Dr B Vinoth Kumar
Associate Professor

Affiliation:	Department of Information Technology
	PSG College of Technology
	Coimbatore, Tamil Nadu, India
Email:	bvk.it@psgtech.ac.in, bvkphd@gmail.com
Mobile:	9500721416
Area of Research:	Evolutionary Algorithms, Memetic Algorithms, Machine Learning, Digital Image Processing

Publications

Publication Summary	Patent Published	1
	Books	4
	Book Chapters	4
	Journals	17
	Conferences	14

Patents:

1 **Title** System and method for notifying an arrival of an emergency vehicle to automotive vehicles

   Inventors B Vinoth Kumar, P.Sivakumar, G.R.Karpagam, K.Umamaheswari

   Status Published

   Publication date 27/12/2019

Books:

1. D. Jude Hemanth, **B. Vinoth Kumar** and G. R. Karpagam, "Recent Advances on Memetic Algorithms and its Applications in Image Processing", series of Studies in Computational Intelligence Springer, 2019. ISBN: 9789811513619.

2. G. R. Karpagam, **B. Vinoth Kumar**, J. Uma Maheswari and Xiao-Zhi Gao, "Smart Cyber Physical Systems: Advances, Challenges and Opportunities", CRC Publisher (**in Press**), ISBN: 9780429321955.

3. **B. Vinoth Kumar**, J. Uma Maheswari, G. R. Karpagam and P. Sivakumar, "Computing Paradigms for Smart Healthcare", Novascience Publishers (**in Press**), ISBN: 9781536186192

4. **B. Vinoth Kumar**, P. Sivakumar,M.M.Rajan Singaravel and K.Vijayakumar, "Intelligent Paradigms for Smart Grid and Renewable Energy Systems", Series of Algorithms for Intelligent systems, Springer (**in Press**), 2021. ISBN: 9789811599682

Book Chapters:

1. **B. Vinoth Kumar** and G.R.Karpagam, "A Smart algorithm for Quantization Table Optimization: a case study in JPEG Compression" Smart Techniques for a Smarter Planet: Towards Smarter Algorithms, published in the "***Studies in Fuzziness and Soft Computing***" book series, Springer,257-280, 2019. **(Scopus Indexed)**

2. **B. Vinoth Kumar**, G.R.Karpagam, and Yanjun Zhao "Evolutionary Algorithm with Memetic Search Capability for Optic Disc Localization in Retinal Fundus Images" Intelligent data analysis for biomedical applications: Challenges and Solutions, "*Intelligent Data-Centric Systems*" book series, Elsevier, 191-207, 2019. (**Scopus Indexed**)

3. J. Prakash and **B. Vinoth Kumar, "**Exploration of Computational Intelligence Insights and Data Analytics to Combat COVID-19", Handbook of Research on Engineering, Business, and Healthcare Applications of Data Science and Analytics, IGI Global, 373-383, 2020.

4. S Vishnuvarthan, R Aswath Srimari, S Sridevi, **B Vinoth Kumar**, G R Karpagam, "Blockchain based Regenerative E-Voting System", Security and Trust Issues in Internet of Things: Blockchain to the rescue", CRC Press, USA (**Accepted for Publication**)

International Journal Papers:

1. S. Sridevi, G.R.Karpagam, **B.Vinoth Kumar** and J Uma Maheswari, (2021) "Investigation on Blockchain Technology for Web Service Composition: A Case Study", International Journal of Web Services Research (IJWSR) Vol.18 No.1, 2021, pp. 1-23. (**Science Citation Index Expanded (SCI-E)**

2. J. Prakash, E.Vimal, **B. Vinoth Kumar** and S.Priyadharshini, (2020), "Impact Analysis and Combating of Covid-19 Around The World", Journal of Analysis and Computation, Vol. 13 No. 7, 2020, pp. 1-11. (**UGC Care Journal**)

3. R Sandhya, J Prakash, **B Vinoth Kumar** (2020), "Comparative Analysis of Clustering Techniques in Anomaly Detection in Wind Turbine Data", Journal of Xi'an University of Architecture & Technology, Vol. 12 No.3 2020, pp. 5684-5694.

