

## LIST OF PUBLICATIONS OF Dr. K. MARTIN SAGAYAM

1. Bharat Bhushan, Preeti Sinha, **K. Martin Sagayam**, Andrew J (2020), “**Untangling blockchain technology: A survey on state of the art, security threats, privacy services, applications and future research directions**”, Computers and Electrical Engineering, <https://doi.org/10.1016/j.compeleceng.2020.106897>, (Impact Factor = 2.663)
2. Bharat Bhushan, Aditya Khamparia, **K. Martin Sagayam**, Sudhir Kumar Sharma, Mohd Abdul Ahad, Narayan C. Debnath (2020), “**Blockchain for Smart Cities: A review of Architectures, Integration Trends and Future Research Directions**”, Sustainable Cities and Society, <https://doi.org/10.1016/j.scs.2020.102360>. (Impact Factor = 5.268)
3. G. Rajesh, X M Raajini, **K. Martin Sagayam**, Hein Dang (2020), “**A Statistical approach for high order epistasis interaction detection for prediction of diabetic macular edema**”, Informatics in Medicine Unlocked, vol. 29, pp. 1-9, <https://doi.org/10.1016/j.imu.2020.100362>. (SCOPUS INDEXED)
4. Amir Anton Jone A, Annal Joy J, **K. Martin Sagayam**, Esther Jebarani P, J John Paul (2020), “**Dual feed microstrip patch antenna for X-band application**”, International Journal of Advanced Science and Technology, vol. 29, no. 8s, pp. 3506-3516. (SCOPUS INDEXED)
5. Amir Anton Jone A, T. Anita Jones Mary Puspha, Navin M George, Esther Jebarani P, **K. Martin Sagayam**, Suresh Subramanian (2020), “**Report on various diagnostic methos for breast cancer detection in women**”, International Journal of Advanced Science and Technology, vol. 29, no. 8s, pp. 2843-2848. (SCOPUS INDEXED)
6. Abhishikt Kadam, J. Andrew, **K. Martin Sagayam**, Dang T Hien (2020), “**Vehicle Automation and Car-Following Models for Accident Avoidance**”, PRZEGLAD ELEKTROTECHNICZNY, pp. 118-123, ISSN 0033 – 2097. (SCOPUS INDEXED)
7. R. Catherine Joy, **K. Martin Sagayam**, A. Albert Rajan, J. Andrew, Ching Chung Ho (2020), “**Analyzing Human Emotion from Facial Expression based on Eigen Face Approach**”, International Journal of Scientific & Technology Research, vol. 9, issue 01, pp. 3247-3250, ISSN 2277 – 8616. (SCOPUS INDEXED)
8. G Rajesh, X Mercilin Raajini, **K Martin Sagayam**, Bharat Bhushan, Utku Kose (2020), “**Fuzzy genetic based dynamic spectrum allocation (FGDSA) approach for cognitive radio sensor network**”, Turkish Journal of Electrical Engineering & Computer Sciences, doi: 10.3906/elk-, (Impact Factor = 0.682)
9. Martin Sagayam Kulandairaj, Alex J. Timothy, Chung Ching Ho Peter, Lawrence Henesey, Robert Bestak (2020), “**Augmented Reality based solar system for e-magazine with 3-D audio effect**”, International Journal of Simulation and Process Modelling – in SpecialIssue on: I3M 2018 Virtual and Augmented Reality in Industry and Logistics, (ACCEPTED) (ON PRESS)

### 2019

1. Amir Anton Jone, A., Anita Jones Mary Pushpa, T., George, N.M., **Martin Sagayam K.**, Subramanian, S., Esther Jebarani, P. (2019), “**Method for early detection of breast cancer: A technical review**”, Indian Journal of Public Health Research and Development, vol. 10, issue 10, pp. 441-445. (SCOPUS INDEXED)
2. Hein Dang, **K. Martin Sagayam**, P. Malin Bruntha, S. Dhanasekar, A. Amir Anton Jone, G. Rajesh (2019), “**Image Fusion based on Sparse Sampling Method and hybrid**

