

National Institute of Technology, Tiruchirappalli: Performa for CV of Faculty/ Staff Members

Curriculum Vitae



Brief Profile: 1-2 paragraphs (not exceeding 500 words)

Dr. M. Duraiselvam is presently working as a Professor in the Department of Production Engineering, National Institute of Technology, Tiruchirappalli and serving as Dean Planning and Development since Jan 2020. He is instrumental in developing the Centre of Excellence in Manufacturing, a 200 Crore Project partly supported by Siemens. He completed B.E. in Mechanical Engineering from Coimbatore Institute of Technology in 1996 and M.E. in Manufacturing Technology from National Institute of Technology, Tiruchirappalli in 1998. He did his M.B.A. in Operations Management from Madurai Kamaraj University in 2002. He received Ph.D. in Materials Science and Engineering from Technical University of Clausthal, Germany in 2006. His research interests include laser surface engineering, laser micromachining, tribology and digital manufacturing. He received many awards and honors that include German Academic Exchange Service (DAAD) Fellowship from Germany, 3rd Best Paper for a presentation made in an International Conference held in Miami, Florida, USA and Young Scientist from DST. He is handling/handled research and consultancy projects worth more than 7 Crores from various funding sources such as DRDO, DST, CSIR, BHEL, GTRE and DRDL. He has published 60 papers in International Journals and made more than 30 International Conference presentations during his 23 years of tenure as a faculty. He has delivered more than 75 invited talks and chaired sessions in conferences both at International and national level. His research visits outside India includes Germany, USA, France, Switzerland, Sweden, Singapore, Finland, Australia and Taiwan.

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|------------------------------------|---|
| 1. Name | Dr. - Ing. M. DURAISELVAM |
| 2. Designation: | Professor, Department of Production Engineering
Dean, Planning and Development,
National Institute of Technology
Tiruchirappalli |
| 3. Office Address: | National Institute of Technology
Tiruchirappalli- 620 015
Tamilnadu, India |
| 4. Telephone (Direct) (Optional): | Ph: +91-431-2503509 |
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| Mobile (Optional): | |
| 5. Email (Primary): durai@nitt.edu | Email (Secondary) :
duraiselvam@yahoo.com |
| 6. Field(s) of Specialization: | Laser cladding, Liquid impact erosion,
Synthesis of nano composites, Process |

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optimization, Laser surface engineering
and tribology, Laser micromachining,
Digital Manufacturing, Additive
Manufacturing

7. Employment Profile

Job Title	Employer	From	To
Professor	Department of Production Engineering, National Institute of Technology, Tiruchirappalli, India	12 th March 2018	Till date
Associate Professor	Department of Production Engineering, National Institute of Technology, Tiruchirappalli, India	23 rd April 2010	11 th March 2018
Assistant Professor	Department of Production Engineering, National Institute of Technology, Tiruchirappalli, India	23 rd April 2007	22 nd April 2010
Lecturer	Department of Management Studies, National Institute of Technology, Tiruchirappalli, India	23 rd July 1999	22 nd April 2007
Research Associate	Department of Production Engineering, National Institute of Technology, Tiruchirappalli, India	25 th June 1998	22 nd July 1999

8. Academic Qualifications (From Highest Degree to High School):

Examination	Board / University	Year	Division/ Grade	Subjects
Ph.D	Technical University of Clausthal, Clausthal-Zellerfeld, Germany	2006		Title: Experimental investigations on laser clad/alloyed carbide reinforced intermetallic matrix composites to improve erosion resistance of turbine blade materials.
M.B.A.	Madurai Kamaraj University, Madurai, India.	2001	First class	
M.E. <i>Manufacturing Technology</i>	- National Institute of Technology, Tiruchirappalli, India.	1998	First class with distinction	
B.E. <i>Mechanical</i>	- Coimbatore Institute of Technology,	1996	First class	

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<i>Engineering</i>	Coimbatore, India.		with distinction	
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9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/Institution	From	To
Dean	Planning and Development	Dec 2019	Till Date
Head	Centre of Excellence in Manufacturing	May 2018	Dec 2019
Head	Department of Production Engineering	Feb 2015	Jan 2018
Associate Dean	Planning and Development	Oct 2012	Feb 2015
Member	Centre for Excellence in Corrosion and Surface Engineering	2017	Till Date
Member	Department Administrative Council	2012	2015
Staff Advisor	Entrepreneurship cell	March 2008	Oct 2009

