

REPORT OF INTELLECTUAL PROPERTY RIGHTS (IPR) CELL

2023-2024 (1st April 2023 to 15th March 2025)

An IPR cell is functioning at NSS College of Engineering, Palakkad from 2011 with a motive of promoting the innovative sprits of the students, faculty, staff and people of the nearby places. The cell is active in organizing various programs with a vision of promoting innovation leading to patents. Support and guidance for developing innovative products of various fields of engineering and grass root level innovators are promoted by the cell for the past several years. IPR cell of NSSCE is headed by Dr Vinod V, Professor of Mechanical Engg.

The IPR cell of NSSCE received the best IPR cell award in Kerala among the 27 IPR cells in colleges and all the Universities in Kerala. The award was received by Dr Vinod V, IPR cell coordinator of NSSCE from Dr Saji Gopinath, Hon'ble Vice Chancellor of APJ Abdul Kalam Technological University & Digital University of Kerala on 12/1/2024 at College of Engineering Trivandrum. We are getting this award for the second consecutive time. **We have got 11 Patents Granted, published 6 patents, applied 3 patents and received 12 awards and our alumni also got 2 patents during the past 5 years which lead to the award.**

IPR Cell, NSSCE has organized one 2 seminars during this period.

1. Seminar on IPR & patent Information on 5th November,2024 at E One hall organised by KSCSTE & Dept. of Mechanical Engg.
2. Webinar on IPR best Practices for Innovators on 28th Nov 2024 organised by Dept of Mechanical Engg, ASSOCHAM & Dept for promotion of Industry & Internal Trade.

The major achievement in the year 2023-2024 (1st April 2023 to 29th Nov 2024) was the grant of 6 patents, published 1 applied 1 patent for our following innovations

	Title of Invention	Name of applicant	Patent Grant No & Application Date of filing/Date of publication
1	Gravity assisted dehusker for coconut dehusking	Dr A S Varadarajan Professor (Retd) MED	Granted Indian Patent Patent no :447111 dated 24/8/2023

2	“A coconut scrapper” (A portable and safer device used to scrap coconut without effort)	Dr. Vinod V (Prof., MED, Sadasivan M (Farmer, Chittur)	Granted Indian Patent Patent No: 492824, dated 01/01/2024
3	Mall customers expression monitoring smart device	Dr Sujith S (Professor, EEE)Prem kumar C M, Muruganath G R, Hanane A, Arif U, Dr Waleem M E, Dr Mohammed M A, Dr Jyothi C	Design Patent Granted Design No: 379162-001 dated 17/5/2023
4	Convertible Wheel Chair (A convertible wheel chair cum bed for elderly people with a bed to bed transfer facility and IOT facilities)	Dr.Vinod V., (Professor, MED), Dr. Resmi G, (Professor, CED), Dr. Sudeep U., Dr. Suresh P R, (Professor, MED), Adithya, Dananjay, Aswin Ajay Afrad Husssian (Student, MED)	Indian Patent Application 202341045745, TEMP/E-1/52821/2023-CHE, CBR no. 30552, Filed on Date 7/7/2023 Published on Indian Patent Journal Page 87207, Issue no. 39/2024, dated 27/9/2024
5	A solar assisted compact liquid desiccant comfort system	Sajesh M (Asst Professor , MED), Geletta F D, Kalpana	Indian Patent granted Patent No. 488395 Dated 23/12/2023
6	Block chain based data storage and processing device	Dr Gireesh V Puthuserry,(Associate Prof, EED), Dr B K Sarkar, Dr Reena Singh	Design Patent Granted Application No431373-001 CBR 217355 Dated 23/9/2024
7	An integrated EC-IC tester and method thereof	Dr Lija Arun, (Assistant prof –Adhoc, ECD) Vinod G(Professor, ECD), Saranya R (Assistant prof, ECD), Dr Sumi M, Aswin P, Abhisek V, Aswan S, Arjun P	Patent Published: The Patent Office Journal No. 06/2024 Dated 09/02/2024 page 13733
8	Multiresonator Configurations For Chipless Rfid	Dr Lija Arun, (Assistant prof –Adhoc, ECD) Dr. Sumi M(Assistant prof, ECD), Gopika G Krishnan Harikrishnan A I, (Assistant prof, ECD), Vinod G(Professor, ECD),, Saranya R(Assistant prof, ECD)	Patent Published The Patent Office Journal No. 28/2024 Dated 12/07/2024 Page 61063

