

# FACULTY PROFILE

HARI HARA SAKTHI SUDHAN. P

## Personal Details

**Salutation:** Dr.  
**Instructor Name:** Harihara Sakthi Sudhan. P  
**Designation:** Assistant Professor (Senior Grade)  
**Department:** MECHANICAL ENGINEERING - NEC  
**Date of Joining in NEC:** 02-06-2017  
**Date of Joining in Present Post:** 01-06-2019  
**Mobile Number:** 8754107398  
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## Address for Communication

**Address Line 1:** No.13, Town road, Theneerkulam **Pincode:** 627358  
**Address Line 2:** Thachanallur **District:** Tirunelveli  
**City:** Tirunelveli **State:** Tamilnadu

## Educational Qualifications

Sr	Name of the Degree	Specialization	Name of the Institute	Name of the University	Year of Passing
1	B.E	Mechanical Engineering	National Engineering College, Kovilpatti	Anna University, Chennai	2009
2	M.E	Engineering Design	Government College of Engineering, Tirunelveli	Anna University, Chennai	2012
3	Ph.D	Composite Materials and Tribology	Sathyabama Institute of Science and Technology, Chennai	Sathyabama institute of Science and Technology, Chennai	2019

## Faculty Professional Experience

Sr	Name of Institute / Organizations	Designation	Date of Joining	To	Total Experience
1	National Engineering College, Kovilpatti	Assistant Professor (SG)	02-06-2017		4.5 years

Sr	Name of Institute / Organizations	Designation	Date of Joining	To	Total Experience
2	Loyola-ICAM College of Engineering and Technology, Chennai	Assistant Professor	11-08-2012	31-05-2017	5 years

### FDP/ Workshop/ Seminar/ Training/ Knowhow Program Attended

Sr	Name of the Event	Event Type	Name of the Institution or Organization	From	To
1	Engineering Mechanics	Faculty Development Program	Loyola-ICAM college of engineering and technology, chennai	26-11-2013	06-12-2013
2	Innovative Digital tools enabled product design	GIAN Course	IITM, Chennai	05-02-2018	09-02-2018
3	Dynamic response of advanced composites	GIAN Course	NITK, Surathkal	10-12-2018	15-12-2018
4	Fatigue of Composite Materials	GIAN Course	NIT, Jalandhar	11-12-2019	15-12-2001
5	Research and Development in Materials Behavior, Processing, and Characterization Techniques	Faculty Development Program	The Indian Institute of Metals (IIM)	09-06-2020	14-06-2020
6	Autodesk University India 2019	International Seminar	The Lalit Ashoka Hotel,	01-01-2019	
7	Challenges in Materials for Energy Conversion, Storage and Enhancement Applications	National Seminar	National Engineering College, Kovilpatti		
8	Design Thinking and Product Development	Faculty Development Program	NIT, Arunachal Pradesh	23-08-2021	27-08-2021
9	Sheet metal design using solid works	Faculty Development Program	ICT Academy	01-03-2022	
10	Micro and Nano mechanics of solids: Fundamentals and Applications	Short Term Training Program	IIT, Indore	01-03-2022	
11	Research and Development in Materials Behavior, Processing, and characterization technique	International Workshop	Indian Institute of Metals & GLA University		
12	Mechatronics	International Workshop	Govt. College of Engg, Tirunelveli		

Sr	Name of the Event	Event Type	Name of the Institution or Organization	From	To
13	Thermal system modeling using MATLAB and Computational Fluid Dynamics Analysis using fluent software	National Seminar	Kongu Engineering College, Erode	23-01-2012	25-01-2012
14	Futuristic Automotive Concept Design and Styling	National Seminar	PSG College of Technology, Coimbatore	10-01-2014	11-01-2014

