

Faculty Profile

Er.P.Balasundar,

Assistant Professor (Senior scale)

Department of Mechatronics Engineering,

Kamaraj College of Engineering and Technology, Madurai.

balasundarmtr@kamarajengg.edu.in , pbalasundar13@gmail.com

Google scholar citation: <https://scholar.google.co.in/citations?user=F0Tj-coAAAAJ&hl=en>

ORCID iD: <https://orcid.org/0000-0002-3578-3733>

Researchgate: https://www.researchgate.net/profile/Balasundar_P

ResearcherID: <http://www.researcherid.com/rid/U-7402-2017>

Mobile No: +919626257113



Educational Qualification			
Degree	Class & %	Institution	Year
Ph.D.	Mechanical Engineering	Anna University, Chennai.	Course work completed
M.E. (Manufacturing Engineering)	8.35 CGPA - First class	Anna university regional campus, Coimbatore.	2013-2015
B.E. (Mechanical Engineering)	7.45 CGPA - First class	Kamaraj College of Engineering & Technology, Madurai.	2010-2013
D.M.E. (Mechanical Engineering)	84% -First class with Distinction	ArasanGanesan Polytechnic College, Sivakasi.	2007- 2010

Experience			
Name of the College	Designation	Period	No.of.Years
Rajalakshmi Institute of Technology, Chennai.	Assistant Professor, Mechanical Engineering	June 2015 to May 2019	4 Years
Kamaraj College of Engineering and Technology, Madurai.	Assistant Professor(SS), Mechatronics Engineering	June 2019 to till date	

Area of Specialization

- ❖ Manufacturing Technology
- ❖ Composite materials
- ❖ Powder metallurgy
- ❖ Materials Characterization
- ❖ Automobile Engineering

International Research Publications:

Science Indexed International Journals:

1. R.Prithivirajan, P.Narayanasamy, Naif Abdullah Al-Dhabi, **P.Balasundar**, R.Shyam Kumar, K.Ponmurugan, T.Ramkumar, S.Senthil. Characterization of Musa paradisiaca L. cellulosic natural fibers from agro discarded blossom petal waste, Journal of Natural Fibers – In Press.
2. R.Prithivirajan, **P.Balasundar**, R.Shyamkumar, NaiyfSulthan Al-Harbid, Shine Kadaikunnan, T.Ramkumar, P.Narayanasamy. Characterization of new cellulosic fibers from Morus alba stem. Journal of Natural Fibers, Taylor & Francis Publications, 16(4), 2019; 503-511 (Impact Factor - 1.252).
3. T. Ramkumar, M. Selvakumar, P. Narayanasamy, **P. Balasundar**. “Effect of B₄C in Ti-6Al-4V Matrix on Workability Behavior of Powder Metallurgy Composites During Cold Upsetting”, International Journal of Materials Research, HANSER Publications, 2018;109(12),1146-1152 (Impact Factor - 0.748).
4. T.Ramkumar, P.Narayanasamy, M.Selvakumar, **P.Balasundar**. Effect of nano-reinforced B₄C on the dry sliding wear behaviour of Ti-6Al-4V sintered composites using response surface methodology, Archives of Metallurgy and Materials, DE GRUYTER Publications, 2018;63(3),1179-1200 (Impact Factor - 0.571).

5. **P.Balasundar**, P.Narayanasamy, P.Senthamaraikannan, S.Senthil, R.Prithivirajan, T.Ramkumar. Extraction and Characterization of new natural cellulosic *Chloris barbata* fiber, Journal of Natural Fibers, Taylor & Francis Publications, 15(3), 2018; 436-444 (Impact Factor - 0.974).
6. G.Pitchayapillai, P.Seenikannan, **P.Balasundar**, P.Narayanasamy. Effect of Nano Silver on Microstructure, Mechanical and Tribological Properties of Cast Aluminum 6061 Alloy, Transactions of Nonferrous Metals Society of China, Elsevier publications – 27(10), 2017;2137–2145 (Impact Factor - 1.342).
7. P.Narayanasamy,N.Selvakumar, **P.Balasundar**. Effect of hybridizing MoS₂ on the Tribologicalbehaviour of Mg-TiC Composites, Transactions of the Indian Institute of Metals, Springer Publications, 68(5):2015;911-925 (Impact Factor - 0.502).

