



## N S S COLLEGE OF ENGINEERING

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**The major achievements of IPR Cell of NSSCE Palakkad from the year 2018-2026 (updated till 11/02/2026)**

**The Best IPR Cell in Kerala (2018-2023) (For the 2<sup>nd</sup> consecutive period (2012-2017))**

**Total 27 Patents – (Granted Patents-19, Published Patents-7, applied for 1 Patent & Got several Innovation awards)**



Dr Vinod V (Coordinator, IPR Cell) receiving the Best IPR Cell 2023 award from Dr Saji Gopinath, Hon'ble Vice Chancellor, Digital University and KTU on 12/01/2024

**The major achievements of IPR Cell of NSSCE Palakkad from the year 2018-2025 (updated till 07/09/ 2025)**

**The Best IPR Cell in Kerala (2018-2023) ( For the consecutive 2<sup>nd</sup> time (2012-2017)**

**Total 25 Patents – (Granted patents-17, Published Patents-7, Applied for 1 Patent & several Innovation awards**

SI No	Title of Invention	Name of applicant	Patent No. & Application Date of filing/Date of publication
1.	“A system and method for measuring an amount of fuel consumed and present in a cylinder” (E Stove-An electronic smart cooking gas stove which display the consumption and remaining amount of LPG in a cylinder and do automatic booking)	Dr. Vinod V., (Professor, MED), Saheer M (Student, ECD)	<b>Granted Indian Patent: Patent No. 402939 Dated 03/8/2022</b>  Indian Patent Application No.CBR No.25843 E-2/2531/2019- CHE Application No. 201941032331 dated September 09, 2019 Published in Indian Patent Journal No. 39/2020 dated 25/09/2020, page 42932
2.	“A fuel volume measuring system for a vehicle and a method thereof “ (An on time fuel measurement and display system in vehicles)	Dr. Vinod V., (Professor, MED), Dr. Resmi G, (Professor, CED), Dr. Ramesh U., Dr. Suresh P R, (Professor, MED), Saheer M (Student, ECD),	<b>Granted Indian Patent: Patent No. 397483 Dated 24/5/2022</b>  Indian Patent Application No.202041040835 A Published in the Patent Office Journal No. 40/2020 dated 02/10/2020, page 44587
3.	“LPG Cylinder Carrier and Stair Climber” (A device for carrying LPG Cylinder touppe floor through stairs easily without much effort)	Dr.Vinod V., (Professor, MED), Sreesankar, Sravan K K, Sreedhar N V, Sonu M, Sujeeth Kumar (Students, MED)	<b>Granted Indian Patent: Patent No. 417111 Dated 06/01/2023</b>  Indian Patent Application No.1394/CHE/2015A, 20/03/2015, Published in Indian Patent Journal, Publication date 30/09/2016, Page no. 69814
4.	Pro Hands- Article Holding Device ( This device is used to take and hold any items from a height which has	Jithin Babu., K Aravind Menon, Jaishnu Padman (MED)	<b>Granted Indian Patent: Patent No. 426561, Dated 23/3/2023</b>  Application No. 5666/CHE Date of filing of Application:

	360 degree rotatable head with a telescopic handle bar)		21/10/2015 Publication date 6/11/2015, Page no. 59782
5.	Gravity assisted dehusker for coconut dehusking (A device for dehusking coconut with the help of leg)	Dr A S Varadarajan Professor (Retd) MED	<b>Granted Indian Patent: Patent no :447111 dated 24/8/2023</b> Application no: 2571/CHE/2015 22/05/2015
6.	Artificial Intelligence based heart rate monitoring system for sports training	P Vijayakumar, Periyaswamy, B J Ananth, Revathi, Raj Kumar, C Nafi, Elayaraja, D Aeezul, C B Rajesh (Associate Prof, Dept. of Physical Education, NSSCE) , M Ali, Ghantasala, Pradeep, Muruganathan, Sathiyamoorthy, Mohan,, S Mufassir, L Ahamad, Kshirsagar, Pravin R	<b>Granted Australian Patent: Patent No: 2021101272 dated 11/03/2021</b>
7.	E-Stick, An electronic Multi-handicap Aid,An electronic Multi handicap Aid (This innovative project was granted Rs 2 Lahks by Startup mission, Kerala for making Prototype)	Muhammed Saheer(EC)	<b>Granted Indian Patent: Patent no :567729 dated 23/06/2025</b> Patent application no 201841004760, reference no. E 2/391/2018-CHE, docket no. 8756 dated 8-2-2018
8.	"Huxley Compact Private Vehicle" (This innovative project titled guided by Dr. Vinod V and Fayad S. From Dept. of Mechanical Engg has also received a project grant of Rs. 8,80,000/- by order no. 737/2017/KSCSTE dated 28/10/2017)	Fayad S. (MED)	E-2/3094/2017-CHE, Application no. 201741037309 Date of filing of Application: 23/10/2017
9	"Human weight operated coconut	Dr.Vinod V., (Professor, MED),	<b>Granted Indian Patent: Indian patent number: 532698, Date</b>

