



Ajeesh Ramanujan

My Erdos number is 3 (Gheorghe Păun → Solomon Marcus → Paul Erdős)

CONTACT INFORMATION

Associate Professor
Department of CSE
College of Engineering, Trivandrum
Trivandrum, Kerala-695016

Mobile: (91) 9495135213
E-mail: ajeeshramanujan@gmail.com

RESEARCH INTERESTS

- Formal Languages and Automata Theory
- Unconventional Modes of Computation
- Algorithms and Complexity Theory
- Theoretical Aspects of Machine Learning

EDUCATION

Indian Institute of Technology, Madras, Chennai, India

Ph.D., Computer Science and Engineering, February 2014

- Dissertation Topic: “CONTROL LANGUAGES IN P SYSTEMS”
- Advisor: Prof. Kamala Krithivasan

Cochin University of Science and Technology, Kochi, India

M.Tech., Computer and Information Science, May, 2003

LBS, Kasaragod (Calicut University), Kasaragod, India

B.Tech., Computer Science and Engineering, Dec, 1999

ACADEMIC EXPERIENCE

Amrita Institute of Technology, Kollam, India

Lecturer

May, 2004 - May, 2005

Taught undergraduate level course for the B.Tech in Computer Science and Engineering .

Government Engineering College, Palakkad, India

Lecturer

June, 2005 - Dec, 2008

Taught undergraduate level course for the B.Tech in Computer Science and Engineering .

IIT Madras, Chennai, India

Graduate Student

Jan, 2009 - Dec, 2013

Includes Ph.D. research, Ph.D. and Masters level coursework and teaching assistant for undergraduate and graduate level courses.

Government Engineering College, Palakkad, India

Assistant Professor

Jan, 2014 - June 2017

Teaching undergraduate level course for the B.Tech in Computer Science and Engineering and graduate level course for M.Tech in Computational Linguistics.

College of Engineering, Trivandrum, India

Assistant Professor

July, 2017 - 9th Sep, 2021

Teaching undergraduate level course for the B.Tech in Computer Science and Engineering and graduate level course for M.Tech in Computer Science and Engineering and Information Science.

Rajiv Gandhi Institute of Technology,, Kottayam, India

Assistant Professor

13th Sep, 2021 - 7th July, 2022

Teaching undergraduate level course for the B.Tech in Computer Science and Engineering and graduate level course for M.Tech in Computer Science and Engineering and Information Science.

College of Engineering, Trivandrum, India

Associate Professor

8th July, 2022 - present

Teaching undergraduate level course for the B.Tech in Computer Science and Engineering and graduate level course for M.Tech in Artificial Intelligence, Computer Science and Engineering and Information Science.

PUBLICATIONS

Aswathy M R, P.C. Reghu Raj, and Ajeesh Ramanujan, Effectiveness of Fuzzy Graph Based Document Model. KSII Transactions on Internet and Information Systems, 18(8), 2178-2198, 2024. DOI: 10.3837/tiis.2024.08.007.

Luping Zhang, Fei Xu, Ajeesh Ramanujan and K.G. Subramanian, Control languages accepted by labeled spiking neural P systems with rules on synapses, Theoretical Computer Science, 893, 60-71, 2021.

Deepa C A, Reghu Raj P C and Ajeesh Ramanujan, Relation Extraction Using Deep Learning Methods - A Survey, ICTACT Journal on Soft Computing, 9(3), 1893-1902, 2019.

Atulya K Nagar, Ajeesh Ramanujan and K G Subramanian, Control Words of String Rewriting P Systems, International Journal of Advances in Engineering Sciences and Applied Mathematics, 10(3), 230-235, 2018.

Kamala Krithivasan, Gheorghe Păun and Ajeesh Ramanujan, On Controlled P systems, Fundamenta Informaticae 131, 451-464, 2014.

Ajeesh Ramanujan and Kamala Krithivasan, Control Languages associated with Spiking Neural P Systems, Romanian Journal of Information Science and Technology, 15(4), 301-318, 2012.

