

Rahul Kala

Work

Assistant Professor,
Robotics and Artificial Intelligence Laboratory,
Indian Institute of Information Technology Allahabad, India

(2014-present)

Scholarships and Awards

- One of the four finalists in the Professional Category at the Study UK Alumni Awards, organized by the British Council.
- First Prize in Best PhD Dissertation award by the IEEE Intelligent Transportation Systems Society worth USD \$1,000. Awarded at the 2014 IEEE Intelligent Transportation Systems Conference at Qingdao, China.
- Commonwealth 2010 (UK) scholarship for pursuing PhD at the University of Reading, UK, approximately worth £71,000.
- Travel grant for attending 2017 World Congress in Computational Intelligence, Rio de Janeiro, Brazil, June 8-13, 2018 (sponsored by Department of Science and Technology, Government of India) worth Rs. 2,28,815.
- Travel grant for attending 2012 IEEE Intelligent Vehicles Symposium, Alcalá de Henares, Spain, June 3-7, 2012 (sponsored by University of Reading and Commonwealth Scholarship) worth £800.
- Researcher of the Year from the School of Systems Engineering, University of Reading, UK a competition for 3rd year PhD students; nominated for the award at the university level, did not win.
- Lord of the Code scholarship (1st prize) from RedHat and Ekalavya, KReSIT, IIT Bombay worth Rs. 2 lacs (as a team).
- GATE scholarship for pursuing MTech worth Rs. 80,000.
- As an undergraduate student, numerous awards in software, programming and related contests.

Funded Projects

- *Mission Planning using Sampling based Techniques* as Principle Investigator from the Department of Science and Technology, Government of India for Rs. 39,28,766. [2016-continue]
- *Medical Cyber Physical System for lifestyle diseases using Big Data Analytics* as Co- Principle Investigator from the Department of Science and Technology, Government of India for Rs. 19,12,250. [2018-continue].
- *Towards Socialistic Navigation of Robots and Virtual Robotic Agents Part I: 3D Tacking of People* as Principle Investigator from the Indian Institute of Information Technology, Allahabad for Rs. 10,00,000. [2017-continue].
- *Self-Learning Maps for Self-Driving Cars for Urban Scenarios* as Principle Investigator from NavAjna Technologies Pvt. Ltd. for Rs. 12,81,600. [2019-continue].
- *SLAM for Extreme Weather Conditions* as Principle Investigator from NavAjna Technologies Pvt. Ltd. for Rs. 11,95,200. [2018-continue].
- *New Generation Innovation and Entrepreneurship Development Centre*, Department of Science and Technology and NSTEDB, Government of India as Coordinator for Rs. 2,87,50,000 [2018-continue].
- *Technology Incubation and Development of Entrepreneurs* as coordinator from Ministry of Electronics, Communications and Information Technology, Government of India for Rs. 1,55,00,000.

Education

S. No.	Degree	Board/School/University	Year
1.	PhD in Cybernetics	School of Cybernetics, School of Systems Engineering, University of Reading, UK	2010- 2013

		Thesis: <i>Motion Planning for Multiple Autonomous Vehicles</i>	
2.	BTech (IT) + MTech (IT) (5-year Integrated)	Indian Institute of Information Technology and Management Gwalior, India Thesis: <i>Robotic Path Planning using Artificial Intelligence and Soft Computing Techniques</i>	2005-2010

Areas of Research

- Mission Planning for mobile robots
- Robot Motion Planning
- Intelligent Vehicles and Intelligent Transportation Systems
- Neural Networks, Evolutionary Algorithms, Hybrid Soft Computing
- Pattern Recognition and Classification

Selected Publications

Statistics

Books	Video Lectures	Journals (SCI)	Journals (Others)	Conferences	Book Chapters	Nationals	Total
4	2	27	33	37	3	3	109

Authored Books

1. R. Kala (2016) *On-Road Intelligent Vehicles: Motion Planning for Intelligent Transportation Systems*, Elsevier, Waltham, MA.
2. R. Tiwari, A. Shukla, R. Kala (2013) *Intelligent Planning for Mobile Robotics: Algorithmic Approaches*, IGI Global Publishers, Hershey, PA.
3. A. Shukla, R. Tiwari, R. Kala (2010) *Real Life Applications of Soft Computing*, CRC Press, Boca Raton, FL.
4. A. Shukla, R. Tiwari, R. Kala (2010) *Towards Hybrid and Adaptive Computing: A Perspective*, Studies in Computational Intelligence, Springer-Verlag Berlin, Heidelberg.