10. Academic/Administrative Responsibilities outside the University

Position	Institution	From	To

11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization
2005	3 rd Best Student Paper for a presentation made in an International Congress on Applications of Lasers and Electro-Optics (ICALEO)	International Congress on Applications of Lasers and Electro-Optics (ICALEO), Miami, Florida, USA.
2017	Young Scientist	Department of Science and Technology (DST), Government of India

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12. Fellowships

Year of Award	Name of the Fellowship	Awarding Organization	From (Month/Year)	To (Month/Year)
2004	German Academic Exchange Service Fellowship to do research at ISAF, Technical University of Clausthal, Germany.	DAAD, Germany	June 2004	September 2006

13. Details of Academic Work

(i) Curriculum Development

(ii) Courses taught at Postgraduate and Undergraduate levels

Lasers in Manufacturing, Tribology, Advanced Materials Processing, Non-traditional Manufacturing Processes, Manufacturing of Product from non-metallic materials, Operations Research, Behavioral Science and Industrial Management, Advanced Manufacturing Processes, Project Management, Manufacturing Planning and Control, Computer Aided Design and Manufacturing.

(iii) Projects guided at Postgraduate level

S.No	Title	Student Name	Year
1.	Hong Kong Monetary Authority 12 B	Rahul Mato	2022
2.	Characterization of Laser shock peened Ti-6Al-4V with and without ablative coating	Rahul Mato	2022
3.	Numerical Simulation of Femtosecond laser ablation of Aluminium and Ti-6Al-4V to study the topography of ablation crater	Kumaresh	2021
4.	Fabrication of oil-water filter using laser micro-machining	Bestin Thomas	2021
5.	An Investigation on Resistance Spot Welding of Ti-6Al-4V Sheets Using Taguchi's Design of Experiment	E V Abhinav	2020
6.	Investigation on the performance of a laser surface textured ti6Al6V electrode in a microbial fuel cell	Mathew John	2020
7.	Improvement of Adhesion Bond Strength of Thermal Plasma Spray Coated Material	Survase Akshay Shivaji	2020
8.	An Investigation on Tig Welding of Ti-6Al-4V Sheets Using Taguchi's Design of Experiment	E V Abhinav	2019
9.	Influence of laser surface texturing on the tribological performance of CuNiIn coated Ti6Al4V	Mathew John	2019

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10.	Thermal Plasma Spray Coating of Nickel Aluminium Powder on Inconel 718 Alloy	Survase Akshay Shivaji	2019
11.	Optimising The Parameters for Laser Based Micro Processing on Reflective Materials	Vysakh Mohan	2019
12.	Optimization of parameters of laser drilling on Inconel 718 material using Taguchi-ANOVA method	Mudit Singh	2019
13.	Laser processing of magnesium for biomedical applications	Antony George	2019
14.	Enhancing the properties of glass fibre reinforced composite joint with metal sheet using laser-based surface patterning	Vysakh Mohan	2018
15.	Effect of variation of laser drilling parameters on drilling of Inconel 718 material	Mudit Singh	2018
16.	Tribological study of the surface characteristics of laser surface textured grade 5 Titanium.	Antony George	2018
17.	Modification of Wetting Property of Nickel Based Super Alloy Surface by Picosecond Laser Texturing	G.Prabu	2017
18.	A Study on Wear Characteristics of a Nickel Based Super Alloy (BZ112Y) Surface Textured with Pico Second Laser	Chebrolu Kalyan	2017
19.	Defining Instruction for Continued Airworthiness of a Jet Engine	Hrishikesh KP	2017
20.	Enhancement of Adhesion Strength of Thermal Barrier Coating Through Laser Surface Texturing of Aero-Turbine Materials	Aditya S.V	2017
21.	Impact of Fuel on Gas Turbine Combustor Component Durability	Naveena K.P	2016
22.	Identification and Elimination of Wastes From Cable Cu ng for Improved Productivity Using Value Stream Mapping	Pranay Vi hal Kamble	2016
23.	Fabrication of Titanium Oxide Nanotube Arrays for Laser Surface Nano Texturing	Chebrolu Kalyan	2016
24.	Modelling and Synthesis of Engine Overhaul Data to Infer on Operational Cost	Hrishikesh KP	2016
25.	Effect of CNT Based Laser Alloying on Wear Behavior of Ductile Iron	G.Prabu	2016
26.	Study of Tribological Properties of Laser Treated Nodular Cast Iron	Deep Chakravorty	2016
27.	Characterization of SMA,GTA & PTA Welding for Hard facing of Stellite 6 on Austenitic Stainless Steel	M.Ferozhkhan	2016