- Discrete Cosine Transformation**", International Journal of Scientific & Technology Research, vol. 8, issue 12, pp. 1103-1107. (SCOPUS INDEXED)
3. A. Amir Anton Jone, John Paul J, Shajin Prince, **K. Martin Sagayam**, Samson Immanuel J. (2019), "**Folded Shorted Patch Antenna with Slots for Wireless Applications**", International Journal of Engineering and Advanced Technology, vol. 9, issue 1. (SCOPUS INDEXED)
  4. S. Dhanasekar, P. Malin Bruntha, C. Arunkumar Madhuvappan, **K. Martin Sagayam** (2019), "**An Improved Area Efficient 16-QAM Transceiver Design using Vedic Multiplier for Wireless Applications**", International Journal of Recent Technology and Engineering, vol. 8, issue 3, pp. 4419-4425. (SCOPUS INDEXED)
  5. Amir Anton Jone, Esther, S Subramanian, **K. Martin Sagayam** (2019), "**Design and performance of UWB wide slot antenna to detect cancer in women**", International Journal of Engineering and Advanced Technology 8(6), pp. 3956-3963. (SCOPUS INDEXED)
  6. A. Amir Anton Jone, Shajin Prince, J. Samson Immanuel, **K. Martin Sagayam**, Esther Jebarani (2019), "**Portable UWB based monopole antenna for Wearable Applications**", International Journal of Recent Technology and Engineering, vol. 8, issue 2. (SCOPUS INDEXED)
  7. Amir Anton Jone, J. Samson Immanuel, G. Manoj, **K. Martin Sagayam**, P. Esther Jebarani (2019), "**A Compact UWB slot antenna for WiMAX and WLAN Applications**", International Journal of Innovative Technology and Exploring Engineering, ISSN: 2278-3075, vol. 8, issue-8S, 557-560. (SCOPUS INDEXED)
  8. P. Malin Bruntha, S. Dhanasekar, **K. Martin Sagayam**, S. Immanuel Alex Pandian (2019), "**A Modified Approach for Face Recognition using PSO and ABC Optimization**", International Journal of Innovative Technology and Exploring Engineering, ISSN: 2278-3075, vol. 8, issue 7, 1571-1577. (SCOPUS INDEXED)
  9. **K. Martin Sagayam**, D. Narain Ponraj, Jenkin Winston, Yaspy J. C., Esther Jeba D., Antony Clara (2019), "**Authentication of Biometric System using Fingerprint Recognition with Euclidean Distance and Neural Network Classifier**", International Journal of Technology and Exploring Engineering, vol. 8, issue 4, pp. 766-771. (SCOPUS INDEXED)
  10. **K. Martin Sagayam** and D. Jude Hemanth (2019), "**A Probabilistic Model for State Sequence Analysis in Hidden Markov Model for Hand Gesture Recognition**", Computational Intelligence, vol. 35, issue. 1, pp. 51-81. (Impact Factor = 1.196).

## 2018

1. **K. Martin Sagayam** and D. Jude Hemanth (2018), "**ABC algorithm-based Optimization of 1-D Hidden Markov Model for Hand Gesture Recognition Applications**", Computers in Industry, vol. 99, pp. 313-323, (Impact Factor = 3.954)

## 2017

1. **K. Martin Sagayam** and D. Jude Hemanth (2017), "**Hand Posture and Gesture Recognition Techniques for Virtual Reality Applications: A Survey**", Virtual Reality, vol. 21, issue 2, pp. 91-107. (Impact Factor = 3.634).