4. V Senthil Kumar and **B.Vinoth Kumar** (2019) "Research on Sentimental Analysis Techniques", International Journal of Engineering and Advanced Technology, Vol. 8 No.S3 2019, pp.1263-1269. **(Scopus Indexed)**

5. **B.Vinoth Kumar** and G.R.Karpagam, (2018) "Reduction of Computation time in Differential Evolution based Quantization table optimization for the JPEG baseline algorithm" International Journal of Computational Systems Engineering, Inderscience Publishers Vol. 4 No.1 2018, pp.58-65.

6. I.Devi, G.R.Karpagam and **B.Vinoth Kumar**, (2017) "A Survey of Machine learning Techniques" International Journal of Computational Systems Engineering, Inderscience Publishers, Vol. 3 No.4 2017, pp.203-212.

7. **B.Vinoth Kumar** and G.R.Karpagam, (2017) "Single Versus Multiple Trial Vectors in Classical Differential Evolution for Optimizing the Quantization Table in JPEG Baseline Algorithm", ICTACT Journal on Soft Computing Vol. 7 No.4 2017, pp.1510-1516.

8. V Senthilkumar, **B.Vinoth Kumar** and P Saranya, (2017) "Normalized Pagecount andTextbased Metric for Computing Semantic Similarity between Web documents", Journal of Advanced Research in Dynamical and Control System, No.6, 2017, pp.1865-1875. **(Scopus Indexed)**

9. **B.Vinoth Kumar** and G.R.Karpagam, (2016) "Knowledge based Genetic Algorithm Approach to quantization table generation for the JPEG baseline algorithm" Turkish Journal of Electrical Engineering and Computer Sciences, Vol. 24 No.3. 2016, pp. 1615-1635. Indexed in **Science Citation Index Expanded (SCI-E)**

10. **B.Vinoth Kumar** and G.R.Karpagam, (2016) "A Problem Approximation Surrogate Model (PASM) for fitness approximation in optimizing the quantization table for the JPEG baseline algorithm" Turkish Journal of Electrical Engineering and Computer Sciences. Vol. 24 No.6. 2016, pp. 4623-4636. Indexed in (**Science Citation Index Expanded (SCI-E)**

11. **B.Vinoth Kumar** and G.R.Karpagam, (2016) "Knowledge based Differential Evolution approach to quantization table generation for the JPEG baseline algorithm", International Journal of Advanced Intelligence Paradigms, Inderscience Publishers. Vol. 8 No.1. 2016, pp. 20-41.**(Scopus Indexed)**

12. **B.Vinoth Kumar** and G.R.Karpagam, (2015) "Differential Evolution versus Genetic algorithm in optimizing the quantization table for JPEG baseline algorithm" International Journal of Advanced Intelligence Paradigms, Inderscience Publishers. Vol. 7 No.2. 2015, pp. 111-135.**(Scopus Indexed)**

13. **B.Vinoth Kumar**, G.R.Karpagam and N.Vijaya Rekha,(2015) "Performance Analysis of Deterministic Centroid Initialization Method for Partitional Algorithms in Image Block Clustering", Indian Journal of Science and Technology, Vol 8(S7), 63–73, April 2015. **(Scopus Indexed)**

14. S.Viswajaa, **B.Vinoth Kumar** and G.R.Karpagam, (2015) "A survey on Nature inspired Meta-Heuristics Algorithms in Optimizing the Quantization Table for the JPEG Baseline Algorithm. International Advanced Research Journal in Science, Engineering and Technology, Vol. 2, No. 4, 2015, pp. 114-123.

15. S.P. Naresh, **B.Vinoth Kumar** and G.R.Karpagam, (2015) "A Literature Review on Quantization Table Design for the JPEG Baseline Algorithm", International Journal of Engineering and Computer Science, Vol. 4, No. 10, 2015, pp. 14686-14691.

16. **B.Vinoth Kumar** and G.R.Karpagam, (2011) "An Empirical Analysis of Requantization Errors for Recompressed JPEG Images", International Journal of Engineering Science and Technology, Vol. 3 No.12 2011, pp. 8519-8527.

17. **B.Vinoth Kumar**, A.C.Ramesh and S.N.Sivanandam, (2009) "Modified Heuristic Requantization Algorithm for JPEG Images", CiiT International Journal of Digital Image Processing, Vol. 1, No.2, May 2009.