Kamala Krithivasan, Gheorghe Păun and Ajeesh Ramanujan, Control words associated with P systems, Frontiers of Membrane Computing: Open Problems and Research Topics by M. Gheorghe, Gh. Paun and M. J. Perez-jimenez - editors, Int. J. Foundations of Computer Science, 24(5), 568-569, 2013.

Kamala Krithivasan, Ajeesh Ramanujan, On The Power Of Distributed Bottom-up Tree Automata, Int. J. of Advanced Computer Science, 3(4), 184-190, 2013.

CONFERENCE PRESENTATIONS

Sandhya L S and Ajeesh Ramanujan, Leveraging 3D CNNs for Robust Detection of GAN-Generated Medical Image Forgeries, accepted for publication in the proceedings of the 11th International Conference on Smart Computing and Communications (ICSCC 2025), Kochi, Kerala, 2025.

Aswathy M R, P. C. Reghu Raj, and Ajeesh Ramanujan, Improved Fuzzy graph-based document model for NLP applications, accepted for publication in the proceedings of the International Conference on Innovations in Data Science, ICIDS 2024.

Vidya P V and Ajeesh Ramanujan, Vector Embedding Solution for Recommendation System. Proceedings of the 21st International Conference on Natural Language Processing (ICON), pages 583–587, AU-KBC Research Centre, Chennai, India. NLP Association of India (NLPAI).

J. Jose and A. Ramanujan, Gaze Detection and Text Extraction from Images using CNN with DBSCAN-based Filter Design, 2024 11th International Conference on Advances in Computing and Communications (ICACC), Kochi, India, 2024, pp. 1-6, doi: 10.1109/ICACC63692.2024.10845715.

Hiba Hameed and Ajeesh Ramanujan, Analysis of Various GNNs in Solving MaxCut Problem, Proceedings of 4th International Conference on Recent Trends in Machine Learning, IoT, Smart Cities and Applications, 531-540, 2024.

Jism K, A. Resmi S and, Ajeesh Ramanujan, Deep Learning Enabled Classification of Cognitive Impairment Stages Using MRI Images, 2023 International Conference on Computational Intelligence and Sustainable Engineering Solutions (CISES), Greater Noida, India, 2023, pp. 499-505, doi: 10.1109/CISES58720.2023.10183447.

C. A. Deepa, P. C. Reghu Raj, and and Ajeesh Ramanujan, Improving relation extraction beyond sentence boundaries using attention, AIP Conference Proceedings 2336(1), 2021.

Ajeesh Ramanujan and Blesson Andrews Varghese, Internet Censorship Based on Bayes Learning Model, Proceedings of the Second International Conference on Networks and Advances in Computational Technologies. Transactions on Computational Science and Computational Intelligence, 49-60, 2021.

Vinitha M Rajan and Ajeesh Ramanujan, Architecture of a Semantic WordCloud Visualization, Proceedings of the Second International Conference on Networks and Advances in Computational Technologies. Transactions on Computational Science and Computational Intelligence, 95-106, 2021.

Ajeesh Ramanujan and Blesson Andrews Varghese, A Survey on DDoS Prevention, Detection, and Traceback in Cloud, Proceedings of the Second International Conference on Networks and Advances in Computational Technologies. Transactions on Computational Science and Computational Intelligence, 69-82, 2021.

Deepa C A, Reghu Raj P C and Ajeesh Ramanujan, Relation Extraction across sentences using Bi-directional Long Short Term Memory Networks, 2020 International Conference on Emerging Trends in Information Technology and Engineering (ic-ETITE), 1-6, 2020.

Deepa C A, Reghu Raj P C and Ajeesh Ramanujan, Improving Relation Extraction Beyond Sentence Boundaries Using Attention, In the proceedings of International Conference on Computational Sciences-Modelling, Computing and Soft Computing (CSMCS 2020).

