Name: Dr. K.Vijay Chandra

Designation: Assistant Professor

Department: Electronics & instrumentation engineering

Mail I.D: vijaychandra_k@vnrvjiet.in

Experience (in years): Teaching: 14   Research: 5 yrs

1. Educational / Technical qualifications:

S.No	Level (UG / PG / Ph.D)	Year of passing	Specialization
1	Ph.D	2022	Bio-Medical Image processing(School of Electronics)
2	M.Tech	2011	Digital systems and computer electronics
3	B.Tech	2007	Electronics and Instrumentation Engineering

2 Teaching and Learning:
1.

2.1 Teaching Interests:

- ➢ Micro electro-mechanical systems
- ➢ Control systems
- ➢ PC Based Instrumentation,
- ➢ Electronic Measurements & Instrumentation,

- ➢ Bio-Medical Instrumentation
- ➢ Micro Electro-mechanical Systems
- ➢ Process Control Instrumentation
- ➢ Industrial Instrumentation
- ➢ Instrumentation Control System
- ➢ Opto-Electronics and Laser Instrumentation
- ➢ Analytical instrumentation
- ➢ Automation industry
- ➢ Instrumentation control systems
- ➢ Principles of Electronic Measurements

1.1.
2.2 Novel Teaching & Learning Techniques adopted:

- POGIL, WIT & WIL,PPT & Videos
- Online Course woks,Moodle

2.3 Involvement in curriculum updating / Design:

- Involved in design of Lab manuals & Lab protocols,
- Lab-In charge (Analytical Instrumentation)

3 Co-curricular and Extra-Curricular Activities:
2. 3.1:Profesional Society Memberships:-
  2.1. 3.2Interests and Hobbies: Sports, fishering,chess
  2.2. 3.3CCA/ECA Organized:

- Conducted a 4 day workshop on "Design, Development of applications in robotics"in   2015.
- Conducted a guest lecture on startups by surendralingareddy for Ist year B.tech EIE Students.

  2.3. 3.4CCA/ECA participated:

- Participated in Shadow Engineering & Mirror Engineering programmes.

  2.4. 3.5Counseling and Mentoring Activity:
   Involved in Mentoring of Eight students per class each year.
  2.5. 3.6Committees involved in:
   Department level:

- Career vision(ED co-ordinator)
- Departmental ED co-ordinator
- Sintilashunzdisciplanarycommitte member
- Art of Teaching Co-ordinator
- Lab-inCharge(AI Lab)
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4 Conference / Workshop / Seminar / Guest Lectures:
  4.1 Conducted: 06
  4.2 Attended: 47
5 Academic Contribution and Research & Consultancy:
  5.1 Invited Lectures: 05
  5.2 Articles / Chapters published in Books: NIL
  5.3 Books published as single author or as editor: NIL
  5.4 Projects Guided:
a) UG: 2 batches (3 students per batch)   b) PG: 1 student   01

  5.5 Research Interests: Bio-medical image processing.
  5.6 Ph.D students:
   a) Enrolled: NIL   b) Submitted: NIL   c) Awarded: YES

  5.7 Papers published in reviewed Journals:

S.No	Title of the Paper	Journal Name Vol. No. PP	ISSN No.	Impact Factor	National/ International

1	Machine intelligence on confocal microscope for detection of endothelium layer of corneal diseases	International Journal of Current Trends in Engineering & Research (IJCTER)	2455-1392	----	International, 2016 aug
2	Automobile security a nd safety system using labview	International Journal of Research in Engineering &TechnologyIRJET Volume 2 Issue 2	2319-1163	2.375	International 2015
3	Confocal corneal endothelium dystrophy's Analysis using particle filter	Journal of Engineering Science and Technology, volume 15, No.2(2020), 1338-1356, School of Engineering, Taylor's University, Malaysia	ISSN: 1823-4690	WOS	International 2021
4	Confocal corneal endothelium dystrophy's analysis using a Hybrid Algorithm	Journal of Engineering Science and Technology, volume 15, No.2(2020), 1338-1356, School of Engineering, Taylor's University, Malaysia	ISSN: 1823-4690	WOS	International 2021
5	Machine Intelligence on confocal microscope for detection of endothelium layer of corneal diseases	International Journal of current Trends in Engineering and Research (IJCTER)	e-ISSN 2455–1392	3.468.	International August 2016

5.8 Papers presented at National / International Conferences & Seminars:

S.No	Title of the Paper	Name of the Conference/ Seminar	National/ International	Period
1	Automobile security and safety system using labview	conference	International	Dec 2013
2	Restoration of x-ray images using lab view	conference	International	15th dec,2015
3.	Image compression with dct using lab view	conference	Intenational	16th dec,2015
4	Detection of corneal diseases using ni vision assistant in lab view	IEEE Conference	International	19th dec,2015
5	Design of remote I/O data acquisition system using zigbee	conference	International	2011

