

Jan' 22 – June' 22



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2022

Jan' 22 – June' 22

Chief Editor: Dr. C. Krishnaraj

Editor: Mr. V.V. Arun Sankar

Co-Editor: Mr. R.A. Hari Baalaaji

Student Editorial Board: Sabarimanokar M (20M707), Rizwan Khan(21M239), Vikram S M (21M257)

DEPARTMENT ACTIVITIES

NATIONAL / INTERNATIONAL LEVEL PROGRAMMES (Conducted)

- ❖ Organized a One Week FDP on Laboratory Practices for Faculty from 14th to 19th February 2022.
- ❖ Organized an 'International Conference on Modelling, Simulation and Control (ICMSC 2022)' on 17th and 18th March 2022.



Development Programmes:

- ❖ Organized a One Week Skill Development Programme for Non-Teaching Staff from 09th to 12th February 2022.

Seminars / Workshops / FDP - conducted

- ❖ Organized a Webinar on Entrepreneurship and innovation as career opportunity on 05th January 2022.
- ❖ Organized a Design Talk for Final Year students on 24th January 2022.
- ❖ Organized a Faculty Training Programme on Vibrational Analysis on 10th February 2022.
- ❖ Organized a workshop on "An Insight into career opportunities in Mechanical Engineering" for KCEians by KCEians on 17th and 18th February 2022.
- ❖ Organized a One-day workshop on Role of Mechanical Engineer in IT Sector - Session 3 on 17th and 18th February 2022.
- ❖ Organized a One-day workshop on latest automotive technology introduced in modern cars on 19th April 2022.
- ❖ Organized a Hands-on training on disassembling & rebuilding Mahindra car engine on 20th April 2022.
- ❖ Organized a Job opportunities in space and defense on 25th May 2022.
- ❖ Organized an Alumni interaction on Shell Molding on 25th May 2022.



FACULTY ACHIEVEMENTS

Journal Publications

Dr.C.Krishnaraj, Professor & Head

- ❖ Published a paper titled "Individual and Catalytic Co-Pyrolysis of Agricultural Outcomes and Polymeric Materials over Nano-HZSM-5 Zeolite: Synergistic Effects and Yield Analysis for Heating Applications", Journal of Nanomaterials, 2022.

Dr. P. Madhu, Associate Professor

- ❖ Published a paper titled "Integrating Nanomaterial and High-Performance Fuzzy-Based Machine Learning Approach for Green Energy Conversion", Journal of Nanomaterials, 2022.
- ❖ Published a paper titled "Production and Optimization of Energy Rich Biofuel through Co-Pyrolysis by Utilizing Mixed Agricultural Residues and Mixed Waste Plastics", Advances in Materials Science and Engineering, 2022
- ❖ Published a paper titled "An integrated CRITIC-TOPSIS- and Entropy-TOPSIS-based informative weighting and ranking approach for evaluating green energy sources and its experimental analysis on pyrolysis", Environmental Science and Pollution Research, 2022
- ❖ Published a paper titled "Utilization of Tea Industrial Waste for Low-Grade Energy Recovery: Optimization of Liquid Oil Production and Its Characterization", Advances in Materials Science and Engineering, 2022
- ❖ Published a paper titled "Co-pyrolysis of Hardwood Combined with Industrial Pressed oil Cake and Agricultural Residues for Enhanced Bio-Oil Production", Journal of Chemistry, Vol.22, 2022.
- ❖ Published a paper titled "Production and Characterization of Maximum Liquid oil Products through Individual and Copyrolysis of Pressed Neem oil Cake and Waste Thermocol Mixture", Advances in Polymer Technology, Vol.22, 2022
- ❖ Published a paper titled "Utilization of Eco-Friendly Waste Eggshell Catalysts for Enhancing Liquid Product Yields through Pyrolysis of Forestry Residues", Journal of Nano materials, Vol.22, 2022.
- ❖ Published a paper titled "Utilization Possibilities of waste medium-density fiberboard: A Material Recycling process", Materials Today Proceedings, pp.1362-1366, 2022.
- ❖ Published a paper titled "Utilization Possibilities of Infectious Waste Plastic Materials toward Environmental sustainability", Pollution Research, pp.649-653, 2022.