Krishnaprasad P and Ajeesh Ramanujan, Natural language generation using rst with morphology learning using factorized word vectors, accepted for presentation in the 7th National Conference on Indian Language Computing (NCILC-2017) held at CUSAT, 2017.

Krishnaprasad P, Sooryanarayanan A and Ajeesh Ramanujan, Malayalam text summarization: An extractive approach, Proceedings of the International Conference on Next Generation Intelligent Systems (ICNGIS), 1-4, 2016.

Krishnaprasad P and Ajeesh Ramanujan, Ramanujan sums based image kernels for computer vision, Proceedings of International Conference on Electrical, Electronics, and Optimization Techniques (ICEEOT), 835-839, 2016.

Ajeesh Ramanujan, Kamala Krithivasan and Vipin Vasu A V, On Control Languages of Spiking Neural P Systems with Anti-spikes, Proceedings of the Third Asian Conference on Membrane Computing (ACMC), which will be held in Karunya University, Coimbatore, India, September 18-19, 2014.

Ajeesh Ramanujan and Kamala Krithivasan, Control languages associated with tissue P systems, Proceedings of the Twelfth International Conference on Unconventional Computation and Natural Computation 2013, Milano, Italy, Lecture Notes in Computer Science, 7956, 186-197, 2013, Milan, Italy, July 1-5, 2013.

Ajeesh Ramanujan and Kamala Krithivasan, Control Words of Transition P Systems, Proceedings of Seventh International Conference on Bio-Inspired Computing: Theories and Applications (BIC-TA 2012), Advances in Intelligent Systems and Computing, 201, 145-155, 2013.

Kamala Krithivasan, Gheorghe Paun and Ajeesh Ramanujan, Control words associated with P systems, Frontiers of Membrane Computing: Open Problems and Research Topics by M. Gheorghe, Gheorghe Păun and M. J. Pérez-Jiménez - editors, published in the second volume of the proceedings of 10th Brainstorming Week on Membrane Computing, Sevilla, 171-250, 2012. Also published in Int. J. Foundations of Computer Science, Volume No.24(5), 568-569, 2013.

Kamala Krithivasan and Ajeesh Ramanujan, Matrix Representation of Spiking Neural P Systems with Delay, Proceedings of the Twelfth international conference on membrane computing, France, 283-298, 2011.

BOOK CHAPTER Nahil Ahmed Hassan, Abhigith Neil Abraham, Ajeesh Ramanujan, Deep Learning Applications with Python in Advanced Deep Learning for Engineers and Scientists, 23-60, Springer.

INTERACTIONS WITH
OUTSIDE WORLD • Reviewer for the International Conference on Power, Instrumentation, Control, and Computing (PICC 2025) organised by Government Engineering College, Thrissur held during 9th to 11th October 2025.

• Served as General Co-chair for the 6th International Conference on Control, Communication and Computing (ICCC 2025) organized by College of Engineering Trivandrum, held during 23-25 May, 2025.

• Chaired a session for the 6th International Conference on Control, Communication and Computing (ICCC 2025) organized by College of Engineering Trivandrum, held during 23-25 May, 2025.

• Resource person for a one day seminar on Machine Learning and Generative AI organized by IETE Thiruvananthapuram centre on August 10 2024.

• Chaired two sessions for the International Conference on Power, Communication, and Intelligent Systems (APCI 2024), organized by Government Engineering College, Kannur from 21-22 June, 2024.

• Resource person for an FDP on Theoretical Machine Learning, organized by Dept of CSE, IIIT Kottayam, from 27-31, May 2024.

• Resource person for an FDP on Deep Learning Theory and Practice organized by Dept of CSE, Government Engineering College, Thrissur from 29th January to 3rd February, 2024.

• Resource person for an FDP on Machine Learning Techniques organized by Dept of CSE, Rajiv Gandhi Institute of Technology, Kottayam from 29-31 January, 2024.