6	Specular microscopic endothelium image analysis with Danielsson morphology	IEEE Conference	International	Dec, 2021
7	Specular corneal endothelium dystrophy's analysis using particle filter	Scopus Conference	International	27th & 28th, 2021
8	Finite element analysis of carbon nanotube structured badminton racket	ICRITCSA-2019	International	October 19th, 2019
9	Machine Intelligence for identification of endothelial corneal layer diseases with novel morphology algorithm	ICICCS-2019	International	
10	Detection of corneal diseases using NI Vision assistant tool in labVIEW	ICCICCT-2015	International	15th -19th December-2015
11	Sensor based milk adulteration System	ICRITCSA-2019	International	20th October,2019
12	An artificial intelligent specular corneal layer analysis for disease profiling	DASCAN-2022	International	13th October to 15th October 2022
13	Deep Learning based approach for detection of COVID-19 on CT Images using Residual Networks	DASCAN-2022	International	13th October to 15th October 2022
14	An artificial intelligent specular corneal endothelium analysis using machine vision approach	DASCAN-2022	International	13th October to 15th October 2022

3.

Patents Published

> Dr.K.Vijay Chandra, S.Nagarjuna Chary "IoT-based RO water purifier with auto TDScontrol"

Indian Patent No.
202341032344.CBR No- 20550

> Dr.K.Vijay Chandra, Dr.K.Sudha Rani "Prosthetic Leg Invention disclosure format forpatent application"

Indian Patent No.
202141016519.CBR No-
12958

The proposed work includes physical, mechanical design of prosthetic leg with unpoweredexoskeleton ankle joint, which will be used as multipurpose applications. One applicationis as prosthetic leg for amputees and another one is as exoskeleton for the paralyzed or stroke victims to improve their walking ability. Third use as a prosthetic leg and exoskeleton, offering rehabilitation and gait assistance to the lower limb artificial leg withunpowered exoskeleton.

➢ Dr D. Muruganandam, Dr.K.Vijay Chandra Title "Prosthetic Leg Invention disclosureformat for patent application"

Indian Patent No.
202041048978.CBR No-
37957

The present invention is an Eco-friendly and reusable home kitchen appliance product. The innovation is to bring ease of skin peeling of the vegetable, to support in mass amountof cooking as well as to support for fast food cooking. The present invention comprises ofdrum which consists of blade to peel the skin of vegetable and fruit and stores the vegetableand fruit and is then collected by means of the collector path. The said shaft connects the motor to the abrasive disc material to transfer rotary motion from motor to disc. The wastage gap collects the skin of vegetables and fruits to the tray into the wastage collector.The tray opener is supported for removal of collected wastage from the tray which acts ina slider motion to transfer the waste skin.

Presentations And Invited Lectures

➢ **Paper Presentation**, "Specular endothelium image analysis with DEM algorithm" All India shri Shivaji memorial society's institute of information technology (AISSMS), Date- 07th march 2021

➢ "Machine Intelligence for identification of endothelial corneal layer diseases with novel morphology algorithm" Vaigai College of Engineering Madhuri, India, Date- 15-17th May 2019

Professional Training And Certification Courses

Certification Course

➢ Indian Institute of Management (IIM), Kozhikode, Date- March 15th – May 31st 2022 Description: Certification Programme in Design Thinking for Customer-Centric Innovation.

- ➢ Indian Institute of Technology (IIT), Kanpur, Date- 29th April -5th April 2014Description: Micro Manufacturing and its Applications

- ➢ National Instruments (NI), Bangalore, Date- 29th April to 3rd May 2013Description: LabVIEW Core 1 and LabVIEW Core 2

Professional Affiliations

- • IEEE Membership, April 2021 to -Present

- **VIT University**
  [Research scholar/Research], [Vellore], Dates-December 2016 to July 2022

Academic Responsibilities

- ➢ ED Cell Coordinator
- ➢ Confederation of Indian Industry (CII) Coordinator
- ➢ Training programs/workshops/Development programs Coordinator
- ➢ Analytical and Imaging lab in charge
- ➢ Organized IEEE international conference
- ➢ Industrial Visits Coordinator for Bachelor and Master students

- ➢ Career vision (ED co-ordinator)
- ➢ Departmental ED co-ordinator
- ➢ Sintilashunz disciplanary committe member
- ➢ Art of Teaching Co-ordinator
- ➢ Lab in-Charge (AI Lab)
- ➢ LAB Master Co-ordinator

4.
5. **Awards / Honors received:**   **NIL**
   Motto:
   To do research in the field of Bio-Medical image processing