Scopus Indexed International Journals

1. **P.Balasundar**,P.Narayanasamy, S.I.SrikrishnaRamya, T.Ramkumar, S.Senthil. Characterization of Ferric oxide reinforced magnesium nano-composites processed through microwave sintering/powder metallurgy, International Journal of Microstructure and Mechanical Properties, Interscience publishers – 2018;13(6) 447 – 453.
2. P.Narayanasamy, N.Selvakumar,**P.Balasundar**. Effect of weight percentage of TiC on their tribological properties of magnesium composites, Materials Today: Proceedings, Elsevier Publications, 5(2) Part 2 :2018;6570-6578.
3. M.Kaliraj, P.Narayanasamy, **P.Balasundar**, M.Rajkumar. Mechanical behavior and analysis of advanced polymer based Kevlar-49 composite material. International Journal of Computer Aided Engineering and Technology, Interscience publishers, 9(2):2017; 251-260.
4. K.Soorya Prakash, **P.Balasundar**, S.Nagaraja, P.M.Gopal, V.Kavimani. Mechanical and Wear behaviour of Mg-SiC-Gr Hybrid composites. Elsevier publications, Journal of Magnesium and Alloys, 2213-9567 (2016).

Non-Indexed International Journals

1. R.Parameshwari, R.Mohanraj, **P.Balasundar**. Experimental Investigation of Particulate Reinforced Composites. Vol 6 / ISSN 2319-1058 (2016).

Papers published in International Conference Proceedings:

1. K. Nivedha, A. Rudraadevi, M. Deepshiya, A. Ronaldo anuf, **P. Balasundar**, I. Ganesh moorthy, R. Prithivirajan, P. Narayanasamy, R. Shyamkumar. Characterization of Natural Cellulosic fiber from Morus Alba (L) Stem. International Conference on Biotechnology: Towards sustainable future, held on 01st& 02nd Feb 18 at PSR Engineering College, Sivakasi.
2. S. K. Rajesh kanna, N. Lingaraj, **P. Balasundar**, Zaheerurrahman, Vinod prasad. Characterization of mechanical properties of particulate carbon nano and crab shell powder reinforcement in polybenzoxazine matrix. International conference on contemporary design and analysis of manufacturing and industrial engineering systems (CDAMIES'18), held on 18th, 19th & 20th January 18 at National Institute of Technology, Tiruchirappalli-620015, Tamilnadu, India.
3. P.Narayanasamy, N.Selvakumar, **P.Balasundar**. Effect of weight percentage of TiC on their tribological properties of magnesium composites. International Conference on Emerging Trends in Materials and Manufacturing Engineering (IMME17), held on 10th, 11th & 12th March 17 at National Institute of Technology, Tiruchirappalli-620015, Tamilnadu, India.
4. R.Indhu, TerrinBabu, D.Anburose, **P.Balasundar**. Dry turning of Al-Si alloy using DLC coated WC inserts & evaluation of its cutting performances. First International conference on Advanced Engineering & Technology for Sustainable Development (ICAETSD 2015) held on 05th & 06th March 15 atKarpagam college of engineering, Coimbatore.
5. P.Narayanasamy, **P.Balasundar**, S.Vinoth Kumar, P.Ravindran. Hybridizing Graphite particles with SiC to enhance the Tribologicalbehaviour of Aluminium composites. International conference on advances in Design & Manufacturing (ICAD&M'14) Sponsored by CSIR, held on 5th to 7th December 2014, at National Institute of Technology, Tiruchirappalli-620015, Tamilnadu, India.
6. R.Indhu, TerrinBabu, D.Anburose, **P.Balasundar**. Evaluation of cutting performances in dry turning of Al-Si alloy using DLC & Diamond coated WC inserts. Second

International Conference Workshop on Current trends in Engg& Tech (March 2014), held on 25th March 14 at Akshaya College of engineering & technology, Coimbatore.