- Resource person for an FDP on Deep Learning and its Applications organized by Government Engineering College, Sreekrishnapuram, Palakkad from 15-19 January, 2024.
- Served as Technical Program Committee Co-chair for the 5th International Conference on Control, Communication and Computing (ICCC 2023) organized by College of Engineering Trivandrum, held during 19-21 May, 2023.
- Resource person for an FDP on Recent Trends and Applications of NLP organized by the Department of Computer Science and Engineering, SCMS School of Engineering and Technology, Ernakulam from 15-18 February, 2022.
- Resource person for a training program on Machine Learning Engineering Applications organized by College of Engineering Trivandrum from 20-22 December, 2021.
- Resource person for an FDP on AI and Data Sciences: A Pedagogical Approach organized by the Department of Electronics and Communication, St. Joseph's College of Engineering and Technology, Palai from 09-13 August, 2021.
- Resource person for an FDP on Mathematical Foundations For Artificial Intelligence and Machine Learning organized by the Department of Basic Science and Humanities, Muthoot Institute Of Technology and Science, Varikoli from 23-25 June, 2021.
- Chaired a session for the International Conference on Communication, Control and Information Sciences (ICCISc-2021) organized by Government Engineering College, Idukki from 16-18 June, 2021.
- Resource person for an FDP on Machine Learning with its Mathematical Foundations conducted by the Department of Computer Science and Engineering, Vimal Jyothi Engineering College, Kannur from 02-06 March, 2021.
- Resource person for an FDP on Emerging Trends in Machine Learning and its Application conducted by the Department of Information Technology, University College of Engineering, Kariavattom from 05-10 August, 2020.
- Acted as a reviewer for the journal "Journal of Membrane Computing".
- Presented the project titled "Image Super Resolution" at the final round of 7th CSI-InApp National Student Project Awards 2018 held on 28-29 April, 2018 at Trivandrum, Kerala.
- Acted as a resource person for an FDP on Algorithms in Machine Learning conducted by the Department of Computer Science and Engineering, CET from 18-22 December, 2018.
- Acted as a reviewer for the 13th International Conference on Unconventional Computing and Natural Computation held at University of Western Ontario, London, Ontario, Canada, July 14-18, 2014.
- In the technical program committee of the International Conference on Computing, Communication and Signal Processing conducted by College of Engineering Karunagapally in July 8-9, 2016.
- Acted as a resource person for an FDP on Natural Language Processing and Machine Learning conducted by CSE Department of Vidhya Academy of Science and Technology in September 2016.
- Acted as a question paper setter for Kerala University, Calicut University and Kannur University.
- Head of the Department, Department of Computer Science and Engineering, College of Engineering Trivandrum from October 2024.
- PG Coordinator, Department of Computer Science and Engineering, CET from September 2022 to October 2024.
- Convener, Board of Studies, COMPUTER SCIENCE AND ENGINEERING(ALLIED) of APJ Abdul Kalam Technological University, Thiruvananthapuram.

POSITIONS
HELD/OTHER
RESPONSIBILITIES

- Member Treasury Technical Committee, Directorate of Treasuries, Government of Kerala, Thiruvananthapuram.
- DQAC Coordinator, Department of Computer Science and Engineering, CET from September 2022 to July 2024.
- Faculty Advisor, 2023-2025 PG Computer Science and Engineering (Artificial Intelligence) Batch, CET.
- Faculty Advisor, 2022-2024 PG Computer Science and Engineering (Artificial Intelligence) Batch, CET.
- Faculty Advisor, 2021-2023 PG Computer Science and Engineering (Artificial Intelligence) Batch, CET.
- Faculty Advisor, 2020-2022 PG Computer Science and Engineering (Artificial Intelligence) Batch, CET.
- TEQIP-II R&D Coordinator, GEC Palakkad from January 2014 to June 2017.
- Skill Development Platform Kerala nodal officer from April 2018 to September 2021.
- Faculty Advisor, 2016-2020 UG Computer Science and Engineering Batch, CET.
- TrEST research park advisory committee member from March 2019 to September 2021.
- Member CET center for International Relations from 2018.
- PG Coordinator, GEC Palakkad from August 2014 to June 2017.