Video Lectures

1. R. Kala (2010) *Video Lecture of Soft Computing (39 Hour Video Lecture Series)*, Soft Computing and Expert System Laboratory, IIITM Gwalior, India. Available at: <http://rkala.in/softcomputingvideos.php>
2. R. Kala (2013) *Motion Planning for Multiple Autonomous Vehicles (14 videos/13 hours Video Lecture Series)*, School of Cybernetics, School of Systems Engineering, University of Reading, UK. Available at: <http://rkala.in/autonomousvehiclesvideos.php>

International Journals – SCI

1. R. Kala (2019) Robot Mission Planning using Co-evolutionary Optimization, *Robotica*, DOI: 10.1017/S026357471900081X
2. R. Kala (2019) On sampling inside obstacles for boosted sampling of narrow corridors, *Computational Intelligence* 35(2): 430-447.
3. SMH Jafri, R. Kala (2019) Motion Planning for an Outdoor Mobile Robot on a Probabilistic Costmap, *International Journal of Robotics and Automation*, Accepted, To Appear.
4. S.S. Paliwal, R. Kala (2018) Maximum clearance rapid motion planning algorithm. *Robotica* 36(6): 882-903
5. R. Kala (2018) Routing-based navigation of dense mobile robots. *Intelligent Service Robotics* 11(1): 25–39.
6. R. Kala (2018) On repelling robotic trajectories: coordination in navigation of multiple mobile robots. *Intelligent Service Robotics* 11(1): 79–95.

7. R. Kala (2016) Homotopic Roadmap Generation for Robot Motion Planning, *Journal of Intelligent and Robotic Systems*, 82(3): 555–575.
8. R. Kala (2016) Reaching destination on time with cooperative intelligent transportation systems, *Advanced Transportation* 50(2): 214–227.
9. R. Kala (2016) Homotopy conscious roadmap construction by fast sampling of narrow corridors, *Applied Intelligence*, 45(4): 1089-1102.
10. R. Kala, K. Warwick (2015) Congestion Avoidance in City Traffic. *Journal of Advanced Transportation*, 49(4): 581–595.
11. R. Kala, K. Warwick (2015) Intelligent Transportation System with Diverse Semi-Autonomous Vehicles, *International Journal of Computational Intelligent Systems*, 8(5): 886-899.
12. R. Kala, K. Warwick (2014) Dynamic Distributed Lanes: Motion Planning for Multiple Autonomous Vehicles. *Applied Intelligence*, 41(1): 260-281.
13. R. Kala (2014) Navigating Multiple Mobile Robots without Direct Communication. *International Journal of Intelligent Systems*, 29(8): 767–786.
14. R. Kala, K. Warwick (2014) Heuristic based evolution for the coordination of autonomous vehicles in the absence of speed lanes. *Applied Soft Computing*, 19: 387–402.
15. R. Kala (2014) Coordination in Navigation of Multiple Mobile Robots. *Cybernetics and Systems*, 45(1): 1-24.
16. R. Kala, K. Warwick (2014) Computing Journey Start Times with Recurrent Traffic Conditions. *IET Intelligent Transport Systems*, 8(8): 681 – 687.
17. R. Kala, K. Warwick (2013) Planning Autonomous Vehicles in the Absence of Speed Lanes using an Elastic Strip. *IEEE Transactions on Intelligent Transportation Systems*, 14(4): 1743-1752.
18. R. Kala, K. Warwick (2013) Multi-Level Planning for Semi-Autonomous Vehicles in Traffic Scenarios based on Separation Maximization. *Journal of Intelligent and Robotic Systems*, 72(3-4): 559-590.
19. R. Kala, K. Warwick (2013) Motion Planning of Autonomous Vehicles in a Non-Autonomous Vehicle Environment without Speed Lanes. *Engineering Applications of Artificial Intelligence*, 26(5-6): 1588–1601.
20. R. Kala (2013) Rapidly-exploring Random Graphs: Motion Planning of Multiple Mobile Robots. *Advanced Robotics*, 27(14): 1113-1122.
21. R. Kala (2013) Multi-Robot Motion Planning using Hybrid MNHS and Genetic Algorithms. *Applied Artificial Intelligence*, 27(3): 170-198.
22. R. Kala (2012) Multi-Robot Path Planning using Co-Evolutionary Genetic Programming. *Expert Systems With Applications*, 39(3): 3817-3831.
23. R. Kala, A. Shukla, R. Tiwari (2011) Robotic path planning in static environment using hierarchical multi-neuron heuristic search and probability based fitness. *Neurocomputing*, 74(14-15): 2314-2335.
24. R. Kala, A. Shukla, R. Tiwari (2011) Robotic Path Planning using Evolutionary Momentum based Exploration. *Journal of Experimental and Theoretical Artificial Intelligence*, 23(4): 469-495.
25. R. Kala, A. Shukla, R. Tiwari (2010) Fusion of probabilistic A* algorithm and fuzzy inference system for robotic path planning. *Artificial Intelligence Review*, 33(4): 275-306.
26. R. Kala, A. Shukla, R. Tiwari (2010) Dynamic Environment Robot Path Planning using Hierarchical Evolutionary Algorithms. *Cybernetics and Systems*, 41(6): 435-454.
27. R. Kala, A. Shukla, R. Tiwari (2009) Self-Adaptive Parallel Processing Neural Networks with irregular Nodal Processing Powers using Hierarchical Partitioning. *Neural Network World*, 19(6): 657-680.