Dr. K. Ananthakumar, Associate Professor

- ❖ Published a paper titled "The effect of hybrid nanofillers on mechanical response s of woven glass fiber reinforced polymer nanocomposites", Materials Today: Proceedings, 2022, International (Scopus).

Mr. N. Subramani, Assistant Professor

- ❖ Published a paper titled "Comparative Analysis on Mechanical Properties of Glass Fiber and Rice Husk Fiber Reinforced Polypropylene Composites", Materials Today: Proceedings, International (Scopus).

Mr. R. Haridass, Assistant Professor

- ❖ Published a paper titled "Experimental and Numerical Analysis of Aluminium Alloy 5083-5059 Friction Stir Welds", Materials Today: Proceedings, International (Scopus).
- ❖ Published a paper titled "Comparative analysis of mechanical behavior of glass fiber and rice husk reinforced composites", Materials Today: Proceedings, 2022.

Mr. S. Chitharthan, Assistant Professor

- ❖ Published a paper titled "Optimization of Process Parameters for Mechanical Properties of Al- Al₂O₃- Graphite Hybrid Composite Fabricated using Stir Casting Process", Materials Today: Proceedings, International (Scopus).

Book Publications

Dr. Titus Thankachan, Associate Professor

- ❖ Published a chapter titled "Composites for corrosive wear applications", under the book titled "Composite and Composite Coatings Mechanical and Tribology Aspects, ISBN: 9780367625672.
- ❖ Published a chapter titled "Tribological properties of ceramic reinforced metal matrix composite", under the book titled "Composite and Composite Coatings Mechanical and Tribology Aspects, ISBN: 9780367625672.
- ❖ Published a chapter titled "Composite for high temperature wear applications", under the book titled "Composite and Composite Coatings Mechanical and Tribology Aspects, ISBN: 9780367625672.

Patent Publications

Dr. J. Devaraj, Professor

- ❖ Published a patent titled "Evaluation of mechanical properties and stability of lignocellulosic briquettes", Patent No.: 202241009462, February 2022.

Paper Presentation - National / International Conferences

Dr.K.Ananthakumar Associate Professor

- ❖ Presented a paper titled "Enhancement of Piezoelectric Responses of Electrospun PVDF Nanofibers through Mechanical Stretching and Annealing process", International Conference on Intelligent System and Control (ISCO) 2022 at Karpagam College of Engineering, January 2022.
- ❖ Presented a paper titled "The Effect of Hybrid Nanofillers on Mechanical Responses of Woven Glass Fiber Reinforced Polymer Nanocomposites", International Conference on Intelligent System and Control (ISCO) 2022 at Karpagam College of Engineering, January 2022.

Mr. S. Chitharthan, Assistant Professor

- ❖ Presented a paper titled "Optimization of Friction Stir Process Parameters for Fabrication of Surface Hybrid Composite using Full Factorial Design", International Conference on Intelligent System and Control (ISCO) 2022 at Karpagam College of Engineering, January 2022.
- ❖ Presented a paper titled "Optimization of Process Parameters for Mechanical Properties of Al- Al₂O₃- Graphite Hybrid Composite Fabricated using Stir Casting Process", International Conference on Intelligent System and Control (ISCO) 2022 at Karpagam College of Engineering, January 2022.

Mr.N. Subramani, Assistant Professor, Mr.R. Haridass, Assistant Professor and Mr.R. Krishnan, Assistant Professor

- ❖ Presented a paper titled "Mechanical Characterization of Aluminium 6061 Hybrid Metal Matrix Composites", International Conference on Intelligent System and Control (ISCO) 2022 at Karpagam College of Engineering, January 2022.