## International and National Conferences Attended

Sr	Name of the Conference	Event Type	Name of the Institution or Organization	Title of the Paper	Authors
1	Trends and Development in Aeronautical and Avionics Engineering	National Conference Presentation	Adhiyamaan College of Engineering, Hosur	Fatigue Crack Growth behavior in structures	P. Hariharasakthisudhan et al.,
2	Emerging trends in Mechanical Engineering	National Conference Presentation	Meenakshi Sundararajan Engineering College, Chennai.	Characterization and Cohesive Zone Modeling of Adhesives and Bone Cements used in Prosthesis Fixation Surgeries	P. Hariharasakthisudhan et al.,
3	Emerging Materials, Metallurgy and Manufacturing	International Conference Participation	SSN College of Engineering, Chennai	Effect of hybrid natural fiber reinforcement on mechanical behavior of polymer-based composites	P. Hariharasakthisudhan et al
4	4th International Conference on Advances in Mechanical Engineering	International Conference Participation	SRM Institute of Science and Technology, Chennai	Topology Optimization of prosthetic hip implant using Finite Element Analysis.	P. Hariharasakthisudhan et al

## FDP/ Workshop/ Seminar/ Conference Programs Organized

Sr	Name of the Event	Event Type	Name of the Funding Agency	Amount received from funding Agency	Role
1	Product Release cum Exhibition- 2019	Workshop	NEC	₹ 40,000.00	Co-Coordinator
2	Idea Generation and Product Development Process	Workshop	Nil	₹ 0.00	Co-Ordinator

Sr	Name of the Event	Event Type	Name of the Funding Agency	Amount received from funding Agency	Role
3	Recent Advancements in Mechanical Engineering - 2020	National Conference	NEC	₹ 40,000.00	Co-Coordinator
4	Journey of an Young Entrepreneur	National Seminar	nil	₹ 0.00	Co-Ordinator
5	Training Program on Fusion 360	Hands-on Training	nil	₹ 0.00	Co-Ordinator
6	Career Awareness Program (Higher Studies in Europe and Canada)	National Seminar	nil	₹ 0.00	Co-Ordinator
7	Concept to Commercialization	National Seminar	nil	₹ 0.00	Co-Coordinator

## Guest Lecture Delivered

Sr	Name of the Event / Program	Name of the Institution / Organization	Title of the Lecture delivered	From	To
1	Webinar	B. S. Abdur Rahman Crescent Institute of Science and Technology, Chennai	An overview on futuristic skill for employability	22-03-2021	26-03-2021

## Faculty Research Publications

Sr	Title of the Paper	Name of the Journal	Year of Publication	Authors	DOI (Digital Object Identifier System)
1	Influence of metal powder premixing on mechanical behavior of dual reinforcement (Al <sub>2</sub> O <sub>3</sub> (μm)/Si <sub>3</sub> N <sub>4</sub> (nm)) in AA6061 matrix	Journal of Alloys and Compounds	2018	P. Hariharasakthisudhan, S. Jose	<a href="https://doi.org/10.1016/j.jallcom.2017.10.00">https://doi.org/10.1016/j.jallcom.2017.10.00</a>
2	Dry sliding wear behavior of single and dual ceramic reinforcements premixed with Al powder in AA6061 matrix	Journal of Materials Research and Technology	2019	Ponnarengan Hariharasakthisudhan, Swaminathan Jose, Kondal Manisekar	<a href="https://doi.org/10.1016/j.jmrt.2018.01.005">https://doi.org/10.1016/j.jmrt.2018.01.005</a>
3	Regression and Grey relational analysis on friction and wear behavior of AA6061/Al <sub>2</sub> O <sub>3</sub> /Si <sub>3</sub> N <sub>4</sub> /graphite hybrid nano composites	Materials Research Express	2019	P Hariharasakthisudhan, A Arul Marcel Moshi, SR Sundara Bharathi and KLogesh	<a href="https://doi.org/10.1088/2053-1591/ab1cd3">https://doi.org/10.1088/2053-1591/ab1cd3</a>
4	Steady state Wear behavior of multi-scale hybrid composite – AA6061 / Al <sub>2</sub> O <sub>3</sub> (μm) / Si <sub>3</sub> N <sub>4</sub> (nm) / graphite – EN31 steel Tribo system	ASME Transactions – Journal of Tribology (ASME)	2020	P. Hariharasakthisudhan, K. Sathickbasha, B. Surya Rajan, V. Jeyanthram	<a href="https://doi.org/10.1115/1.4044853">https://doi.org/10.1115/1.4044853</a>

