



RajaRajeswari College of Engineering

(An Autonomous Institute, Affiliated Visvesvaraya Technological University, Belagavi,
Approved by AICTE, UGC & GoK, Accredited by ISO 9001-2015 Certified Institution)

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Department of Robotics and Automation

Academic Year 2023-24

Sl No.	Name of the Applicants	Title	Year	Application Number	Status
1	Dr N Sreenivasalu Reddy	Mosquito Trapping Device	2024	413567-001	Granted
2	Dr N Sreenivasalu Reddy, Dr Vishwanath K C, Dr Karthikeyan M, Dr Ramesh C.	Flat Plate Solar Water Heating System with Twisted Elliptical Tubes	2024	202041050521	Granted
3	Dr.Thanuj Kumar M 2. Dr. Radhakrishna R Kumshika	Robotic Arm for Precision Manufacturing	2024	417390-001	Granted

Faculty Publications 2023-24

International Journal

- 1) Radhakrishna R Kumshikar, R. Shankara Reddy “Experimental and Numerical Analysis of Woven Bamboo and Jute Fiber Reinforced in Epoxy Composites” Mechanics of Advanced Composite Structures, Vol 11, Issue 2 - Serial Number 23, November 2024, Pages 103–118, DOI:10.22075/mac.s.2023.30534.1504 Link : https://macs.semnan.ac.ir/article_8056.html
- 2) Kurapalli Shivareddy Madhu, Ramareddy Shankarareddy , Shantappa Gurubasappa Sangashetty “Experimental Study on the Effect of TiO₂-Water Nanofluid on Heat Transfer and Pressure Drop in Heat Exchanger with Varying Helical Coil Diameter” Journal of Advanced Research in Fluid Mechanics and Thermal Sciences, 107, Issue 2 (2023), pp 50-67, ISSN: 2289-7879, Link: <https://doi.org/10.37934/arfmts.107.2.5067>

International Conference

- 1) Pramodkumar S Kataraki, Harsha kusnoorkar, Ahmad Baharuddin Abdullah, Satheesha V, Ahmad Farrahnor and Ahmad Faiz Zubair “Optimization of EDM Process Parameters for Inconel 718 by Machine Learning Techniques” – Industrial Engineering and Operations Management World Congress Detroit, Michigan, October 9-11, 202

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- 2) Vishwanath K C, N. Sreenivasalu Reddy, Chandrashekar A, Abdul Razak
“Evaluation of Mechanical Properties and Characteristic of bamboo fibers reinforced with polymer matrix composite” International Conclave on Engineering Sciences and Technology, P A College of Engineering, Mangalore on 23rd & 24th April 2024.

- 3) Prem Chand R, Vishwanath K C, N. Sreenivasalu Reddy, Chandrashekar A, Abdul Razak “ Evaluation of physical and mechanical properties of chicken feathers and wood apple shell powder reinforced bio-degradable hybrid composites” International Conclave on Engineering Sciences and Technology, P A College of Engineering, Mangalore on 23rd & 24th April 2024.

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202241065521 A

(19) INDIA

(22) Date of filing of Application :15/11/2022

(43) Publication Date : 25/11/2022

(54) Title of the invention : OPEN-FACE HELMET FABRICATED USING WOVEN BAMBOO AND JUTE FIBER REINFORCED WITH EPOXY COMPOSITES

<p>(51) International classification :A42B0003040000, C08J0005040000, A42B0003060000, C08J0005060000, B32B0009020000</p> <p>(86) International Application No Filing Date :PCT// / :01/01/1900</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number Filing Date :NA :NA</p> <p>(62) Divisional to Application Number Filing Date :NA :NA</p>	<p>(71)Name of Applicant :</p> <p>1)PRASANNA KUMAR MALLAPPA Address of Applicant :406, FLOURISH GURUSHREE APARTMENTS , 80 FEET ROAD, MPM LAYOUT, NAGARABHAVI -----</p> <p>2)Rajarajeshwari College of Engineering</p> <p>3)Radhakrishna R K</p> <p>4)Dr.R.Shankara Reddy</p> <p>Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor :</p> <p>1)Radhakrishna R K Address of Applicant :Radhakrishna R K Assistant Professor Mechanical Engineering Department RajaRajeswari College of Engineering,Bangalore Bangalore -----</p> <p>2)Dr.R.Shankara Reddy Address of Applicant :Professor Mechanical Engineering Department RajaRajeswari College of Engineering Bangalore -----</p> <p>3)Prasanna Kumar M Address of Applicant :Dept. of CSE RajaRajeswari College of Engineering Bangalore Bangalore -----</p>
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(57) Abstract :

Abstract Helmets provide safety and protection to human beings and prevent head injuries during accidents. Helmets fabricated by metals/ polymers or ceramic composites are used as shields or guards for a wide variety of applications like Motor racing, construction work, manufacturing industries, mining, refinery, public strikes, defense, bike riding, etc. The road transport department has made it mandatory to wear a helmet for all bike riders. Natural fibers like bamboo, sisal, coir, jute, etc are getting more research interest as reinforcement in polymer composites. These fibers are very attractive due to being light in weight, nontoxic, low cost, abundant availability, low energy inputs, ease of fabrication, and eco-friendly. The current investigation is focused on the fabrication of an open-face helmet by using natural fiber composites. Woven fabrics are made by interweaving warp 00 and weft 900 fibers in a regular pattern. This composite is prepared by selecting a suitable combination of woven bamboo [10%] and jute [20%] as fibers and epoxy [70%] as the matrix. Based on the stacking sequence, BJB the helmet is fabricated. The fabricated helmet is cured for 72 hours.

No. of Pages : 10 No. of Claims : 6

