

**REPORT OF THE ACTIVITIES OF THE INTELLECTUAL PROPERTY RIGHTS (IPR)
CELL AT THE NSS COLLEGE OF ENGINEERING, PALAKKAD FOR THE YEAR 2021-22**

An IPR cell is functioning at NSS College of Engineering, Palakkad from 2011 with a motive of promoting the innovative spirits 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.

Kerala State Council for Science Technology and Environment (KSCSTE), Govt. of Kerala has evaluated the activities of all the 23 IPR cells in various colleges and Universities in Kerala for the past 5 years and selected IPR cell of NSS College of Engineering as the best IPR Cell in Kerala for the year 2017 vide letter dated 18/10/2018. The appreciation is for the disseminating awareness of significance of IPR among students, encouraging students to do innovative projects, scouting potential IP's from students, providing guidance to students on protecting intellectual citations and forwarding eligible cases of IP protection to PIC/KSCSTE. The award was based on the activities and efforts taken by the cell so that we could receive awards received in the field of Innovation like Indian Automotive Technology Innovation Award, 2016 and Innovation Leadership Award, 2015. Even during the Covid pandemic, we were able to publish patents, conduct patent search, attend online programs on IPR and motivate our students to attend workshops on innovation & entrepreneurship organized by IIT Palakkad. We are also started an Institute Innovation Cell (IIC) an initiative of MHRD and AICTE which is supporting the activities of IPR Cell.

The major achievement in the year 2021-2022 was the grant of 3 patents for our following innovations

1	<p>“A system and method for measuring an amount of fuel consumed and present in a cylinder”</p> <p>(E Stove-An electronic smart cooking gas stove which display the consumption and remaining amount of LPG in a cylinder and do automatic booking)</p>	<p>Dr. Vinod V., (Professor, MED), Saheer M (Student, ECD)</p>	<p>Granted Indian Patent- patent No. 402939 Dated 03/8/2022</p> <p>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</p>
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2	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	Granted Australian Patent , Patent No: 2021101272 dated 11/03/2021
3	“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),	Granted Indian Patent- patent No. 397483 Dated 24/5/2022 Indian Patent Application No.202041040835 A Published in the Patent Office Journal No. 40/2020 dated 02/10/2020, page 44587

Our students participated in the interactive workshop on mock pitching and innovation was conducted by TECHIN IIT Palakkad from 2nd October to 24th October, 2021 in association with IIC, IEDC of NSS College, Palakkad. The ideation, business workshop help the participants understand the basics of customer discovery, customer segments and value proposition. An overview of Business model canvas and market was also given to the participants.

Three of our student teams, Team 1, with the theme “**Wild Animal Intrusion Detection**” done by Vishnu P, Nishanth S kumar, Pranav T won second prize, Team 2, with the theme “**Multi-Purpose Tool Kit**”, Arun kumar, Nithin E K, Sreerag C R, Vishnu V won third prize and the Team 3, with the theme “**Network of EV charging stations and Restaurants**” Muhammed Mishal P S, Jithin G, Sreedhar K K won the fourth prize in the competition.

A Webinar on “**IPR Awareness Programme**” under National Intellectual Property Awareness Mission (NIPAM) for faculty and students was organized by Institution Innovation Council (IIC) of NSS College of Engineering in association with Office of the Controller General of Patents, Designs & Trademarks, and Department for Promotion of Industry & Internal Trade, Ministry of Commerce & Industry, and Government of India on 9/2/2022. Smt. Devika R Nair, Examiner- Patents and Designs, Ministry of Commerce and Industry,

Government of India, Chennai was the resource person. The webinar was attended by 160 participants. This webinar gave lot of information to the faculty and students regarding the process of filing patents.

World Intellectual Property Day was celebrated on 26th April, 2022 to learn about the role that intellectual property (IP) rights play in encouraging innovation and creativity. The theme of this year of World Intellectual Property Day was **“IP and Youth: Innovating for a Better Future”** and celebrates youth-led innovation and creativity. In connection with the World IP Day 2022, Intellectual Property Rights Information Centre - Kerala (IPRICK) of KSCSTE, the IPR Cell and IIC of NSSCE organized an oration by Dr.Yashwant Dev Panwar, Director, Patent Facilitating Centre, TIFAC, Dept. of Science & Technology, Govt. of India, on April 26, 2022. The program was attended by IPR Cell Coordinator Dr Vinod V and IIC Coordinator Dr. Leena Nair along with 60 students and other faculty of NSS College of Engineering, Palakkad. The program created awareness on the significance of IPR and its role in different sectors, which was really informative for the students and faculty.