Sr	Title of the Paper	Name of the Journal	Year of Publication	Authors	DOI (Digital Object Identifier System)
5	Effect of multi-walled carbon nano-tube on mechanical behavior of glass laminate aluminum reinforced epoxy composites	Polymer Composites (Wiley)	2020	K. Logesh, P. Hariharasakthisudhan, B. Surya Rajan, A. Arul Marcel Moshi V. Khalkar,	DOI: 10.1002/pc.25757
6	Mechanical properties and microstructure of A356 alloy reinforced AIN/MWCNT/Graphite/Al composites fabricated by stir casting	Mater. Res. Express	2020	K Logesh, P Hariharasakthisudhan ,A Arul Marcel Moshi, B Surya Rajan and Sathickbasha K	<a href="https://doi.org/10.1088/2053-1591/ab587d">https://doi.org/10.1088/2053-1591/ab587d</a>
7	Evaluation of mechanical properties of novel GLARE laminates filled with nanoclay	Polymer composites	2021	Hariharasakthisudhan Ponnarengan, Logesh Kamaraj, Surya Rajan Balachandran, Sathickbasha Kathar Basha	<a href="https://doi.org/10.1002/pc.26113">https://doi.org/10.1002/pc.26113</a>
8	Optimizing the Ultrasonication effect in stir casting process of Aluminum hybrid composite using Desirability Function Approach and Artificial Neural Network	Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications	2022	K, Logesh; P, Hariharasakthisudhan, A, Arul Marcel Moshi	<a href="https://doi.org/10.1177/1464420721102570">https://doi.org/10.1177/1464420721102570</a>
9	Tribological performance evaluation of newly synthesized silane treated shell powders in friction composites	Mater. Res. Express	2019	B Surya Rajan, MAS Balaji, AB Mohamed Aslam Noorani, Md Usaid Hammad Khateeb, P Hariharasakthisudhan and Prince Arockia Doss	<a href="https://doi.org/10.1088/2053-1591/ab08e0">https://doi.org/10.1088/2053-1591/ab08e0</a>
10	Inspiration of reinforcements, manufacturing methods, and Microstructural changes on wear behavior of metal matrix composites—a recent review	Materials Research Express	2020	P Hariharasakthisudhan , B Surya Rajan and K Sathickbasha,	<a href="https://doi.org/10.1088/2053-1591/ab6918">https://doi.org/10.1088/2053-1591/ab6918</a>
11	Multi-metal sulphide pre-blend combination on the tribological performance of the brake friction material	Industrial Lubrication and Tribology	2020	Sathickbasha K., Selvakumar A.S. and Surya Rajan Balachandran, Harihara sakthisudhan P	<a href="https://doi.org/10.1108/ILT-07-2020-0249">https://doi.org/10.1108/ILT-07-2020-0249</a>
12	Reusing exhausted alkaline battery powder as reinforcement in AA6061 composites and mechanical characterization	Energy Sources, Part A: Recovery, Utilization, and Environmental Effects	2020	Hariharasakthisudhan Ponnarengan, Logesh Kamaraj , Surya Rajan Balachandran , and Sathickbasha Kathar Basha	<a href="https://doi.org/10.1080/15567036.2020.179">https://doi.org/10.1080/15567036.2020.179</a>

