taught at Postgraduate and Undergraduate levels
       Postgraduate: Mathematical Concepts in Computer Science
       Undergraduate:
           1. Design and Analysis of Algorithms
           2. Compiler Design
           3. Design Thinking
           4. Randomized Algorithms

5. Computer Organization
6. Comprehensive Viva Voce
7. Algorithm Lab
8. Discrete Mathematics (IIIT Ranchi)
9. Combinatorics and Graph Theory (IIIT Ranchi)
10. Advanced Algorithms (IIIT Ranchi)

(iii) Projects guided at Postgraduate level
- Simulation and Modelling of Covid-19 Pandemic, 2021-2022
- Creating College Enquiry Chatbot using RASA and Python, 2020-2021

(iv) Other contribution(s)
- NBA work at Department level
- Course outline for NEP at Department level
- Reviewer for Mathematical Reviews, American Mathematical Society
- Reviewer of Journals -International Journal of Bifurcation and Chaos, New Generation Computing, Nonlinear Dynamics, Discrete Applied Mathematics, European Journal of Pure and Applied Mathematics, Bulletin of Electrical Engineering and Informatics, Applied Mathematics

14. Details of Major R&D Projects

| Title of Project | Funding Agency | Duration | | Status |
		From	To	Ongoing/ Completed

15. Number of PhDs guided

Name of the PhD Scholar	Title of PhD Thesis	Role(Supervisor/ Co-Supervisor)	Year of Award

16. Participation in Workshops/ Symposia/ Conferences/ Colloquia /Seminars/ Schools etc. (mentioning the role)

Date (s)	Title of Activity	Level of Event (International/ National/ Local)	Role (Participant/ Speaker/ Chairperson, Paper presenter,	Event Organized by	Venue

			Any other)		
March 15-19, 2021	One Week Online Workshop on Cellular Automata and Secured Hardware Design	International	Session Chair	Indian Institute of Engineering Science and Technology, Shibpur, India, in collaboration with University of Turku, Finland	Online from IIEST Shibpur
17-DEC-2018 to 22-DEC-2018.	7th Indian School on Logic and its Applications (Part II)	National	Speaker	IIEST, Shibpur and Calcutta Logic Circle in collaboration with Association for Logic in India	IIEST Shibpur
12-JAN-2018 to 13-JAN-2018.	5th International Conference on Emerging Applications of Information Technology (EAIT), 2018	International	Paper Presenter	IIEST, Shibpur and Computer Society of India	IIEST Shibpur
25-MAR-2013	One-day workshop on Non-Uniform Cellular Automata: Theory and Applications	National	Volunteer and Speaker	BESU, Shibpur	BESU, Shibpur

17. Workshops/ Symposia/ Conferences/ Colloquia/Seminars Organized (as Chairman/ Organizing Secretary/ Convenor / Co-Convenor)

Title of Activity	Level of Event (International/ National/ Local)	Date (s)	Role	Venue
Indian Summer School on Cellular Automata 2023	International	May 23 -July 22, 2022	Mentor and Co-organizer	Online
First Asian Symposium on Cellular Automata Technology (ASCAT) 2022	International	03-05 March, 2022	Member of Organizing Committtee	IIEST, Shibpur
Indian Summer School on Cellular Automata 2022 - An Internship on Cellular Automata	National	15-June-2021 to 01-August-2021.	Teacher and Co-organizer	Online
Second Webinar Series on Cellular Automata	International	June, 2021 - August, 2021	Organizer and Host	Online
A Tribute to John Conway: A Lecture Series on the Memory of Prof. John Horton Conway	International	April 2021	Organizer and Host	Online
First Webinar Series on Cellular Automata	International	Aug, 2020 - Feb, 2021	Organizer and Host	Online
One Week Online Workshop on Machine Learning – Concepts and Applications	National	19 – 23 Apr, 2021	Co-Convenor	Department of CSE, NIT Trichy.

18. Invited Talks delivered

Topic	Date	Inviting Organization
Limits of Computation	14-19 December, 2020	Short-term Training Programme on Formal Languages and Automata Theory (e-STTP FLAT-2020), organized by SRM University, Kattankulathur
1. Reversibility, Semi-Reversibility and Reachability Tree 2. Randomness in Cellular Automata	March 15-19, 2021	One Week Online Workshop on Cellular Automata and Secured Hardware Design, organized by Indian Institute of Engineering Science and Technology, Shibpur, India, in collaboration with University of Turku, Finland, sponsored by Scheme for Promotion of Academic and Research Collaboration (SPARC), Ministry of Human Resource and Development, Govt. of India.