	dehusking machine” (A device operated using leg to dehusk a coconut with very less effort)	Anuvind Ajit, Alvin Sebastian ,Amal Monsi, Anandakrishnan G, Akhil PK (Students, MED)	<b>of grant: 12/4/2024</b>  Indian Patent Application No.CBR No.29652, E-Ref No. 2/2858/2019-CHE, Application No. 201941036766 A Published in Indian Patent Journal No. 38/2019 dated 20/9/2019 page 4334
11.	“A coconut scrapper” (A portable and safer device used to scrap coconut without effort)	Dr. Vinod V (Prof., MED, Sadasivan M (Individual)	<b>Granted Indian Patent: Patent No: 492824, dated 01/01/2024</b>  Indian Patent Application No.CBR No.33249 E-2/3199/2019-CHE Application No. 201941041192A Published in Indian Patent Journal No. 43/2019 dated 25/10/2019, page 50251
12.	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 Mohmmmed M A, Dr Jyothi C	<b>Granted Design Patent: Design No: 379162-001 dated 17/5/2023</b>
13.	Coating composition for a medical device surface with nanoparticles.	Dr Jyothisankar P R (Professor, MED), Dr Kiron K R (Professor, MED), Dr Aneesh Kumar P(Asst. Professor, MED), Sajith V S(Asso. Professor, Mathematics),	<b>Patent Published: Patent Office Journal No. 29/2022 dated 22/07/2022, page 45962</b>  Indian Patent Application No.202241040273 A
14.	“Portable dual powered grain transporter with variable height and flow rate	Dr A S Varadarajan Professor (Retd) MED	<b>Granted Indian Patent: Patent No. 400166, dated 28/6/2022</b>
15.	A solar assisted compact liquid desiccant comfort system	Sajesh M (Asst Professor , MED), Geletta F D, Kalpana	<b>Granted Indian Patent: Patent No. 488395 Dated 23/12/2023</b>  Indian patent application no: 202011056779 dated 28/12/2020

16	Block chain based data storage and processing device	Dr Gireesh V Puthuserry, (Associate Prof, EED), Dr B K Sarkar, Dr Reena Singh	<b>Granted Design Patent: Accepted &amp; Published in Patent Journal No 48/2024 date 29/11/2024, page 114283</b>  <b>Application No431373-001</b> CBR 217355 Dated 23/9/2024
17	A Gravity assisted dehusker for coconut dehusking using dual piercing heads	Dr A S Varadarajan Professor (Retd) MED	<b>Granted Indian Patent: Patent no: 531218, dated 31/03/2024</b>  Indian patent application no: 201641040371 dated 25/11/2016
18.	System and method for identifying type ii dominance in rectus femoris muscle of aspiring athletes	Remya R Nair Divya Sasidharan Dr. Venugopal G, Professor (Instrumentation & control) Dr. S. Ramakrishnan	<b>Granted Indian Patent: Patent no :557388 dated 02/01/2025</b>  Application No 202341028334 Dated 18/04/2023 Date of publishing 5/5/2023
19	Convertible Wheel Chair cum bed ( 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 Hussian (Student MED)	<b>Patent Published: Patent Office Journal No. 39/2024 dated 27/09/2024, page 87207</b> Indian Patent Application 202341045745  TEMP/E-1/52821/2023-CHE, CBR no. 30552, dated 7/3/2024

20	Charging System and payment method of an Electric Vehicle thereof (An App free charging system for EV vehicles)	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)	<b>Patent Published: Patent Office Journal No. 12/2025 dated 21/03/2025, page 27855</b> Indian Patent Application 202441041737 TEMP/E-1/48825/2024-CHE CBR No.35603 dated 29/5/2024
21	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	<b>Patent Published: The Patent Office Journal No. 06/2024 Dated 09/02/2024 page 13733</b>
22	“Method and Apparatus for Enhancing Efficiency in Solar Power Systems using Maximum Point Tracking”	Vivek V.M. (Assistant prof –Adhoc, MED)	<b>Patent Published: Patent Office Journal No. 18/2025 dated 02/05/2025, page 41624</b>
23	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)	<b>Patent Published The Patent Office Journal No. 28/2024 Dated 12/07/2024 Page 61063</b>
24	Compact Solar Energy Device	Dr Sateesh Krishnan G (Associate Prof, EED), Dr Saju N (Professor, EED), Rita Pavan Bansal, Dr Priyanka Singh, Dr Nitin Bubey, Akshaya Desai, Dr Kiran Kumari, Dr Rishi Dev	<b>Design Patent Granted, Design No 444899-001, dated 28/04/2025</b>



25	"Preparation of hollow bricks using waste plastic"	Vivek V.M. (Assistant prof –Adhoc, MED)	<b>Patent Published</b> <b>Patent Office Journal No. 22/2025 dated 30/05/2025, page 50427</b>
26	Voltage level based switching control of sub modules in a cascaded multi-level converter	Vivek P V ( Asst Prof, EED) ,Ansuman Shukla	<b>Patent Granted: Patent No. 577063, dated 31/12,2025</b>
27	Sustainable 3D printed low carbon concrete wall element	Sajitha R Nair, Praveen Nagarajan, Santhosh G Thampi, Sudha Das, Rajesh P	<b>Design Patent Granted: Design No. 466201-001 dated 11/12/2025</b>

#### Patents by Alumni

A portable sterile enclosure for surgical procedures	<b>Dinoj Joseph (2008-2012 Batch Mechanical Engg)</b>	<b>Indian Patent Granted Patent No: 472415 Date of Granting: 23/11/2023</b>
A negative pressure portable sterile enclosures kit for dental procedures	<b>Dinoj Joseph (2008-2012 Batch Mechanical Engg)</b>	<b>Indian Patent Granted Patent No: 430781 Date of Granting: 04/12/2020</b>

**In a nut shell: the achievements of IPR cell NSSCE for the year 2018-26 (Updated till 11/02/2026) are as follows**

<b>Patents Granted -19 Nos</b> <b>Utility Patents (Products) - 16Nos,</b> <b>Design Patents - 3 Nos</b>	<b>One Patent (Patent No: 492824- Coconut Scraper) Commercialized</b>
<b>Patents -Published 7 Nos,</b>	<b>Granted Patents by Alumni (2018-24) -2 Nos</b>
<b>Patents- Applied - 1 Nos</b>	<b>Patent searches done- 6 Nos</b>