Sr	Title of the Paper	Name of the Journal	Year of Publication	Authors	DOI (Digital Object Identifier System)
13	Influence of Binder on Thermomechanical and Tribological Performance in Brake Pad	Tribology in Industry	2018	B.S. Rajan, M.A.S. Balaji, K. Sathickbasha, P. Hariharasakthisudhan	DOI: 10.24874/ti.2018.40.04.12
14	A hybrid approach for fault diagnosis of spur gears using Hu-Invariant moments and artificial neural networks	Metrology and Measurement System	2020	F. Michael Thomas Rex, A. Andrews, A. Krishnakumari, P. Hariharasakthisudhan	DOI: 10.24425/mms.2020.134587
15	Optimizing the Design Parameters of Radial Tip Centrifugal Blower for Dust Test Chamber Application Through Numerical and Statistical Analysis	FME Transactions	2020	Selvaraj T, Hariharasakthisudhan P, Pandiaraj S, Sathickbasha K, Mohamed Aslam Noorani A B	DOI: 10.5937/fmet2001236S
16	Development of an Automated and Dedicated Measuring System of Tube Dimensions Using 1d and 2d Laser Displacement Sensors	FME Transactions	2019	Surya Rajan B, Sathickbasha K, Sai Balaji M A, Hariharasakthisudhan P	DOI: 10.5937/fmet1901122R
17	Characterizing the Compression Behavior of Al <sub>2</sub> O <sub>3</sub> /Si <sub>3</sub> N <sub>4</sub> Nano Sized Particulate Reinforced Ceramic Matrix Composites	Indian Journal of Science and Technology	2016	P. Harihara sakthisudhan and Jose Swaminathan	DOI: 10.17485/ijst/2016/v9i42/104586
18	A Review On the Materials Used for Bearing and Failure Behaviour	International Journal of Students Research in Technology & Management	2013	Seshagiri. R, Nishant Jonathan Rubens, Harihara Sakthi Sudhan P	<a href="https://giapjournals.com/index.php/ijstrm/ar">https://giapjournals.com/index.php/ijstrm/ar</a>
19	A Multi-Objective Grey relational approach and regression analysis on optimization of drilling process parameters for GLARE fiber metal laminate	Surface Reviews and letters	2022	K. Logesh, A. Arul Marce Moshi, S. R. Sundhara Bharathi, P. Hariharasakthisudhan	<a href="https://doi.org/10.1142/S0218625X225006">https://doi.org/10.1142/S0218625X225006</a>

## Research Supervisor & Scholars Details

Sr	Name of the University	Name of the Faculty	Reference No. (Supervisor id Number)	Research Area	Date of supervisor recognition
1	Anna University, Chennai	Mechanical Engineering	3820017	Composite Materials, Tribology, Characterization	04-01-2022

## Product Development Activities

Sr	Product Title	From	To	Funds Received	IPR Status
1	Water Tank Cleaning Device	01-07-2017	30-06-2018	₹ 2,50,000.00	Published
2	Seed Injecting Equipment	01-06-2019	01-07-2020	₹ 2,50,000.00	Published
3	Can / Bottle Crusher	31-10-2019	30-03-2022	₹ 40,000.00	

## Membership in Professional Societies

Sr	Name of the Society / Organization	Type of Membership	Membership ID
1	Society of Automotive Engineers - India	Professional	7210410010

## Consultancy Work Details

Sr	Consultancy Work Detail	Name of Industry / Agency	Amount	From	To
1	Design of Radial tip centrifugal blower for Dust test chamber	CM Envirosystems, Bangalore through Apex Design Center, Coimbatore	₹ 1,50,000.00	01-06-2019	31-07-2020
2	Design of Impeller for centrifugal pump	Apex Design Center, Coimbatore	₹ 0.00	01-06-2017	01-12-2021

## Instructor Log

Sr	Academic Year	Academic Term	Department	Program	Course
1	2021-22	2021-22 (EVEN)	MECHANICAL ENGINEERING - NEC	B.E (MECHANICAL ENGINEERING)	Finite Element Analysis