Mr.J. Mohanraj, Assistant Professor

- ❖ Presented a paper titled "Effect of various welding process parameters on carbon steels for different welding methods", International Conference on Intelligent System and Control (ISCO) 2022 at Karpagam College of Engineering, January 2022.

Mr. Sathish.R, Assistant Professor

- ❖ Presented a paper titled "Effect of polygon collision Approach in the Nesting process", International Conference on Intelligent System and Control (ISCO) 2022 at Karpagam College of Engineering, January 2022.

Mr. Vijai Kaarathi V, Assistant Professor

- ❖ Presented a paper titled "Theoretical and Computational Investigations on Inverse Design of Air-foil for Low Wind Speed Conditions", International Conference on Intelligent System and Control (ISCO) 2022 at Karpagam College of Engineering, January 2022.

Mr. Hari Baalaaji R.A, Assistant Professor

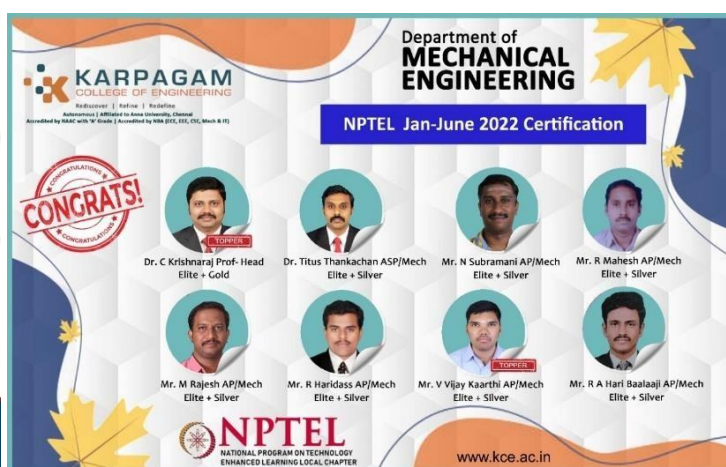
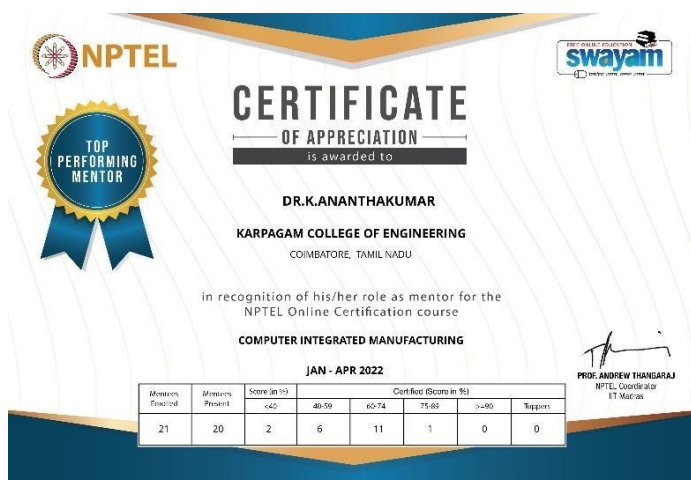
- ❖ Presented a paper titled "Experimental Investigation on Machining Properties of Aluminum 5052 - Tungsten Carbide – Graphite Hybrid Composite Materials using Electric Discharge Machining", International Conference on Intelligent System and Control (ISCO) 2022 at Karpagam College of Engineering, January 2022.