The IPR Cell coordinator Dr. Vinod V. has delivered a lecture on **“IPR and Innovations”** in the webinar on IPR organized by the IPR Cell & ED Club of AL Ameen College, Edathala in association with KSCSTE on 30 th March, 2021.

Details of Patents Granted/Published/Applied till September 2022

Sl No.	Title of Invention	Name of applicant	Application No/Ref No, & Date of filing/Date of publication
1	“LPG Cylinder Carrier and Stair Climber” (A device for carrying LPG Cylinder to upper 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)	Indian Patent Application No.1394/CHE/2015 A, 20/03/2015 Published in Indian Patent Journal, Publication date 30/09/2016 Page no. 69814
2	“Human weight operated coconut dehusking machine” (A device operated using leg to dehusk a coconut with very less effort)	Dr.Vinod V., (Professor, MED), Anuvind Ajit, Alvin Sebastian ,Amal Monsi, Anandakrishnan G, Akhil PK (Students, MED)	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
3	Pro Hands- Article Holding Device	Jithin Babu.(MED)	Application No. 5666/CHE Date of filing of Application: 21/10/2015 Publication date 6/11/2015 Page no. 59782
4	An electronic Multi handicap Aid (This innovative project was granted Rs 2 Lahks by Startup mission, Kerala for making Prototype)	Muhammed Saheer(EC)	E-2/391/2018-CHE Application no. 201841004760 Date of filing of Application: 8/2/2018
5	A Portable Sterile Enclose for Surgical procedures	Dinoj Joseph (MED)	Tamp/E-1/33248/2018-MUM, Application No. 201821030523, Date of filing of Application: 14/8/2018
6	“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

7	<p>“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)</p>	<p>Dr.Vinod V., (Professor, MED), Saheer M (Student, ECD)</p>	<p>Granted Indian Patent- patent No. 402939 Dated 03/8/2022 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</p>
8	<p>“Kitchen Sahay-Easy Coconut Scrapper” (A portable and safer device used to scrap coconut without effort)</p>	<p>Dr. Vinod V (Prof., MED, Sadasivan M (Individual)</p>	<p>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</p>
9	<p>“A fuel volume measuring system for a vehicle and a method thereof “ (An on time fuel measurement and display system in vehicles)</p>	<p>Dr.Vinod V., (Professor, MED), Dr. Resmi G, (Professor, CED), Dr. Ramesh U., Dr. Suresh P R, (Professor, MED), Saheer M (Student, ECD),</p>	<p>Granted Indian Patent- patent No. 397483 Dated 24/5/2022 Indian Patent Application No.202041040835 A Published in the Patent Office Journal No. 40/2020 dated 02/10/2020, page 44587</p>
10	<p>Artificial Intelligence based heart rate monitoring system for sports training</p>	<p>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,</p>	<p>Granted Australian Patent , Patent No: 2021101272 dated 11/03/2021</p>

		Sathiyamoorthy, Mohan,, S Mufassir, L Ahamad, Kshirsagar, Pravin R	
11	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),	Indian Patent Application No.202241040273 A Published in the Patent Office Journal No. 29/2022 dated 22/07/2022, page 45962

Two of our student projects from the Dept. of mechanical Engineering, mentored by Dr Vinod V, were declared **winner in the Young Innovators Program (YIP-2020)** organized by Kerala- District Innovation and Strategic Council (K-DISC) and Startup Mission. They are “**Design and development Electric Vehicle Test Rig**”, Idea Theme- Electric Vehicle, and the second one “**Wild Animal Intrusion Detection**” These two teams will be approved by the YIP for further mentoring and product development by Government of Kerala.

The IPR coordinator Dr Vinod V has attended, an online seminar on Intellectual Rights Awareness program (NIPAM) organized by TKM College of Engineering, Kollam which was hosted by IPO Kolkata on 3rd August, 2022.

The IPR coordinator Dr Vinod V has attended, an online seminar -Vigyan Utsav Program on the theme “Intellectual Property Rights” on 24th August, 2022, which was conducted by Kerala State council for science technology and environment (KSCSTE) as a part of the Azadi ka Amrit mahotsav.

These achievements show the potential of our students in the field of innovation. The IPR cell is trying to inculcate the spirit of innovation a research among students, faculty and the students in the nearby schools/colleges by conducting online awareness program. These programs are organized by the National Intellectual Property Awareness Mission (NIPAM) and KSCSTE-IPRICK, Govt. of Kerala with a motive to mould creative citizens with social commitment.