9	Charging System and payment method of an Electric Vehicle thereof	Dr.Vinod V., (Professor, MED), Dr. Sujith S, (Professor, EED), Dr. Anil Kumar K R, Associate Prof (ECD)., Dr. Lija Arun , Asst Prof. (ECD), Vibin P V, Alka, (Student EEE, NSSCE)	Indian Patent Application 202441041737 E-2/2139/2025/CHE CBR No. 13803 dated 29/5/2024
10	System & method for identifying type II dominance in rectus femoris muscle of aspiring athletes	Dr Venugopal G (Professor ICD), Remya R Nair, Divya sasidharan, Dr S Ramakrishnan	Indian Patent granted Patent No. 557388 Dated 2/1/2025

Patents by Alumni

1	A portable sterile enclosure for surgical procedures	Dinoj Joseph (2008-2012) Mechanical Engg	Indian patent Granted Patent no: 472415 Date of Granting: 23/11/2023
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Patent searches were conducted for various innovative projects like

1. Project on “Convertible wheel chair cum bed”, by Dhananjay S, Ajay A, Adithya S, Aswin R Nath guided by Dr Suresh P R (Principal), and Dr Vinod V, Professor, Dept. of Mechanical Engg, NSSCE
2. Project on “Pneumatic system based 90 degree Steering mechanism” Sobith Menon, Sreehari, Vivek Janardhanan guided by Dr Vinod V, Professor, Dept. of Mechanical Engg, NSSCE
3. Project on “Portable automotive weighing equipment” Shinoj, Harimurali, Syam Mohan, Sreehari, Rinu Sankar guided by Dr B. Rajesh Menon, Professor, Dept. of Mechanical Engg, NSSCE
4. Project on “Rocker Bogie mechanism”, Mustafa, Kaya Rajesh, Meenakshi, Sreehari guided by Dr B. Rajesh Menon, Professor, Dept. of Mechanical Engg, NSSCE
5. A project on “Charging System and payment method of an Electric Vehicle thereof”, guided by Dr.Vinod V., (Professor, MED), Dr. Sujith S, (Professor, EED), Dr. Anil Kumar K R, Associate Prof (ECD)., Dr. Lija Arun , Asst Prof. (ECD), Vibin P V, Alka, (Student EEE, NSSCE)
6. Adaptive platform for enhanced eye and health comfort, “Dr. Satheesh Krishnan G, (Associate Professor, EED) Dr. Saju N, (Professor, EED)

Midhun Nellisseri Poovayil, Sreenath Krishnan, Kesavasadanam Raghulal,
Sreeram Pathiyaparambil Anilkumar, Ramees Muhammad Kuzhiyengal

Achievements in Innovations

- Received the **best project award Bronze prize** for the KSCSTE Techfest 2024 for the project “Energy from Humps” on 3rd March, 2024 at IIT Palakkad.
- B Tech project **Convertible Wheel Chair Cum Bed”** got selected for the **idea grant by startup mission** on 26/12/2023.

- Received the **OEN Technology Innovation award** for the project, „**Retrofitting of an Internal Combustion Engine to an Electric Car**” instituted by OEN and IEEE on 27th July, 2023 at Muthoot Institute of Technology, Ernakulam. The prize consisted of Rs 1 Lakh cash award and a citation.
- Received the E. Prabhakaran memorial **award for best socially relevant project** for the project, „**Convertible Wheel Chair Cum Bed**” instituted by Darshana charitable trust on 13th August 2023 at Govt. Polytechnic College, Palakkad. The prize consisted of Rs 25,000/- cash award and a citation
- Received the **IGNITE Best Project award** for the project, „**Convertible Wheel Chair Cum Bed**” at the Innovation and Entrepreneurship competition instituted by IGNITE, KTU, Startup Mission, KDISC and Digital University on 12th August 2023 at Govt. Polytechnic College, Palakkad.
- Received the First prize for the **Best Project award** for the project, „**Convertible Wheel Chair Cum Bed**” at the Knowledge Innovation Technology Freedom Fest 2023 –District Level Young Scientist Contest instituted by Govt of Kerala, Kerala IT Mission, and KDISC on 5th August 2023 at District Collectorate, Palakkad. The prize consisted of Rs 5000/- cash award and a citation
- Received the **Best third Project award** for the project, „**Fire and Rescue Drone** ” at the Knowledge Innovation Technology Freedom Fest 2023 –District Level Young Scientist Contest instituted by Govt of Kerala, Kerala IT Mission, and KDISC on 5th August 2023 at District Collectorate, Palakkad. The prize consisted of Rs 1000/- cash award and a citation
- Received the **Best second Project award** for the project, „**Convertible Wheel Chair Cum Bed**” instituted by IGNITE , KTU, Startup Mission, KDISC and Digital University on 12th August 2023 at Govt. Polytechnic College, Palakkad.

In a nut shell: the achievements of IPR cell NSSCE for the year 1st April 2023 to 15th March 2025 are as follows

Patents Granted -6 Nos	Patent searches done- 6
Patents Published -1 Nos,	Innovation awards-8
Patents Applied-1 Nos	Patents granted by alumni -1