## INTERNATIONAL CONFERENCES

## 2020

1. **K. Martin Sagayam**, J Jenkin Winston, Mohd Helmy Abd Wahab, Bharat Bhushan, Radzi Ambar, and Hazwaj Mhd Poad (2020), "**Combination of Thermal and sRGB**

- Imaging Techniques for Advanced Surveillance System**", Global Research Conference 2020 "Hybrizing Transdisciplinary Research towards Digital Society 5.0" 16<sup>th</sup> – 18<sup>th</sup> October 2020, Universiti Teknologi Mara, Malaysia.
2. G. Rajesh, X. Mercilin Raajini, N. Kritika, A. Kavinkumar, **K. Martin Sagayam**, Mohamad Md. Som, and Mohd Helmy Abd Wahab (2020), "**Achieving Longevity in Wireless Body Area Network by Efficient Transmission Power Control for IoMT Applications**", Global Research Conference 2020 "Hybrizing Transdisciplinary Research towards Digital Society 5.0" 16<sup>th</sup> – 18<sup>th</sup> October 2020, Universiti Teknologi Mara, Malaysia.
  3. J. Andrew, Varun Unnikrishnan Nair, **K. Martin Sagayam**, Mohd Helmy Abd Wahab, and Nor'Aisah Sudin (2020), "**Skin Cancer Classification using Pretrained Deep Learning Model**", Global Research Conference 2020 "Hybrizing Transdisciplinary Research towards Digital Society 5.0" 16<sup>th</sup> – 18<sup>th</sup> October 2020, Universiti Teknologi Mara, Malaysia.
  4. Surendheran Kaliyaperumal, Mohd Helmy Abd Wahab, **K. Martin Sagayam**, Radzi Ambar, and Hazwaj Mhd Poad (2020), "**Impact of Pairing an Augmented Reality Demonstration with Online Video Lectures... Does it Improve Students Performance?**", Global Research Conference 2020 "Hybrizing Transdisciplinary Research towards Digital Society 5.0" 16<sup>th</sup> – 18<sup>th</sup> October 2020, Universiti Teknologi Mara, Malaysia.
  5. Mhathesh T.S.R., Andrew J., **Martin Sagayam K.**, Henesey L. (2021) **A 3D Convolutional Neural Network for Bacterial Image Classification**. In: Peter J., Fernandes S., Alavi A. (eds) Intelligence in Big Data Technologies—Beyond the Hype. Advances in Intelligent Systems and Computing, vol 1167. Springer, Singapore. DOI: 10.1007/978-981-15-5285-4\_42 (SCOPUS INDEXED)
  6. Petson V B, Kevin V, Jacob M A, Sanjo J J, **K. Martin Sagayam** (2020), "**Smart Wheel Chair for Physically Challenged People**", 6<sup>th</sup> IEEE International Conference on Advanced Computing and Communication Systems, Sri Eshwar Engineering College, Coimbatore. DOI: [10.1109/ICACCS48705.2020.9074188](https://doi.org/10.1109/ICACCS48705.2020.9074188)(SCOPUS INDEXED)
  7. Ripcy A J., Sneha V, Sneha T S, **K. Martin Sagayam** (2020), "**Assistive Device for Physically Challenged Persons using Voice Controlled Intelligent Robotic Arm**", 6<sup>th</sup> IEEE International Conference on Advanced Computing and Communication Systems, Sri Eshwar Engineering College, Coimbatore. DOI: [10.1109/ICACCS48705.2020.9074236](https://doi.org/10.1109/ICACCS48705.2020.9074236)(SCOPUS INDEXED)
  8. **K. Martin Sagayam**, D. Jude Hemanth, Andrew J., Chiung Ching Ho, Dang Hein (2020), "**Interactive Educational Content Using Marker Based Augmented Reality**", International Conference on Information Technology and Intelligent Transportation Systems, China, 2019, Proceedings (Frontiers in Artificial Intelligence and Applications). (SCOPUS INDEXED)