Seminars / Workshops / FDPs / STTPs - Presented / Attended

- ❖ Dr.C.Krishnaraj Professor & Head, attended NPTEL - AICTE FDP on "Computer Integrated Manufacturing" during 24th Jan 2022 -15th Apr 2022.
- ❖ Dr.K.Ananthakumar Associate Professor, attended NPTEL - AICTE FDP on "Computer Integrated Manufacturing" during 24th Jan 2022 -15th Apr 2022.
- ❖ Dr.Titus Thankachan Associate Professor, attended NPTEL - AICTE FDP on "Computer Integrated Manufacturing" during 24th Jan 2022 -15th Apr 2022.
- ❖ Mr.N.Subramani, Assistant Professor attended NPTEL - AICTE FDP on "Computer Integrated Manufacturing" during 24th Jan 2022 -15th Apr 2022.
- ❖ Mr.P.Muraleedharan, Assistant Professor attended NPTEL - AICTE FDP on "Computer Integrated Manufacturing" during 24th Jan 2022 -15th Apr 2022.
- ❖ Mr. S.Chitharthan, Assistant Professor attended NPTEL - AICTE FDP on "Computer Integrated Manufacturing" during 24th Jan 2022 -15th Apr 2022.
- ❖ Dr. G.Padanaban, Associate Professor attended Online training Programme on "Renewable Energy Applications" during 28th Feb 2022 – 04th Mar 2022.
- ❖ Mr. R.Arul Murugan, Assistant Professor attended FDP on "Intellectual Property Rights" during 07th -12th Mar 2022.
- ❖ Mr. V.V Arun Sankar, Assistant Professor attended FDP on "Behavior of Composite Materials" during 14th - 19th Mar 2022
- ❖ Mr. M.Rajesh, Assistant Professor attended NPTEL - AICTE FDP on "Inspection and Quality control in Manufacturing" during 21st Feb 2022 – 14th Mar 2022.
- ❖ Mr.T.Prabhakaran, Assistant Professor attended FDP on "Entrepreneurship & Startups" during 28th Feb 2022 - 12th Mar 2022.
- ❖ Mr.R.Sathish, Assistant Professor attended Atal FDP on "Polymer Matrix based Nanostructures for Targeted Drug Delivery Application" during 07th -11th Feb 2022.
- ❖ Mr. R.A. Hari Baalaaji, Assistant Professor, attended Anna University FDP on "Finite Element Analysis" during 03rd – 08th Jan 2022.
- ❖ Mr. R.A. Hari Baalaaji, Assistant Professor, attended NPTEL - AICTE FDP on "Product Design and Manufacturing" during 24th Jan 2022 - 20th Apr 2022.
- ❖ Mr. R.A. Hari Baalaaji, Assistant Professor, attended NPTEL - AICTE FDP on "Manufacturing Guidelines for Product Design" during 21st Feb 2022 - 22nd Apr 2022.
- ❖ Mr. R.A. Hari Baalaaji, Assistant Professor, attended AICTE - ISTE program on "Curriculum Design, Assessment, Evaluation and Innovative Teaching and Learning to Achieve Outcome Based Education" during 19th – 25th Feb 2022.
- ❖ Mr.P.Muraleedharan, Assistant Professor attended workshop on "Roadmap to place your students in MNC workshops" on 12th Feb 2022.
- ❖ Mr.P.Muraleedharan, Assistant Professor attended workshop on "How to send professional Emails to Recruiters Workshop" on 5th Feb 2022.
- ❖ Mr. R.Masilamani, Assistant Professor attended online Training Programme on "ICT based STC on free software and resources on Technical Education" during 21th -25th Mar 2022.
- ❖ Mr.R.Haridass, Assistant Professor attended online Training Programme on "ICT based STC on free software and resources on Technical Education" during 21th -25th Mar 2022.
- ❖ Mr. S.Chitharthan, Assistant Professor attended online Training Programme on "ICT based STC on free software and resources on Technical Education" during 21th -25th Mar 2022.
- ❖ Mr.T.Prabhakaran, Assistant Professor attended online Training Programme on "ICT based STC on free software and resources on Technical Education" during 21th -25th Mar 2022.
- ❖ Mr. R.A. Hari Baalaaji, Assistant Professor attended online Training Programme on "ICT based STC on free software and resources on Technical Education" during 21th -25th Mar 2022.