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28.	Laser Surface Modification of Nodular Cast Iron for Improved Tribological Performance	Deep Chakravorty	2015
29.	Laser Based Surface Polishing of Ti and Ni Based Alloys	Pranay Vihal Kamble	2015
30.	Laser Surface Texturing on Steel to Improve Hydrophobic Effect	Lankireddy Manikanta Reddy	2015
31.	Preparation of Coating for Ti-6Al-4V for the Use in Biomedical Applications Using Anodization	S Ravi Kiran	2015
32.	Taguchi Optimization of AISI D-2 Die Steel Using Graphite Based Electrical Discharge Coating	Mohit Singhal	2014
33.	Laser Surface Texturing on Silicon Wafer	Lankireddy Manikanta Reddy	2014
34.	Taguchi Optimization of AISI D-2 Die Steel Using Molybdenum Based Electrical Discharge Coating	Mohit Singhal	2013
35.	Numerical Finite Element Investigation on Laser Cladding of Aerospace Components	Arun G.K	2013
36.	Finite Element Simulation and Optimization of Dissimilar Welding for Gas Turbine Applications	Rahul V.S	2013
37.	Numerical Simulation and Experimental Investigation of Dissimilar Welded Joints	Vinneth Murali	2013
38.	Erosive- Corrosion Behaviour of Laser Surface Treated Hastelloy C-276	Rajith K.R	2013
39.	Optimizing Delivery Lead Time in the Subcontracting of Boiler Components	G.Nila	2012
40.	Comparative Study of Tribological Behaviour of Laser Surface Treated Hastelloy C276 in Nitrogen and Argon Atmosphere	K.E.Sarath Raghavendra Babu	2012
41.	Tribological Behaviour of D-Gun Sprayed Al ₂ O ₃ -TiO ₂ Coating	D.Sudhakar	2012
42.	Experimental Analysis and Simulation Studies of Laser Surface Treated Hastelloy C-276	Rajith K.R	2012
43.	Tribological Behaviour of D-Gun Sprayed Cr ₃ C ₂ -NiCr Coating	D.Sudhakar	2012
44.	Laser Surface Nitriding of Hastelloy C276	K.E.Sarath Raghavendra Babu	2011
45.	Dry Sliding Wear Characteristics of Aluminium Composites	M.Jeyashree	2011
46.	Dry Sliding Wear Behaviour of Nickel-Chromium Electroplated Low Carbon steel (AISI 1020) at Elevated Temperatures	Raayya Peche	2010
47.	Sliding Wear Characteristics of Nano Al ₂ O ₃ Dispersed	M.Jeyashree	2010

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	Grey Cast Iron Composite		
48.	Improved Tribological Properties of Ti-6Al-4V Alloy by Laser Surface Mel ng	Salunke Balaji Mohan	2010
49.	Tribological Study of Chrome Coated AISI 304 Austenitic Stainless Steel	K.S.R.Krishna	2010

(iv) Other contribution(s)

14. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
Design and Development of Robotic based Continuous Fiber Additive Manufacturing System (Principal Investigator)	DRDO, Ministry of Defence, Government of India	2022	2025	Ongoing
Development of metal 3D printed lightweight flywheel and novel control algorithm for micro-grid energy storage applications (Co-Principal Investigator)	SERB, DST, Government of India	2022	2025	Ongoing
Laser micro-cladding of titanium and nickel-based turbine shafts (Principal Investigator)	GTRE, Bangalore, Government of India	2019	2022	Ongoing
Development of equal area-based grid measurement for alternate self-averaged cylindrical pitot air flow measuring device (Co-Principal Investigator)	Bharat Heavy Electricals Limited (BHEL), Government of India	2020	2021	Completed
Structural weight optimization of monocoque structured E-Bus (Principal Investigator)	Bharat Heavy Electricals Limited (BHEL), Government of India	2020	2021	Completed
Study and establishing the design guidelines for the real time CAN communication for BHEL E-Bus (Co-Principal Investigator)	Bharat Heavy Electricals Limited (BHEL), Government of India	2019	2020	Completed
In-depth investigations on corrosion and tribological studies on expendable engine (Co-Principal Investigator)	GTRE, Bangalore, Government of India	2018	2021	Completed
3D Modeling and Engineering design validation of 12-meter E-	Bharat Heavy Electricals Limited (BHEL), Government	2018	2019	Completed

