

## **Faculty Profile**



**Dr. D.ELIL RAJA, B.E.(Mech), M.E.(CAD/CAM), Ph.D.**

**Professor, Department of Mechanical Engineering**

### **HIGHLIGHTS:**

- Number of Journal Publications:**65**
- H-Index:**14**
- Patent Granted(Design):**02**
- Patents Published: **10**

### **PROFESSIONAL LINKS:**

- Scopus ID: **57216125047**
- Scopus Link: <https://www.scopus.com/authid/detail.uri?authorId=57216125047>
- <https://orcid.org/0000-0001-7697-3720>
- <https://www.webofscience.com/wos/author/record/ABD-1642-2020>
- Google Scholar ID: <https://scholar.google.com/citations?user=ph06XOIAAAAJ&hl=en&oi=ao>
- LinkedIn: <https://www.linkedin.com/in/elil-raja-d-370668191/>
- AICTE Faculty ID: **1-9316446251**

### **PROFESSIONAL BACKGROUND:**

- Teaching Experience till date: 25 years 2 months
- Industrial Experience : 2 Years

### **AREA OF SPECIALIZATION:**

- ❖ Additive Manufacturing
- ❖ Composite Materials
- ❖ Tribology
- ❖ Material Characterization
- ❖ Optimization

### **PUBLICATIONS WITH HIGH IMPACT FACTOR (IF)**

1. G Velmurugan, Jasgurpreet Singh Chohan, SA Muhammed Abraar, K Velusamy, **D Elil Raja**, Ramya Maranan, D Gowthami, S Lakshmi Narayana, K Arunprasath, M Nagaraj, Arun Kumar, Regasa Yadeta Sembeta (2026), “Environmental aging and its influence on mechanical integrity and interface of bio-filled E-glass/epoxy composites” *scientific reports*. <https://doi.org/10.1038/s41598-026-55105-8> [Q1] (WOS & Scopus Indexed) Impact factor **3.9**
2. S Prathap Singh, **D Elil Raja**, M Sindhu, S Panneer Selvan, Ragothaman Subramaniyan, S Vijayan, Ashish Goyal, Abhijit Bhowmik, (2026) “Influence of Aging Duration on the Tribological Performance of LM25-Based SiC/TiO<sub>2</sub> Hybrid Composites” *Results in Engineering*, Volume 30, Pages 110674. <https://doi.org/10.1016/j.rineng.2026.110674> [Q1] (WOS & Scopus Indexed) Impact factor **7.4**
3. S Prathap Singh, **D Elil Raja**, C Ramesh Kumar, K Gnanasekaran, Abhijit Bhowmik, Kedir Hussen, S Sowndar, M Sundara Cholan, (2026), “Evaluation of cutting speed and surface roughness in WEDM of functionally graded A356-10 wt% Si<sub>3</sub>N<sub>4</sub> composite” *Scientific Reports*. <https://doi.org/10.1038/s41598-026-44989-1> [Q1] (WOS & Scopus Indexed) Impact factor **3.9**
4. S. Prathap Singh, Binayak Sen, **Elil Raja D**, Sindu M, C. Devanathan, Abhijit Bhowmik, (2026) “Dry sliding wear and microstructural behavior of centrifugally cast Al6061 - Al<sub>2</sub>O<sub>3</sub> functionally graded composite” *The International Journal of Advanced Manufacturing Technology*. <https://doi.org/10.1007/s00170-026-17730-5> [Q1] (WOS & Scopus Indexed) Impact factor **3.5**
5. G Velmurugan, Jasgurpreet Singh Chohan, **D Elil Raja**, Prabhu Paramasivam, Ramya Maranan (2025), “Thermo-Mechanical and Flame-Retardant Performance of Epoxy/Hemp Composites Reinforced with Nano-SiO<sub>2</sub> and Al(OH)<sub>3</sub>” *Fibers and Polymers*, Volume 26, Issue 8, Pages 3601-3620. <https://doi.org/10.1007/s12221-025-01043-7> [Q2] (WOS & Scopus Indexed) Impact factor **3.9**

#### PATENTS PUBLISHED/GRANTED:

- ✓ Anti-Vibration Pad for Machinery (*Granted*)
- ✓ A Solar Panel Cleaning Robotic Device (*Granted*)
- ✓ Power generating swing in two directional using oscillator block (Application No: 202141011314 A)
- ✓ Hybrid Phase Change Material Embedded Over Glove for Better Comfort with Ai Assistance (Application No: 202141003350)
- ✓ Wearable Health Care Smart Band for Physically Challenge People (Application No: 202341007806)
- ✓ Water Pumping System Using Pendulum (Application No: 202341071434)
- ✓ Butea monosperma filler reinforced biopolymer composite (Application No: 202541048328)
- ✓ Dual axis plano driller (Application No: 202541048040)
- ✓ Smart precision irrigation system with soil health prediction using machine learning (Application No: 202641025094 A)
- ✓ Ai driven intelligent airflow system in hvac ducts (Application No: 202541125704 A)