Impact

Citations: 1379

h-index: 20

i10-index: 37

(Source: Google Scholar)

Courses Taken

- Artificial Intelligence for 3rd year undergraduate IT students
- Robot Motion Planning for final year undergraduate and postgraduate students
- Artificial Life Simulations for first year postgraduate students
- Humanoid Robotics for postgraduate students
- Robotics and Industrial Automation for final year undergraduate and post-graduate students
- Computational Intelligence for postgraduate students

- Data Structures for 1st year undergraduate students
- Object Oriented Methodologies for 2nd year undergraduate students
- Principles of Programming Languages for 2nd year undergraduate students

Research Supervision

	Completed	Ongoing
PhD	-	6
MTech	25	1

Lectures and Invited Talks

- IEEE CIS Summer School at IIT Allahabad, “High Rate/High Definition Data in Self-driving Cars” (11th August, 2019)
- Universitas Budi Luhur, Jakarta, “Artificial Intelligence and its Applications in Robotics” and “Autonomous Vehicles” (17th-19th July, 2019)
- Global Academy of Technology Bangalore, “Artificial Intelligence and Machine Learning in Robotics” (1st-3rd July, 2019)
- Mercedes Benz Research and Development India, Bangalore, Simultaneous Localization and Mapping (14th March, 2019)
- JK Institute Allahabad, “Leveraging the power of Machine Learning in Robotics” (25th February, 2019)
- Vignan University, “Robot Motion Planning” (17th December, 2018)
- Universitas Budi Luhur, Jakarta (online) “Some buzzwords for Machine Learning in the medical domain” and “Machine Learning in Robotics” (18-19th October, 2018)
- Indian Railways Institute of Transport Management (IRITM), Lucknow, “Artificial Intelligence Problems in Railways” (5th October, 2018)
- Quantum University Roorkee, “Mobile Robotics: From School Projects to Real Life” (21st September, 2018)
- IIT Naya Raipur, “Making more out of your robotics school projects”, (9th February, 2018)
- NIT Raipur, “Motion Planning in Robotics”, (9th February, 2018)
- Communication Connect at IIT Allahabad, “Academic Writing” (27th October, 2017)
- Shri Ramswaroop Memorial University, “Mission Planning for Mobile Robotics” (5th October, 2017)
- All India Student, Young Professional and Women in Engineering Congress at IIT Allahabad “Mission Planning for Mobile Robotics” (29th September, 2017)
- IEEE Computer Society India Symposium 2017 “3D Object Recognition with PCL” (18th March, 2017)
- Manipal University Jaipur “Machine Learning for Vision” (22nd January, 2017)
- Kendriya Vidyalaya, “Robotics Programming, Android and Python” at 2nd Spell of In-Service Course for PGT (CS) (25th December and 27th December, 2016).
- IIITM Gwalior “Mobile Robotics” at Infotsav 2016 (12th November, 2016).
- TEDxIIITA, “Towards Apocalypse of Human Driving and Re-Shaping Futuristic Transportation Systems” (31st January, 2016).
- IIT Bombay, “Motion Planning for Multiple Autonomous Vehicles”, (13th November, 2014).
- Plenary talk on “Motion Planning for Multiple Autonomous Vehicles” at the annual flagship conference of the IEEE Intelligent Transportation Systems Society in 2014 at Qingdao, China (9th October, 2014).
- First SERB Summer School in Robotics at IIT Allahabad “Robot Motion Planning: Approaches and Research Issues” (12th June, 2014)
- IIITM Gwalior, “A* algorithm with applications to Robot Path Planning”, (21st February, 2014).
- B.M.A.S. College of Engineering, Agra, “Artificial Intelligence: Introduction and Motivation”, (11th August, 2010).
- Lectures on Data Structures and Algorithms for training program Training for Professionals, IIITM Gwalior (February, 2009 and October, 2009).