19. Membership of Learned Societies

Type of Membership (Ordinary Member/ Honorary Member / Life Member)	Organization	Membership No. with date
Member	IEEE, IEEE Computer Society, IEEE Women in Engineering and IEEE Young Professionals	92196895, 2021
Professional Member	ACM	1409594, 2021
Team Member	The Computer Science Laboratory (LCCOMP), Mexico City, Mexico	

20. Academic Foreign Visits

Country	Duration of Visit	Programme

21. Publications

 (A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year	Impact Factor of the Journal (Optional)

Bhattacharjee and Sukanta Das	A Search for Good Pseudorandom Number Generators: Survey and Empirical Studies	Computer Science Review	45	100471	2022	
Sukanya Mukherjee, Kamalika Bhattacharjee and Sukanta Das	Reversible Cellular Automata: A Natural Clustering Technique	Journal of Cellular Automata	16(1-2)	1-38	2021	
Sukanya Mukherjee, Sumit Adak, Kamalika Bhattacharjee and Sukanta Das	Nonuniform Non-linear Cellular Automata with Large Cycles and Their Application in Pseudo-Random Number Generation	International Journal of Modern Physics C	32 (07)	2150091	2021	
Sukanya Mukherjee, Kamalika Bhattacharjee and Sukanta Das	Clustering Using Cyclic Spaces of Reversible Cellular Automata	Complex Systems	30(2)	205-237	2021	
Sumit Adak, Kamalika Bhattacharjee and Sukanta Das	Maximal Length Cellular Automata in GF(q) and Pseudo-random Number Generation	International Journal of Modern Physics C	31(03)	2050037	2020	
Kamalika Bhattacharjee and Sukanta Das	Random Number Generation using Decimal Cellular Automata	Communications in Nonlinear Science and Numerical Simulation	78	104878	2019	
Kamalika Bhattacharjee, Nazma Naskar, Souvik Roy and Sukanta Das	A survey of cellular automata: types, dynamics, nonuniformity and applications	Natural Computing	19	433–461	2020	
Kamalika Bhattacharjee and Sukanta Das	A List of Tri-state Cellular Automata which are Potential Pseudo-random Number Generators	International Journal of Modern Physics C	29(09)	1850088	2018	
Kamalika Bhattacharjee, Dipanjyoti Paul and Sukanta Das	Pseudorandom Number Generation using a 3-state Cellular Automaton	International Journal of Modern Physics C	28(06)	1750078	2017	
Kamalika	Reversibility of d-	Journal of	11(2-3)	213–245	2016	

Bhattacharjee and Sukanta Das	state Finite Cellular Automata	Cellular Automata				

(B) Conferences/Workshops/Symposia Proceedings

Author(s)	Title of Abstract/ Paper	Title of the Proceedings	Page numbers	Conference Theme	Venue	Year
Bhattacharjee, Kamalika	First Degree Cellular Automata as Pseudo-Random Number Generators.	In: Das, S., Martinez, G.J. (eds) Proceedings of First Asian Symposium on Cellular Automata Technology. ASCAT 2022.	122–137	Cellular Automata Technology	Online from IIEST Shibpur	2022
Kamalika Bhattacharjee, Nitin More, Shobhit Kumar Singh, and Nikhil Verma	Emulating Mersenne Twister with Cellular Automata	In: Das, S., Martinez, G.J. (eds) Proceedings of First Asian Symposium on Cellular Automata Technology. ASCAT 2022.	95–108	Cellular Automata Technology	Online from IIEST Shibpur	2022
Bhattacharjee, Kamalika and Das, Sukanta.	Computation with Democracy: An Intelligent System	Intelligence Science III: 4th IFIP TC 12 International Conference, ICIS 2020	273–282	Intelligent Science	Online from NIT Durgapur	February 24-27, 2021
Mukherjee, Sukanya, Bhattacharjee, Kamalika, and Das, Sukanta.	Cycle based Clustering using Reversible Cellular Automata	In Proceedings of AUTOMATA 2020	29–42	Cellular Automata	Online, from Sweden and the UK	Aug 10-12, 2020
Bhattacharjee, Kamalika, Paul, Dipanjyoti Paul and Das, Sukanta	Pseudorandom Pattern Generation using 3-state Cellular Automata	International Conference on Cellular Automata, ACRI, 2016	3-13	Cellular Automata	Morocco	September 5-8, 2016
Bhattacharjee, Kamalika	Design of an Adder for Ternary Numbers using a 3-state Cellular Automaton	Fifth International Conference on Emerging Applications of Information Technology (EAIT) 2018	1-4	Information Technology	Kolkata	Jan 12-13, 2018
Hazari, Raju, Bhattacharjee, Kamalika, and Das, Sukanta	Design of Hardware for Deterministic Nagel-	International Symposium on Electronic System Design	154-156	VLSI Technology	Kolkata	Dec 19-22, 2012

	Schreckenberg Traffic Model	(ISED), 2012				

(C) Books & Monographs

Author(s)	Title of Book/Monograph	Name of Publishers	Year of Publication	ISSN/ISBN Number
Mihir K Chakraborty, Sukanta Das, Shubhasis Bandopadhyay, **Kamalika Bhattacharjee**, Raju Hazari, Sumit Adak, Souvik Roy, Supreeti Kamilya	*A Journey through the Logic Wonderland* .	IIEST Shibpur	2020	e-book
Sukanta Das, Souvik Roy and Kamalika Bhattacharjee (Editors)	The Mathematical Artist - A Tribute To John Horton Conway	Emergence, Complexity and Computation (ECC, volume 45), Springer	2022	978-3-031-03985-0