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bus (Principal Investigator)	of India					
Design of thermal performance evaluation system with charging-discharging circuit for Li-Ion Battery for E-vehicle (Principal Investigator)	Bharat Heavy Electricals Limited (BHEL), Government of India	2018	2019	Completed		
Establishment of Nano/cost effective insulation coating for high temperature application to reduce insulation thickness (Co-Principal Investigator)	Bharat Heavy Electricals Limited (BHEL), Government of India	2018	2020	Completed		
Design modification of equal area grid measurement for alternate square pitot air flow measuring device (Co-Principal Investigator)	Bharat Heavy Electricals Limited (BHEL), Government of India	2018	2019	Completed		
Evaluating criteria for battery condition assessment (Co-Principal Investigator)	Bharat Heavy Electricals Limited (BHEL), Government of India	2018	2019	Completed		
Hot air erosion studies on nickel based super alloy turbine blades and suitable surface treatment for erosion prevention for Aero Engine application (Principal Investigator)	GTRE, Bangalore, Government of India	2016	2018	Completed		
Exploratory studies on abrasive jet machining of superalloys (Co-Principal Investigator)	GTRE, Bangalore, Government of India	2016	2017	Completed		
Exploratory Studies on Laser surface patterning for providing high temperature protective coatings on Nickel based superalloy (Principal Investigator)	GTRE, Bangalore, Government of India	2016	2017	Completed		
Development of Thermal Interface Material (TIM) for Thermoelectric Generator (TEG) (Principal Investigator)	Bharat Heavy Electricals Limited (BHEL), Government of India	2016	2017	Completed		
Development of modified surface for ID fan blades to improve their service life (Principal Investigator)	Bharat Heavy Electricals Limited (BHEL), Government of India	2015	2016	Completed		
Investigation on the properties of direct metal laser fabricated material and its brazing compatibility with nickel-based casing (Co-Principal Investigator)	GTRE, Bangalore, Government of India	2014	2015	Completed		

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Structural Integrity Evaluation Studies on High Speed Transmission Shaft for Turbofan Engine Application (Principal Investigator)	GTRE, Bangalore, Government of India	2013	2015	Completed
Thermal barrier coatings on high temperature Aero Engine Components (Principal Investigator)	DRDL, Hyderabad, Government of India	2013	2015	Completed
Exploratory Studies on Localized Repair of Aero Engine Blade by Welding Techniques (Principal Investigator)	GTRE, Bangalore, Government of India	2013	2014	Completed
Electrical Discharge Alloying of Ni-WC metal matrix composite on D-53 die steel for improved wear resistance (Principal Investigator)	Council of Scientific and Industrial Research (CSIR), New Delhi	2011	2014	Completed
Experimental Investigations on the performance of nano composite surface coatings for boiler applications (Co-Principal Investigator)	Bharat Heavy Electricals Limited (BHEL), Government of India	2010	2012	Completed
Improvement of wear resistance of Ti-alloy disc brake rotor through laser surface melting (Principal Investigator)	Department of Science and Technology (DST), Government of India	2008	2011	Completed

15. Number of PhDs guided

Name of the PhD Scholar	Title of PhD Thesis	Role(Supervisor / Co-Supervisor)	Year of Award
G. Prabu	Studies on Tribological Behavior of Ti-6Al-4V Surface Modified with AlCrCoCuFeNi High Entropy Alloy		2021
S. Ramkumar	Laser Surface Modification of CFRP composite to enhance adhesive bond strength		2020
A. Haja Maideen	Electrical Discharge Surface Alloying of Aluminium 7075 with Nickel and Molybdenum Powder		2020
N. Balamurali Krishnan	Laser surface treatment of nickel-based superalloy for enhancing erosion resistance of aero gas turbines		2019
F. Peter Prakash	Mechanical and tribological studies on laser surface textured nickel-based superalloy		2019
K. Parthiban	Parametric optimization of laser micro-drilling of TBC coated nickel-based superalloy		2019