Major Workshops/Conferences Attended

- IEEE Congress on Evolutionary Computation, Wellington, New Zealand, 10-13 June 2019.

- IEEE Conference on Simulation, Modelling and Programming for Autonomous Robots, Brisbane, Australia, 16-19 May 2018.
- IEEE World Congress on Computational Intelligence, Rio de Janeiro, Brazil, July 8-13, 2018.
- Path Planning and Navigation for Robotics under GIAN, IIT Delhi, 3rd – 8th January, 2018.
- Japan-East Asia Network of Exchange for Students and Youths (JENESYS) program at different places in Japan from 24th September to 4th October, 2016.
- 2016 IEEE World Congress on Computational Intelligence, Vancouver, Canada, July 24-29, 2016.
- 17th International IEEE Conference on Intelligent Transportation Systems, Qingdao, China, October 8-11, 2014.
- 2012 IEEE Intelligent Vehicles Symposium, Alcalá de Henares, Spain, June 3-7, 2012.
- 10th IEEE International Conference on Cybernetic Intelligent Systems, Docklands, London, September 1, 2011.
- Commonwealth, Human Rights and Democracy, Common, Association of Commonwealth Universities, Cumberland Lodge, Windsor, March 11-13, 2011.
- Frontiers of Research on Speech and Music (FRSM 2009) , ITC Sangeet Research Academy, Kolkata; CDAC, Kolkata; Sir C V Raman Centre for Physics and Music, Jadavpur University, Kolkata; BIT Mesra; ABV Indian Institute of Information Technology and Management, Gwalior, Dec 15-16, 2009
- Indo-US Workshop on System of Systems Engineering, Indian Institute of Technology Kanpur, Kanpur, India, Oct 26-28, 2009
- Springer International Conference on Contemporary Computing (IC3), Jaypee Institute of Information Technology University & University of Florida, Noida, India, Aug 17-19, 2009
- IEEE International Advanced Computing Conference (IACC), Patiala, India, March 6-7, 2009
- National Symposium on Acoustics (NSA), Acoustic Society of India (ASI) & Naval Science and Technological Laboratory (NSTL), Vishakapatnam, December 22-24, 2008
- 7 day "National Workshop on Computational Neuroscience" (CNSW-2008), Singhad Institute of Business Administration and Computer Application (SIBACA), Lonavala, 23-28 June, 2008

Administrative Responsibilities

- Coordinator, Incubation (2017 – continue)
- Member, Department Under Graduate Committee (2015-continue)
- Advisor, Technical Council, Student Gymkhana (2015-continue)
- Warden, Boys Hostel III (2017 - 2018)
- Member, Network Committee (2016-2017)
- Treasurer, Robotics and Automation Society, UP Section Chapter (2015-2019)

Workshops/Events Organized

- E-summit, 8-10 March, 2019, IIIT Allahabad
- E-summit, 15-18 March, 2018, IIIT Allahabad
- Robotics to Rural – Innovation Teaching and Research Approaches, 28th October, 2017, IIIT Allahabad.
- First SERB Summer School on Robotics, 7-13 June, 2014 held at IIIT Allahabad, sponsored by Science and Engineering Research Board, Department of Science and Technology, Government of India.
- Communication Connect, 27-28 October, 2017, IIIT Allahabad