## 2019

1. **K. Martin Sagayam**, Julia Schaupp, Alex J. Timothy, Chiung Ching Ho (2019), "**Realization of a 3D Gearbox Model Through Marker-Based Augmented Reality for Edutainment Applications**", 6th International Visual Informatics Conference, IVIC 2019, Bangi, Malaysia, November 19-21, 2019, Proceedings (Lecture Notes in Computer Science). (SCOPUS INDEXED)

## 2018

1. **Martin Sagayam K.**, Chiung Ching Ho, Lawrence Henesey, Robert Bestak (2018), "**3D Scenery Learning on Solar System by using Marker based Augmented Reality**", 4<sup>th</sup> International Conference of the Virtual and Augmented Reality in Education (VARE 2018), Hungary, pp. 139-143, ISBN: 978-888574121-8 (SCOPUS INDEXED).
2. **K.Martin Sagayam**, Hemanth D.J. (2018) **Comparative Analysis of 1-D HMM and 2-D HMM for Hand Motion Recognition Applications**. In: Sa P., Sahoo M.,

Murugappan M., Wu Y., Majhi B. (eds) Progress in Intelligent Computing Techniques: Theory, Practice, and Applications. Advances in Intelligent Systems and Computing, vol 518. Springer, Singapore, DOI [https://doi.org/10.1007/978-981-10-3373-5\\_22](https://doi.org/10.1007/978-981-10-3373-5_22)(SCOPUS INDEXED).

**2017**

1. **Martin Sagayam K.**, Jude Hemanth D. (2017) **Application of Pseudo 2-D Hidden Markov Model for Hand Gesture Recognition**. In: Satapathy S., Prasad V., Rani B., Udgata S., Raju K. (eds) Proceedings of the First International Conference on Computational Intelligence and Informatics. Advances in Intelligent Systems and Computing, vol 507. Springer, Singapore, DOI [https://doi.org/10.1007/978-981-10-2471-9\\_18](https://doi.org/10.1007/978-981-10-2471-9_18) (SCOPUS INDEXED).

## **BOOK CHAPTERS**

**2021**

1. Goyal S., Sharma N., Bhushan B., Shankar A., **K. Martin Sagayam**. (2021) **IoT Enabled Technology in Secured Healthcare: Applications, Challenges and Future Directions**. In: Hassanien A.E., Khamparia A., Gupta D., Shankar K., Slowik A. (eds) Cognitive Internet of Medical Things for Smart Healthcare. Studies in Systems, Decision and Control, vol 311. Springer, Cham. [https://doi.org/10.1007/978-3-030-55833-8\\_2](https://doi.org/10.1007/978-3-030-55833-8_2). (SCOPUS)
2. **K. Martin Sagayam**, P. Malin Bruntha, M. Sridevi, M. Renith Sam, Utku Kose, and Omer Deperlioglu (2021), “A Cognitive Perception on Content-Based Image Retrieval using an Advanced Soft Computing Paradigm”, In: Tapan Gandhi (eds), “Advanced Machine Vision Paradigms for Medical Image Analysis”, Elsevier Publisher, ISBN: 9780128192955. (SCOPUS)

**2020**

1. BL Radhakrishnan, S.Sudhakar, R. V. Belfin, P.Karthikeyan, E. Kirubakaran, and **K. Martin Sagayam** (2020), “Techniques for resource sharing in cloud computing platform”, CRC Press Book “Swarm Intelligence for Cloud Computing”, Taylors and Francis group Ltd., Publisher, ISBN:9780367030551. (SCOPUS)
2. **K. Martin Sagayam**, D. Jude Hemanth, Sankirthana Suresh, Lawrence Henesy and Chiung Ching (2020), “Optimization of SVM based Hand Gesture Recognition System using Particle Swarm Optimization and Plant Growth algorithm” CRC Press Book “The Biometric Computing Recognition & Registration”, Taylors and Francis group Ltd., Publisher, ISBN:978-0-8153-9364-1. (SCOPUS)