PROGRAMS
COORDINATED

- National Conference titled "National Conference on Computational Linguistics and Information Retrieval (NCCLIR 2014) held at GEC, Palakkad from December 29-31, 2014.
- Visiting Faculty Programme on "Orchestrating Microservices Using Containers in Cloud" by Mr. Jay Kumar, Cloud Solution Architect, Microsoft, USA, 04-07-2018 at CET.
- FDP on "Basis of Computational Complexity Theory", January 14-16, 2015 at GEC Palakkad.
- A three day research talk on "Advances in Distributed systems" at GEC Palakkad from 31-03-2016 to 02-04-2016.
- Visiting Faculty Programme on "Research Guidance: How to read, write and present a research paper" by Vaskar Raychoudhury, Assistant Professor, IIT Roorkee at GEC Palakkad on 02-04-2016.

PROGRAMS
ATTENDED

- Two day training programme on "High Performance Computing" organised by College of Engineering Trivandrum from 9-10th May 2024.
- Workshop on "Outcome Based Learning" conducted by Engineering Staff College of India held at College of Engineering Trivandrum from 10-11 June 2019.
- Pedagogical Training conducted by Teaching Learning Center, IIT Madras from 18-20 January 2016.
- FSDP on "Advanced DSP and Applications", conducted by Department of ECE, GEC Palakkad from January 30 - February 2, 2017.
- FSDP on "Advanced Digital Signal Processing", conducted by Department of ECE, GEC Palakkad from 22-24 February, 2016.
- Workshop on "Core Java" conducted by Department of CSE, GEC Palakkad from 5-7 November, 2014.

- SUBJECTS ENGAGED
- Theory of Computation - For CSE Undergraduates.
 - Design and Analysis of Algorithms - For CSE Undergraduates.
 - Compiler Design - For CSE Undergraduates.
 - Graph Theory and Combinatorics - For CSE Undergraduates.
 - Computational Geometry - For CSE Undergraduates.
 - Mathematical Foundations for Computational Linguistics - For CSE M.Tech students.
 - Machine Learning - For CSE M.Tech students.
 - Advanced Data Structures and Algorithms - For CSE M.Tech students.

PHD ADVISEES

Scholar Name	Place of Research	Scholar Type	Type of Guideship
VIDYA P V	CET	Full time scholar	Supervisor
SANDHYA L S	CET	Full time scholar	Supervisor
LEENA V A	CET	Part time scholar	Supervisor
GEORGE THOMAS	CET	Full time scholar	Supervisor
DEEPA C A	GEC Palakkad	Full time scholar	Cosupervisor
ASWATHY M R	GEC Palakkad	Part time scholar	Cosupervisor

MEMBERSHIP IN
PROFESSIONAL
SOCIETIES

- Indian Society for Technical Education (ISTE) lifetime member (53983).

BOOKS/BOOK
CHAPTERS

- Hassan, N.A., Abraham, A.N., Ramanujan, A. (2021). Deep Learning Applications with Python. In: Prakash, K.B., Kannan, R., Alexander, S., Kanagachidambaresan, G.R. (eds) Advanced Deep Learning for Engineers and Scientists. EAI/Springer Innovations in Communication and Computing. Springer, Cham. https://doi.org/10.1007/978-3-030-66519-7_2
- Algorithmic Thinking with Python coauthored with Narasimhan T, textbook for the course named UCEST105 - Algorithmic Thinking with Python under KTU 2024 syllabus.

VIDEO COURSES

- Graph Theory and Combinations.
Playlist Video link:
https://www.youtube.com/playlist?list=PLfC_fEdpdRYj9YKm2HpZuV9dZNcIMjQOE