## **PROGRAM ORGANIZED**

- Coordinator, Anna University Sponsored 7-Day Faculty Development Program on Finite Element Analysis.
- Coordinator, Six days Faculty Development Program on Autodesk Inventor.
- Coordinator, Anna University Sponsored 6-Day Faculty Development Program for Design of Transmission System.
- Coordinator, Anna University Sponsored 6-Day Faculty Development Program on Engineering Mechanics.
- Coordinator, One Day National Level Faculty workshop on 3D Printing conducted on 17th September 2016.
- Coordinator, One Day National Level Faculty workshop on Recent Trends in Thermal Engineering on 4th September 2014
- Coordinator, One Day National Level Faculty workshop on Optimization Techniques in Engineering on 12th September 2015

## **INTERNATIONAL CONFERENCE ORGANIZED**

- Co-Chair for International Conference on Recent Trends in Materials Science and Mechanical Engineering, ICRMSME 2025, Published in AIP Conference proceeding. <https://pubs.aip.org/aip/acp/issue/3445/1>.
- Co-Chair for 2nd International Conference on Recent Trends in Materials Science and Mechanical Engineering, ICRMSME 2026.

## **NPTEL COURSES CERTIFIED:**

- ✓ Rapid Manufacturing
- ✓ Metal Additive Manufacturing
- ✓ Product Design and Manufacturing
- ✓ Computer Integrated Manufacturing
- ✓ Product design and development
- ✓ Product Design Using Value Engineering

## **ACHIEVEMENTS AND AWARDS:**

- Received Best Teacher Award from Lions International Club in the Year 2023.
- Executive Committee Member of IEI Kanchipuram Local Center
- Best Faculty Advisor award from Institution of Engineers KLC
- Received Discipline STAR award from NPTEL Exams July 2025
- Received 2% Topper for Product Design and Development NPTEL Course

## BOOK CHAPTERS PUBLISHED

1. Prathap Singh, S., Prabhuram, T., **Elilraja, D.**, Immanuel Durairaj, J. (2022). [Influence of Drilling Operation Variables on Surface Roughness and Thrust Force of Aluminium Reinforced with 10% Al<sub>2</sub>O<sub>3</sub> Functionally Graded Metal Matrix Composite](#). In: Natarajan, S.K., Prakash, R., Sankaranarayanan, K. (eds) Recent Advances in Manufacturing, Automation, Design and Energy Technologies. Lecture Notes in Mechanical Engineering. Springer, Singapore. (*Scopus Indexed*)
2. Nathan, D., **Elilraja, D.**, Prabhuram, T., Prathap Singh, S. (2021). [Experimental Investigation of Surface Roughness in End Milling of AA6061 Alloy with Flooded Cooling and Minimum Quantity Lubrication \(MQL\) Technique](#). In: Vijayan, S., Subramanian, N., Sankaranarayanan, K. (eds) Trends in Manufacturing and Engineering Management. Lecture Notes in Mechanical Engineering. Springer, Singapore. (*Scopus Indexed*)
3. Prabhuram, T., **Elilraja, D.**, Prathap Singh, S., Durairaj, I. (2021). [Investigation of Mechanical and Chemical Properties of the Coir Fiber and Wood Powder Reinforced Hybrid Polymer Composite](#). In: Vijayan, S., Subramanian, N., Sankaranarayanan, K. (eds) Trends in Manufacturing and Engineering Management. Lecture Notes in Mechanical Engineering. Springer, Singapore. (*Scopus Indexed*)

## BOOKS PUBLISHED :

- “Fixture Layout Design and Optimization” ISBN – 978-620-2-05613-7
- “Design and Analysis of Reconfiguration of Armored vehicles:978-620-2-81582-6

## KEYNOTE LECTURE DELIVERED:

- Delivered many Key note address in many FDP and Conferences.

## PROFESSIONAL MEMBERSHIPS:

- Life Member in The Institution of Engineers (India) (IEI)
- Life Member in Indian Society for Technical Education (ISTE)
- Life Member in International Association of Engineers (IAENG)
- South Asia Institute of Science and Engineering

- International Society for Research and Development

### **EDITORIAL BOARD MEMBER**

- Scientific Reports (5-year Journal Impact Factor: 4.3, Ranking: Q1)
- Blue Eyes Intelligence Engineering & Sciences Publication
- Lattice Science Publication
- International Journal of Mechanical Engineering Research
- AIP Conference Proceedings ICRMSME 2025, Volume No 3445.

### **REVIEWER IN REPUTED JOURNALS**

- Chung-kuo Kung Ch'eng Hsueh K'an/Journal of the Chinese Institute of Engineers
- Composite Interfaces
- Journal of Composite Materials
- Journal of the Institution of Engineers (India): Series C
- Journal of the Brazilian Society of Mechanical Sciences and Engineering
- Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture
- Textile Research Journal
- Journal of Thermoplastic Composite Materials
- Materials Research Express
- Plastics, Rubber, and Composites: Macromolecular Engineering
- Scientific Reports

### **RESPONSIBILITIES HELD IN THE PREVIOUS INSTITUTIONS**

- Head of Mechanical Engineering Department
- NBA Coordinator, NAAC Coordinator, NIRF Coordinator
- Chief Superintendent for Anna University and Autonomous Examinations.
- Handled class for Trimester Skill Enhancement program for Mando India Ltd.
- Nodal Coordinator for Anti-Drug Club
- Class teacher and Counselor for students
- Department sports coordinator
- College Plumbing In charge