**2019**

1. Sathish Nirala, Deepak Mishra, **K. Martin Sagayam**, D. Narain Ponraj, X. Ajay Vasanth, Lawrence Henesey, and Chung Ching Ho (2019), “Image Fusion in Remote Sensing based on Sparse Sampling Method and PCNN Techniques” DE GRUYTER: Machine Learning for Big Data Analytics, Frontiers in Computational Intelligence (FCIR). (SCOPUS)

**2018**

1. **K. Martin Sagayam**, D. Jude Hemanth, X. Ajay Vasanth, Lawrence Henesy and Chiung Ching Ho (2018), “Optimization of a HMM-based Hand Gesture Recognition System Using a Hybrid Cuckoo Search Algorithm” In: Bhattacharya (eds), “Hybrid Metaheuristics for Image Analysis”, Springer, Cham, pp. 87-114, DOI: [https://doi.org/10.1007/978-3-319-77625-5\\_4](https://doi.org/10.1007/978-3-319-77625-5_4). (SCOPUS)
2. **Martin Sagayam K.**, T. Vedha Vyas., Chiung Ching Ho., Lawrence E. Henesey. (2017), “Controlling a Virtual Robotic Arm with Hand Gesture Recognition and Deep Learning Strategies”, book on "deep learning for image processing applications" in Series: Advances in Parallel Computing, Vol. 31: Deep Learning for Image Processing Applications, pp. 50-67, DOI: 10.3233/978-1-61499-822-8-50. (SCOPUS)

**2017**

1. **K.Martin Sagayam**, D. Jude Hemanth, Yadav Nitesh Ramprasad and Raghav Menon (2017), "**Optimization of Hand Motion Recognition System based on 2-D HMM approach using ABC Algorithm**" CRC Press Book "Hybrid Intelligent Techniques for Pattern Analysis and Understanding". **Taylor and Francis group Ltd., Publisher, ISBN: 1351650203, 9781351650205. (SCOPUS)**

### **PATENT PUBLICATION**

1. **Title of Invention:** System and Method for Extraction of Sweet Compounds From Natural Stevia

**Application No. : 202011005968**

**Field of Invention:** FOOD

**Publication date (U/S 11A) :** 21/02/2020

**Agency :** Intellectual Property India, Government of India

2. **Title of Invention:** System of Simultaneous Charging and Discharging Power Backup and Method Thereof

**Application No. : 202011010537**

**Field of Invention:** ELECTRICAL

**Publication date (U/S 11A) :** 20/03/2020

**Agency :** Intellectual Property India, Government of India

3. **Title of Invention:** Multilayer Reusable Activated Carbon Face Mask for Preventing Viral Infection

**Application No. : 202011045474**

**Field of Invention:** MECHANICAL ENGINEERING

**Publication date (U/S 11A) :** 30/10/2020

**Agency :** Intellectual Property India, Government of India

### **BOOKS**

1. **K. Martin Sagayam**, Bharat Bhushan, Diana Andrushia, and Victor Hugo C. de Albuquerque, eds. Deep Learning Strategies for Security Enhancement in Wireless Sensor Networks. Hershey, PA: IGI Global, 2020. <http://doi:10.4018/978-1-7998-5068-7>.

2. **K. Martin Sagayam**, Lawrence Henesey, Victor Hugo C. de Albuquerque, Immanuel A. Edinbarough, "Pattern Recognition for Augmented and Virtual Reality using Machine and Deep Learning", IET Publisher [Production]

### **BOOK SERIES**

**1. Sandhya Makkar, K. Martin Sagayam, Rohail Hassan, Book Series on “Big Data for Industry 4.0: Challenges and Applications”, CRC Press Taylors & Francis Group Publsihers [10 books are under going]**

1. Area of specialization : Image Processing, Machine Learning, Internet of Things, Virtual Reality, Augmented Reality, and Block- Chain & Security System.