Contact

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Publications

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19. R. Kala, K. Warwick (2013) Motion Planning of Autonomous Vehicles in a Non-Autonomous Vehicle Environment without Speed Lanes. *Engineering Applications of Artificial Intelligence*, 26(5-6): 1588–1601.
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22. R. Kala (2012) Multi-Robot Path Planning using Co-Evolutionary Genetic Programming. *Expert Systems With Applications*, 39(3): 3817-3831.
23. R. Kala, A. Shukla, R. Tiwari (2011) Robotic path planning in static environment using hierarchical multi-neuron heuristic search and probability based fitness. *Neurocomputing*, 74(14-15): 2314-2335.
24. R. Kala, A. Shukla, R. Tiwari (2011) Robotic Path Planning using Evolutionary Momentum based Exploration. *Journal of Experimental and Theoretical Artificial Intelligence*, 23(4): 469-495.
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27. R. Kala, A. Shukla, R. Tiwari (2009) Self-Adaptive Parallel Processing Neural Networks with irregular Nodal Processing Powers using Hierarchical Partitioning. *Neural Network World*, 19(6): 657-680.

International Journals - others

1. R. Gautam, H. Harsh Jainm, M. Poply, R. Jain, M. Anand, R. Kala (2018) Experience based localization in wide open indoor environments. *Paladyn, Journal of Behavioral Robotics* 9(1): 82–94.
2. Apoorva, R. Gautam, R. Kala (2018) Motion Planning for a Chain of Mobile Robots Using A* and Potential Field, *Robotics* 2018, 7(2), 20.
3. C. S. Pati, R. Kala (2017) Vision-Based Robot Following Using PID Control. *Technologies* 5(2), 34.
4. A. Kannan, P. Gupta, R. Tiwari, S. Prasad, A. Khatri and R. Kala (2016) Robot Motion Planning using Adaptive Hybrid Sampling in Probabilistic Roadmaps. *Electronics* 5(2), 16.
5. A. Kumar, R. Kala (2016) Linear Temporal Logic-based Mission Planning, *International Journal of Interactive Multimedia and Artificial Intelligence*, 3(7): 32-41.
6. S. Kant, R. Kala, R. Tiwari, A. Shukla, S. Kumar (2016) Lip Recognition Using Various Neural Classifiers. *International Journal of Electrical, Electronics and Data Communication*, 4 (10): 86-94.
7. R. Kala, K. Warwick (2015) Reactive Planning of Autonomous Vehicles for Traffic Scenarios, *Electronics*, 4(4), 739-762.
8. A. Gupta, S. Bhalla, S. Dwivedi, N. Verma, R. Kala (2015) On the Use of Local Search in the Evolution of Neural Networks for the Diagnosis of Breast Cancer, *Technologies*, 3(3): 162-181
9. R. Kala, K. Warwick (2015) Motion Planning of Autonomous Vehicles on a Dual Carriageway without Speed Lanes. *Electronics*, 4(1): 59-81.
10. C. J. Shackleton, R. Kala, K. Warwick (2013) Sensor-Based Trajectory Generation for Advanced Driver Assistance System. *Robotics*, 2(1): 19-35.
11. R. Kala, A. Shukla, R. Tiwari (2012) Robot Path Planning using Dynamic Programming with Accelerating Nodes. *Paladyn Journal of Behavioural Robotics*, 3(1): 23-34.
12. R. Kala, A. Shukla, R. Tiwari (2012) Robotic Path Planning using Hybrid Genetic Algorithm Particle Swarm Optimization. *International Journal of Information and Communication Technology*, 4(2-4): 89 – 105.
13. R. R. Janghel, R. Tiwari, R. Kala, A. Shukla (2012) Breast Cancer Data Prediction by Dimensionality Reduction Using PCA and Adaptive Neuro Evolution. *International Journal of Information Systems and Social Change*, 3(1): 1-9.
14. R. Kala, K. Warwick (2011) Multi-Vehicle Planning using RRT-Connect. *Paladyn Journal of Behavioural Robotics*, 2(3): 134-144.
15. R. Kala, A. Shukla, R. Tiwari (2011) Modular Symbiotic Adaptive Neural Evolution for High Dimensional Classificatory Problems. *Intelligent Decision Technologies*, 5(4): 309-319.
16. R. Kala, A. Shukla, R. Tiwari (2011) A Novel Approach to Classificatory problem using Neuro-Fuzzy Architecture. *International Journal of Systems, Control and Communications*, 3(3): 259-269.