Papers published in National Conference Proceedings:

1. **P. Balasundar**, P. Narayanasamy, S. Senthil, G. Balachandran. Investigation of mechanical and tribological properties of Al-Zirconia composites processed by powder metallurgy. National conference on Nanomaterial in Engineering, held on 01st& 02nd March 18 at PSN college of engineering & Technology (Autonomous), Tirunelveli-627152.
2. **P.Balasundar**, Chelladurai.V, Jennofer.R, Kathiravan.V, Narayanasamy.P. Preparation and Characterization of Aluminium Metal Matrix Composites by Powder Metallurgy. Third National Conference on Recent Advancements in Mechanical Engineering (RAME 2017) held on 30th March 17 at Kamaraj College of Engineering and Technology, Virudhunagar.
3. **P.Balasundar**, Yuvarajan.P, Shriram.A, Sivaraman.R, Narayanasamy.P. Preparation and Testing of Zirconia Reinforced Polymer Matrix Composites. National Conference on Recent Innovations and Trends in Mechanical Engineering (NCRITME'17) held on 23rd&24th March 17 at Rajalakshmi institute of technology, Chennai.
4. M.Ramalingaguru, P.Narayanasamy, S.Senthil, **P.Balasundar**. Fabrication and Testing of Epoxy Polymer matrix Composites. National Conference on Recent Innovations and Trends in Mechanical Engineering (NCRITME'17) held on 23rd&24th March 17 at Rajalakshmi institute of technology, Chennai.
5. N.Halton, P.Narayanasamy, S.Senthil, **P.Balasundar**. Study of Tungsten based composites through Spark Plasma Sintering. National Conference on Recent Innovations and Trends in Mechanical Engineering (NCRITME'17) held on 23rd&24th March 17 at Rajalakshmi institute of technology, Chennai.
6. **P. Balasundar**, Vignesh. S, Srihari. S, Narayanasamy.P. Processing and description of banana coir fibre reinforced polymer composite. Second National Conference on Recent Advancements in Mechanical Engineering (RAME 2016), held on 07th April 16 at Kamaraj College of Engineering and Technology, Virudhunagar.

7. **P.Balasundar**, VigneshSekar, Vineeth.K,Narayanasamy.P. Procedural fabrication and characterization of hemp fiber reinforced polymer composite. Second National Conference on Recent Advancements in Mechanical Engineering (RAME 2016), held on 07th April 16 atKamaraj College of Engineering and Technology, Virudhunagar.
8. **P.Balasundar**, K.Sooryaprakash. Magnesium alloys, Composites & their processing techniques; A Review. National conference “Diseno 2k15” held at Adhiyamaan College of engineering, Hosur, Tamilnadu on 25th Feb 2015.
9. P.Narayanasamy, **P.Balasundar**, R.Indhu, D.Anburose, K.Sooryaprakash. Wear Behaviour of Al-SiC-Gr Hybrid Aluminium Composites.National conference on Innovative Development in Mechanical Engineering (IDME – 2014), held on 21st& 22nd March 2014 at Anna University Regional Centre, Coimbatore.
10. **P.Balasundar**,R.Radhakrishnan, G.Sathyamoorthy. Design and Analysis of Al-Cenosphere Composites. Third national conference on Design and Manufacturing Systems (April 2014) , Sri Krishna College of Engg& Tech, Coimbatore.
11. R.Indhu, **P.Balasundar**, D.Anburose. Micro Gripper : State of the Art. Second national Conference on Recend trends in Engg& Tech (March 2014) held on 22th March 14 atJansons Institute of technology, Coimbatore.

FDP/Seminar/workshop/Short Term Course Attended:

1. Acted as a Mentor for the team Drak Coders in “Smart India Hackathon, 2018” held at Banaras Hindu University, Varanasi on 29th& 30th Mar,2018.
2. Attended a two days seminar on AICTE Sponsored “Challenges and Recent Developments of Welding in Non-Ferrous Alloys” held at Sri Vengateshwara College of Engineering, Pennalur on 24th& 25th Nov,2017.
3. Attended a two days Faculty Development Programme on ICT Academy Sponsored “Introduction to Autodesk Inventor” held at Kings Engineering College, Kanchipuram on 8th& 9th Jun,2017.
4. Participated a two days workshop on “Research Issues in Powder Metallurgy” held at MEPCO Schlenk Engineering College, Sivakasi on 30th Dec to 31st Dec, 2016.

