

DR. CHEMPAK KUMAR A

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PROFESSIONAL SUMMARY

Academician and researcher with over 23 years of teaching experience in higher technical education. Specialized in Electronics & Communication Engineering, Computer Vision, Signal Processing, and Medical Image Processing using Machine Learning and Deep Learning paradigms. Active contributor to the global research community as an international journal reviewer and conference session chair.

EDUCATION

Ph.D. in Computer Science

University of Kerala | Acquired: December 2024

Specialization: Medical Image Processing using Machine Learning and Deep Learning techniques.

M.Tech in Electronics & Communication Engineering

Department of Opto-Electronics, University of Kerala | June 2011

Specialization: Opto-Electronics and Optical Communication.

B.Tech in Electronics & Communication Engineering

Kannur University | June 2001

PROFESSIONAL EXPERIENCE

Assistant Professor (ECE)

College of Engineering Muttathara, CAPE, Govt. of Kerala | July 2003 – Present

- Delivering core undergraduate coursework in Signal Processing, Communication Systems, and AI Applications.
- Guiding student research projects and managing academic compliance under KTU.

Guest Faculty

Government Engineering College, Barton Hill, Trivandrum | July 2002 – October 2002

ACADEMIC & RESEARCH CONTRIBUTIONS

- Conference Leadership:** Chaired sessions at multiple peer-reviewed international conferences.
- Journal Peer Reviewer:** *Computers in Biology and Medicine* (Elsevier), *European Journal of Radiology* (Elsevier), *Biomedical Signal Processing and Control* (Elsevier), *Journal of Applied Intelligence* (Springer), *Physical and Engineering Sciences in Medicine* (Springer), *Journal of Intelligent & Fuzzy Systems* (IOS Press), *IRBM* (Elsevier).

JOURNAL PUBLICATIONS

- A Review On Esophageal Cancer Detection And Classification Using Deep Learning Techniques**
International Journal Of Current Research And Review, Vol. 13, Issue 15, pp. 51-57, Aug 2021. ISSN: 0975-5241.
Scopus Indexed
- Classification Of Early Stages Of Esophageal Cancer Using Transfer Learning**
IRBM (Elsevier), Vol. 43, Issue 4, pp. 251-258, August 2022. ISSN: 1959-0318. DOI: 10.1016/j.irbm.2021.10.003
Impact Factor: 4.8
- Classification Of Early Esophageal Cancer Stages Using Multi-CNN Networks**
NeuroQuantology, Vol. 20, Issue 22, pp. 600-617, December 2022. eISSN: 1303-5150. **Scopus Indexed**
- Classification Of Esophageal Cancer Using Ensembled CNN With Generalized Normal Distribution Optimization Model And Support Vector Machine Classifier**
Smart Innovation, Systems and Technologies (Springer Nature), July 11, 2023. ISBN: 978-981-99-2467-7. **Scopus Indexed**

5. Evaluation Of Gastric Cancer Using Explainable Ai Techniques

Cognitive Science and Technologies (Springer Nature), Oct 2023. ISBN: 978-981-99-2745-6. DOI: 10.1007/978-981-99-2746-3_10 [Scopus Indexed](#)

6. Ensembled CNN With Artificial Bee Colony Optimization Method For Esophageal Cancer Stage Classification Using Support Vector Machine Classifier

Journal of Intelligent & Fuzzy Systems (IOS Press), Jan 2024. [SCIE Indexed](#) | IF: 3.0

CONFERENCE PRESENTATIONS & PROCEEDINGS

1. **Emotion Recognition based on Hybrid model of Fuzzy Logic and Artificial Neural Network** — IJCTA, Vol. 5, pp. 2071-2077, Nov-Dec 2014.
2. **Harvesting 2D Processing in Signal Processing Applications** — IJRDT, Vol. 4, Issue 2, pp. 36-41, Aug 2015.
3. **Counting of RBCs using circular Hough transform with median filtering** — 3rd National Conference on Emerging Trends in Engineering (NET 2015), GCE Kozhikode. ISBN: 978-93-85477-33-1.
4. **Novel method of detecting moving object in video** — ICETEST 2015, Procedia Technology (Elsevier), Vol. 24, pp. 1055-1060, 2016.
5. **Gradient Operator in Video After Object Detection by Optical Flow and Morphological Operation** — 10th ISCO 2016, IEEE Xplore. DOI: 10.1109/ISCO.2016.7727093.
6. **Difference of Gaussian on Frame Differenced Image** — nCORETech, LBSCE Kasaragod, IJIREEICE, Vol. 3, Special Issue 1, pp. 92-95, Feb 2016.
7. **A method for edge detection of moving object in video** — IJRAET, Vol. 4, Issue 7, pp. 28-31, 2016.
8. **Automatic classification of monocots and dicots using SVM classifier** — ICIS 2016, IEEE Xplore. DOI: 10.1109/INFOSCI.2016.7845295.
9. **Review on Deep Learning Techniques for the diagnosis of Esophageal cancer** — ICSO 2019, Aug 9-10, 2019. ISBN: 978-93-89051-59-9, pp. 25-27.
10. **Exploring Deep Learning Concepts for Detection and classification of Colonic Polyps** — ICSTCS 2020, Feb 22, 2020. DOI: 20.18001.STD Spl.2020.V9I2.20.33427, pp. 226-236.
11. **Deep CNN Techniques for the Diagnosis of COVID-19 from Radiographic Images** — IECIIT 2020, Bharathiar University, Aug 29, 2020. ISBN: 978-93-89105-53-7, pp. 88-93.
12. **Early Diagnosis and Classification of Esophageal Cancer Stages Using Deep Learning Networks** — ICISTSD 2020, Nov 23-24, 2020. ISBN: 978-93-4238-20-1, pp. 19-24.
13. **Improved Texture-Based Feature Extraction Method for Colorectal Cancer Classification** — ICAIS 2021, Mar 26-28, 2021. ISBN: 978-93-5457-149-7, pp. 77-81.
14. **A Review on the Diagnosis of Colon Cancer Stages Using Deep Learning Techniques** — IJARETS, Vol. 9, Issue 7, July 2022.
15. **Classification Of Early Esophageal Cancer Stages Using Multi-CNN Networks** — ICETEMT 2022, NeuroQuantology, Vol. 20, Issue 22, pp. 600-617, Dec 2022.
16. **Texture Feature Based Colonic Polyp Detection And Classification Using Machine Learning Techniques** — ICISTSD 2022, IEEE Xplore. DOI: 10.1109/ICISTSD55159.2022.10010641, pp. 359-364.