17. R. Kala, R. Tiwari, A. Shukla (2011) Breast Cancer Diagnosis using Optimized Attribute Division in Modular Neural Networks. *Journal of Information Technology Research*, 4(1): 34-47.
18. R. Kala, R. R. Janghel, R. Tiwari, A. Shukla (2011) Diagnosis of Breast Cancer by Modular Evolutionary Neural Networks. *International Journal of Biomedical Engineering and Technology*, 7(2): 194 – 211.
19. A. Tripathi, P. Gupta, A. Trivedi, R. Kala (2011) Wireless Sensor Node Placement using Hybrid Genetic Programming and Genetic Algorithms. *International Journal of Intelligent Information Technologies*, 7(2): 63-83.
20. R. Kala, A. Shukla, R. Tiwari (2010) Evolving Robotic Path with Genetically Optimized Fuzzy Planner. *International Journal of Computational Vision and Robotics*, 1(4): 415-429.
21. R. Kala, A. Shukla, R. Tiwari (2010) Clustering Based Hierarchical Genetic Algorithm for Complex Fitness Landscapes. *International Journal of Intelligent Systems Technologies and Applications*, 9(2): 185-205.
22. R. Kala, A. Shukla, R. Tiwari (2010) Hierarchical Evolutionary Strategy for Complex Fitness Landscapes. *Journal of Information Science and Technology*, 7(2): 36-57.
23. R. Kala, H. Vazirani, N. Khawalkar, M. Bhattacharya (2010) Evolutionary Radial Basis Function Network for Classificatory Problems. *International Journal of Computer Science Applications*, 7(4): 34-49.
24. R. Kala, H. Vazirani, A. Shukla, R. Tiwari (2010) Medical Diagnosis using Incremental Evolution of Neural Network. *Journal of Hybrid Computing Research*, 3(1): 9-17.
25. R. Kala, H. Vazirani, A. Shukla, R. Tiwari (2010) Evolution of Modular Neural Network in Medical Diagnosis. *International Journal of Applied Artificial Intelligence in Engineering System*, 2(1): 49 -58.
26. R. Kala, H. Vazirani, A. Shukla, R. Tiwari (2010) Offline Handwriting Recognition using Genetic Algorithm. *International Journal of Computer Science Issues*, 7(2): 16-25.
27. R. Kala, A. Shukla, R. Tiwari (2010) A Novel Approach to Classificatory Problem using Grammatical Evolution based Hybrid Algorithm. *International Journal of Computer Applications*, 1(28): 61-68.
28. A. Tarsauliya, S. Kant, R. Kala, R. Tiwari, A. Shukla (2010) Analysis of Artificial Neural Network for Financial Time Series Forecasting. *International Journal of Computer Applications*, 9(5): 16–22.
29. R. Kala, A. Shukla, R. Tiwari (2010) A Novel Approach to Clustering using Genetic Algorithm. *International Journal of Engineering Research and Industrial Applications*, 3(1): 81-88.
30. H. Vazirani, R. Kala, A. Shukla, R. Tiwari (2010) Use of Modular Neural Network for Heart Disease. *International Journal of Computer and Communication Technology*, 1(2-4): 88-93.
31. A. Shukla, R. Tiwari, R. Kala (2009) Mobile Robot Navigation Control in Moving Obstacle Environment using Genetic Algorithms and Artificial Neural Networks. *International Journal of Artificial Intelligence and Computational Research*, 1(1): 1-12.
32. A. Shukla, R. Kala (2008) Multi Neuron Heuristic Search. *International Journal of Computer Science and Network Security*, 8(6): 344-350.
33. A. Shukla, R. Kala (2008) Predictive Sort. *International Journal of Computer Science and Network Security*, 8(6): 314-320.

International Conferences

1. A. Chandra, R. Kala (2019) Regularised Encoder-Decoder Architecture for Anomaly Detection in ECG. In: *Proceedings of the Conference on Information and Communication Technology*, Allahabad, India.
2. R. Kala (2019) Evolutionary Planning for Multi-User Multi-Task Missions, In *Proceedings of the 2019 IEEE Congress on Evolutionary Computation*, Wellington, New Zealand, pp. 2689-2696.
3. A. Bharadwaj, R. Kala (2019) Sensor based Evolutionary Mission Planning, In *Proceedings of the 2019 IEEE Congress on Evolutionary Computation*, Wellington, New Zealand, pp. 2697-2704.
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