NPTEL Mentor Certifications

S.No	Name of the Faculty	Name of the Certification Course	Mentees Cleared	Award
1	Mr.R.Maresh	Computer Integrated Manufacturing	13	Top Performing Mentor
2	Dr.K.Ananthakumar	Computer Integrated Manufacturing	18	Top Performing Mentor
3	Mr.V.Vijai Kaarthi	Enhancing Soft skills and personality	17	-
4	Dr.S.Vimalanand	Principles of Casting Technology	4	-
5	Dr.Titus Thankachan	Computer Integrated Manufacturing	9	-
6	Mr.R.Haridas	Computer Integrated Manufacturing	3	-
7	Mr.T.Prabhakaran	Computer Integrated Manufacturing	6	-
8	Mr.N.Subramani	Computer Integrated Manufacturing	3	-
9	Mr.R.Periyasamy	Inspection and Quality Control in Manufacturing	2	-
10	Dr.C.Krishnaraj	Computer Integrated Manufacturing	3	-
11	Mr.S.Chitharhan	Enhancing Soft skills and personality	9	-
12	Mr.R.Arulmurugan	Introduction to Abrasive Machining and Finishing Processes	27	-



NPTEL Certifications

S.No	Name	Course Title	Certificate type
1	Dr.C.Krishnaraj	Computer Integrated Manufacturing	Elite+ Gold
2	Mr.R.Haridass	Computer Integrated Manufacturing	Elite+ Silver

3	Mr.R.Mahesh	Computer Integrated Manufacturing	Elite+ Silver
4	Dr.Titus Thankachan	Computer Integrated Manufacturing	Elite+ Silver
5	Mr.N.Subramani	Computer Integrated Manufacturing	Elite+ Silver
6	Mr.M.Rajesh	Inspection and Quality Control in Manufacturing	Elite+ Silver
7	Mr.R.A.Hari Baalaaji	Inspection and Quality Control in Manufacturing	Elite+ Silver
8	Mr.R.A.Hari Baalaaji	Product Design and Manufacturing	Elite+ Silver
9	Mr.J.Mohanraj	Fundamental of Welding Science and Technology	Elite
10	Mr.R.Arul Murugan	Introduction to Abrasive Machining and Finishing Processes	Elite
11	Mr.R.Periyasamy	Inspection and Quality Control in Manufacturing	Elite
12	Mr.P.Muraleedharan	Computer Integrated Manufacturing	Elite
13	Mr.S.Chitharthan	Computer Integrated Manufacturing	Elite
14	Mr.T.Prabhakaran	Computer Integrated Manufacturing	Elite
15	Dr.K.Ananthakumar	Computer Integrated Manufacturing	Elite
16	Mr.V.V.Arun Sankar	Computer Integrated Manufacturing	Elite
17	Mr.R.Masilamani	Computer Integrated Manufacturing	Successfully Completed
18	Dr.G.Padmanaban	Computer Integrated Manufacturing	Successfully Completed

Innovations by the Faculty in Teaching and Learning

S.No.	Course Name	Mode
1	Kinematics of Machinery	ICT+ Smart Class
2	Strength of Materials	ICT + Smart Class
3	Thermal Engineering	ICT
4	Engineering Metallurgy	ICT + Smart Class
5	Machine Drawing	ICT
6	Design of Transmission Systems	ICT
7	Gas Dynamics and Jet Propulsion	ICT+ Smart Class
8	Unconventional Machining Processes	ICT
9	Metrology and Measurements	ICT
10	Design for Manufacture and Assembly	ICT+ Smart Class
11	Power Plant Engineering	ICT
12	Principles of Management and Engineering Ethics	ICT
13	Aircraft Systems	ICT
14	Industrial Robotics	ICT

Industry Offered Courses

- "Aircraft System" course was offered to final year students of Mechanical Engineering as a part of Industry offered course, partial delivery of courses by industrial expert.