5. Attended a two days Faculty Development Programme on “Computer Integrated Manufacturing” held at Rajalakshmi institute of technology, Chennai on 29th& 30th Jun, 2016.
6. Attended a six days Anna University Sponsored Faculty Development Programme on “Engineering Thermodynamics” held at Sri Vidhya College of Engineering and Technology, Virudhunagar on 06th& 12th Jun, 2016.
7. Attended a two days Faculty Development Programme on “Research Methodology” held at Rajalakshmi institute of technology, Chennai on 18th& 19th Dec, 2015.
8. Participated a two days workshop on “Engineering Faculty Workshop – Mission10X” sponsored by WIPRO held at Rajalakshmi Engineering College, Chennai on 25th Aug to 27th Aug, 2015.
9. Attended a two days Faculty Development Workshop on “Engineering Graphics” held at Saveetha Engineering College, Chennai on 31st July & 1st August, 2015.
10. Attended one day national workshop on “Non-Destructive Testing” held at Narasu’s Sarathy Institute of Technology, Salem on 10th January 2015.
11. Attended UGC sponsored short term course on “New Materials their Characterization and Applications” held at Anna University, Chennai during 15th-16th October 2014.
12. Attended two day national workshop on “Industrial Safety Management and Regulations” held at Anna University Regional Centre, Coimbatore during 11th-12th August 2014.
13. Attended two day national workshop on “Advancements in Metal Forming” held at Anna University Regional Centre, Coimbatore during 8th-9th April 2014.
14. Attended short term course on “Repair & Maintenance of Two wheeler Mechanism” held at Arasan Ganesan Polytechnic College, Sivakasi during 27th July to 03th Aug 2008.

Awards/Recognition Received

1. Best paper Award – entitled “Procedural fabrication and characterization of hemp fiber reinforced polymer composite” organized by Department of Mechanical Engineering, Second National Conference on Recent Advancements in Mechanical Engineering (RAME 2016), held on 07th April 16 at Kamaraj College of Engineering and Technology, Virudhunagar.

Journal reviewer

- ❖ Journal of Metalcasting, Springer Publications
- ❖ Materials Research Express, IOP Publishing

Books Published

1. P. Narayanasamy, **P. Balasundar**, T.P.D. Rajan. Processing of Functionally Graded Al Composites through Infiltration, 2018, LAP LAMBERT Academic Publishing. ISBN-13:978-613-9-57656-2; ISBN-10: 6139576563.

Membership

- ❖ Powder Metallurgy Association of India (PMAI)
- ❖ International Society for Research and Development (ISRDR)
- ❖ Society of Automotive Engineers (SAE)

Subject Expert

- ❖ Manufacturing Technology - I
- ❖ Manufacturing Technology - II
- ❖ Automobile Engineering
- ❖ Power Plant Engineering
- ❖ Metrology and measurements
- ❖ Engineering Graphics
- ❖ Fluid mechanics and machinery
- ❖ Computer Integrated Manufacturing Systems
- ❖ Basics of Mechanical Engineering
- ❖ Dynamics of Machines

Industrial Visit

- ❖ M M Forgings Pvt. Ltd, Singampunari
- ❖ Lakshmi Machine Works, Coimbatore
- ❖ Hydrocare Systems, Madurai
- ❖ GKDIDR, Coimbatore

- ❖ Fenner India Ltd, Chennai
- ❖ Kar Mobiles, Bangalore
- ❖ Fludics, Coimbatore
- ❖ ICF, Chennai
- ❖ ESSAR ENGINEERS, Coimbatore
- ❖ S R Polybags, Madurai

RESEARCH SPECIALTIES:

- ❖ Processing and Characterization of Metal Matrix Composites through Powder Metallurgy, Stir Casting and Infiltration Technique.
- ❖ To study the Mechanical and Tribological properties of Metal Matrix Composites.
- ❖ To characterize the natural cellulosic fibers from bio-residues for Polymer Matrix Composites.