International Conferences:

1. **B Vinoth Kumar**, R Akash, A karan, K Vishal and J Aanandha Praseeth Kumar "A Smart Public Transportation System for Reliable and Hassle Free Conveyance in Sustainable Smart Cities" International Conference on Computer Communication and Informatics, Jan. 22-24, 2020, Coimbatore, India. Available in **IEEE Digital Xplore. (Scopus Indexed).**

2. **B Vinoth Kumar,** P Jeneesha and M Nivethitha, "A Differential Evolution Approach for segmentation of white blood cells in Acute Lymphoblastic Leukemia Images", 4th International Conference on Inventive Systems And Control, 8-10 January 2020, Coimbatore, India. Available in **IEEE Digital Xplore. (Scopus Indexed).**

3. P Sivakumar, RS Sandhya Devi, AD Buvanesswaran, **B Vinoth Kumar**, R Raguram, M Ranjithkumar, "Model-Based Testing of Car Engine Start/Stop Button Debouncer Model", 2020 Second International Conference on Inventive Research in Computing Applications, Coimbatore, India. Available in **IEEE Digital Xplore. (Scopus Indexed).**

4. P Sivakumar, RS Sandhya Devi, A Neeraja Lakshmi, **B Vinoth Kumar**, B Vinod, "Automotive Grade Linux Software Architecture for Automotive Infotainment System", International Conference on Inventive Computation Technologies, 26, February 2020, Coimbatore, India. Available in **IEEE Digital Xplore. (Scopus Indexed).**

5. **B Vinoth Kumar**, S Abirami, R J Bharathi Lakshmi, R Lohitha, R B Udhaya, "Detection and Content Retrieval of Object in an Image using YOLO", IOP Conf. Series: Materials Science and Engineering 590 (2019). (**Scopus Indexed**).

6. P. Sivakumar, R.S. Sandhya Devi, **B. Vinoth Kumar**, R. Balaji, X Dominic Savari Raj, "Analysis of Software Reusablity Concepts Used In Automotive Software Development Using Model Based Design and Testing Tools" Alliance International Conference on Artificial Intelligence and Machine Learning (AICAAM), April 2019.

7. **B.Vinoth Kumar**, S. Sabareeswaran and G. Madumitha, A Decennary Survey on Artificial Intelligence Methods for Image Segmentation, International Conference on Advanced Engineering Optimization through Intelligent Techniques, Sardar Vallabhbhai National Institute of Technology, Surat, Gujarat, India, 3-5 August 2018. Available in **Springer (Scopus Indexed).**

8. **B.Vinoth Kumar**, and S Divya, "A Study on Optic Disc Localization Methods in Retinal Images" Springer Sponsored International Conference on IoT, Social, Mobile, Analytics and Cloud, SCAD Institute of Technology, Coimbatore, Tamil Nadu, May 16-17, 2018.

9. **B.Vinoth Kumar**, K Janani, and N Mythili Priya, "A Survey on Automatic Detection of Hard Exudates in Diabetic Retinopathy" IEEE International Conference on Inventive Systems and Control, JCT College of Engineering and Technology, Coimbatore, Tamil Nadu, January 19-20, 2017. Available in **IEEE Digital Xplore. (Scopus Indexed).**

10. **B.Vinoth Kumar**, G.R.Karpagam and S.P. Naresh" Generation of JPEG Quantization Table using Real Coded Quantum Genetic Algorithm", 5th IEEE International Conference on Communication and Signal Processing, (ICCSP'16), Adhiparasakthi Engineering College, Tamil Nadu, April 6-8, 2016. Available in **IEEE Digital Xplore. (Scopus Indexed).**

National Conferences:

1. Abinaya Rajalakshmi and **B.Vinoth Kumar**," Design of Quantization Table for JPEG Baseline Algorithm using Particle Swarm Optimization", Conference on Research Issues in Computing, PSG College of Technology, Coimbatore, April 24-25, 2015.

2. C.Bhuvana and **B.Vinoth Kumar**," Image Compression using Data Folding and Wavelet", TEQIP II sponsored National Conference on Trends in Computing, PSG College of Technology, April 25-26, 2014.

3. K.P.Balamurugan and **B.Vinoth Kumar**, "Region Based Segmentation in Very Large Image Datasets using Distributed systems" PSG-ACM National Conference on Intelligent Computing, PSG College of Technology, Coimbatore, April 26-27,2013.

4. **B.Vinoth Kumar**, S.Poornima, E.Ramya, S.Umadevi and G.Parvathi," Requantization Based JPEG Image Recompression", 3rd National Conference on Innovations in Communication and Computing, SNS College of Technology, Coimbatore, February 21, 2008.