Visiting Faculty

Se.No.	Name of the Visiting or Adjunct Faculty	Designation of the Faculty	Course Handled	Duration (Hours/Semester)
1	N. Sukumar	Managing Director, Tech Flow Engineers, Coimbatore	Principles of Management	16
2	G. Prasath	Senior Engineer Design and Development, Aquasub Engineering, Coimbatore	Strength of Materials	16

STUDENT ACHIEVEMENTS

Certification Programmes Participated by the Students

- 27 Students completed ICT Academy Learnathon 2022 (148 certifications)
- 53 Students Completed Fusion 360: Foundational Concepts Certification Course conducted by AUTODESK Design Academy.
- 53 Students completed Introduction to 3D Modelling for Manufacturing Certification Course conducted by AUTODESK Design Academy.
- 52 Students completed Introduction to Design for Manufacturing Certification Course conducted by AUTODESK Design Academy.
- 52 Students completed Modelling and Design for Mechanical Engineers Certification Course conducted by AUTODESK Design Academy
- 67 Students completed CAD and 3D printing Certification Course conducted by CISCO ThingQbator and NASSCOM
- 61 students have completed ICT Academy Skillathon
- Students completed 754 course Certification in Infosys Springboard
- 113 certifications have been completed in COURSERA by students

Students Participated in Industry contest

- 2 batches submitted Idea for MANTHAN conducted by MIC and AICTE
- 2 students got selected for Boot camp conducted by Startup India Scheme with Schulich school of business Canada under together 2022 scheme.
- 1 Batch applied for TNSI 2021 Program under Tamilnadu ED Cell
- 2 students – Attended National Level Design Now challenge conducted by Autodesk
- Prasanna S (21M608) – won Multi Awards in the International Micro Film Festival.
- Jayanth R J (18M314), Praveen S (18M324), Sri Dhanush R (18M335), Thalabathi Raj G (18M338) has been awarded **First Place** at "Smart India Hackathon – Internal" event, conducted by the Karpagam Innovation Centre (KIC).



MoUs' signed for the year

- Signed MoU with Ashok Leyland Ltd on 27.04.2022

External Research Proposals Obtained

- AICTE has sanctioned the Grant-in-Aid of **Rs. 7,01,950** (Rupees Seven Lakhs One Thousand Nine Hundred Fifty Only) under the Modernization of Obsolescence - Regular (MODROBS-REG) scheme to Karpagam College of Engineering, Coimbatore under the project titled "Modernizing Composites laboratory with mechanical characterization testing and additional fabrication setup".
- Tamilnadu State Council for Science and Technology (TNSCST) has sanctioned the Grant-in-Aid of Students of Rs.7,500 (Rupees Seven Thousand Five Hundred Only) under the Students Project Scheme to the project titled "Recycling and Reuse of single use plastics by fabricating the mini extruder".

Revenue Generated through Consultancy

- Rs.20,500 Revenue Generated through Consultancy under Centre for composite materials.

Online Certifications

- ❖ In the during Jan – June 2022
 - Total number of NPTEL Certifications from Students: 286
 - Elite + Gold: 1
 - Elite + Silver: 6
 - Elite: 51
 - Successful Completion: 113

Placement, Higher Studies and Entrepreneurship

- In the academic year 2021 - 2022,
 - 151 students are placed in Core and IT companies.
 - Total Offers 151
 - Single Offer - 85
 - Double Offer - 24
 - Triple Offer - 6
 - 14 students from the Department of Mechanical Engineering, have been admitted for degree in Masters / M.E. program.
 - 2 of our students have turned into Entrepreneurs.

Appreciation:

- ❖ Mr. V.V Arun Sankar and Mr. N. Subramani, Assistant Professor, Department of Mechanical Engineering, completed their 10 years of service at Karpagam College of Engineering has been recognized and awarded by the management.



- ❖ Dr.C.Krishnaraj, Professor & Head, Dr. Titus Thankachan, Associate Professor, Dr. P. Madhu, Associate Professor Mechanical Engineering have been recognized by the 'AD Scientific Index Award' listed under the "World Scientist and University Rankings 2022".



Website:

<https://kce.ac.in/departement-of-mechanical-engineering/>

Youtube:

<https://www.youtube.com/channel/UCfbQXNQUT42sUqUnAARzFNw/featured>

<https://www.youtube.com/channel/UCbXIMuvC7Bt6309xdBUADnA>