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K. E. Sarath Raghavendra Babu	Experimental Investigations on micro/nano laser patterning for anti-reflectance of silicon		2018
N. Jeya Prakash	Tribological Studies on laser surface modified nodular cast Iron		2018
V. Dillibabu	Weldability and tribological studies on nickel based super alloy for aero engine applications		2017
S. R. Dhinesh Kumar	Laser surface modification of functionally graded thermal barrier coatings for aero-engine applications		2017
Muhammed Anaz Khan	Thermo-Mechanical Characterisation of laser treated functionally graded thermal barrier coatings		2017
R. Ramesh	Mechanical and microstructural studies on laser metal deposited nickel and titanium based aero-engine blades		2016
I. Arun	Experimental investigations on the wear resistance of electrical discharge alloyed metal matrix composites		2015
M. Hashim	Experimental investigation on the tribological properties of Laser surface treated Hastelloy C-276		2013
G. M. Balamurugan	Comparative wear studies on WC-Co Plasma sprayed and chrome plated AISI 304 Austenitic stainless steel at elevated temperature		2012
N. L. Parthasarathi	High temperature tribological studies of NiCrBSiFe Plasma sprayed AISI 316 Austenitic Stainless steel		2011

16. Participation in Workshops/ Symposia/ Conferences/ Colloquia /Seminars/ Schools etc. (mentioning the role)

Date (s)	Title of Activity	Level of Event (International/ National/ Local)	Role (Participant/ Speaker/ Chairperson, Paper presenter, Any other)	Event Organized by	Venue

17. Workshops/ Symposia/ Conferences/ Colloquia/Seminars Organized (as Chairman/ Organizing Secretary/ Convenor / Co-Convenor)

Title of Activity	Level of Event (International/	Date (s)	Role	Venue

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	National/ Local)			
One day Online workshop on Additive Manufacturing		18 January 2022	Coordinator	NIT, Trichy
International Conference on Contemporary Design and Analysis of Manufacturing and Industrial Engineering Systems (CDAMIES 2018)	International	18-20 January 2018	Chairman	NIT, Trichy
International Conference on Advances in Production and Industrial Engineering (INCAPIE 2015)	International	20-21 February 2015	Organizing Secretary	NIT, Trichy
Current Challenges in Manufacturing Leading to Innovation		19-24 December 2016	Coordinator	Department of Production Engineering, NIT, Trichy
Measuring Productive in higher education		19-24 September 2016	Coordinator	Department of Management studies, NIT, Trichy
Laser Micro Processing for Biomedical Application, ,		03-April 2014	Coordinator	Department of Production Engineering, NIT, Trichy
Surface Engineering for Tribological Applications		10-12 June 2013	Coordinator	Department of Production Engineering, NIT, Trichy
Production Processes for Defense Application		27-May to 01 June 2013	Coordinator	Department of Production Engineering, NIT, Trichy
Materials Awareness Program for DRDL Scientists,		02-November to 29 December 2012.	Coordinator	Department of Production Engineering, NIT, Trichy
Application of Information Technology Tools in Manufacturing		11-12 December 2008	Coordinator	Department of Production Engineering, NIT, Trichy
Laser Processing of Materials		06-07 March 2008	Coordinator	Department of Production Engineering, NIT, Trichy

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				Trichy
Enterprise Resource Planning		05 March 2008	Coordinator	Department of Production Engineering, NIT, Trichy
Entrepreneurship Skills		22 February 2008	Coordinator	Department of Production Engineering, NIT, Trichy
Emerging Industrial Applications of Laser		30- June to 12 July 2008	Coordinator	Department of Production Engineering, NIT, Trichy
Advances in Material Processing		30- June to 12 July 2008	Coordinator	Department of Production Engineering, NIT, Trichy
Short term courses, conference chair, continuing education to be included or not				

18. Invited Talks delivered

Topic	Date	Inviting Organization
Research Scope in Laser Materials Processing	5th March 2022	NIT Trichy
Flexible 3D Printing operation & Prototype Development	21-25th February 2022	NIT Arunachal Pradesh(online)
3D scanning and 3D slicing	6-10th December 2021	University College of Engineering, Nagarcovil
Additive Manufacturing- An Overview	20-24th September 2021	SA Engineering College, Chennai
Industry 4.0	17 th October, 2020	Pandit Deendayal Petroleum University, Gujarat.
Advances in Laser Materials Processing	9 th October, 2020	NIT, Surat- TEQIP Sponsored STTP
Application of Lasers in	10 th September	Annamalai University,

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Materials Processing		Chidambaram
Lasers in Manufacturing	13 th August, 2020	NDRF Online Internship Program, Bangalore
Writing research proposals and experience in handling the grant	31 st July 2020	NAFEMS India, Bangalore
Research proposal writing for grant	28 th July 2020	RMD Engineering College, Chennai
Tribology of laser surface engineered materials	27 th July 2020	Rajalakshmi Engineering College, Chennai
Introduction to Industry 4.0	25 th July 2020	Sri Sairam Engineering College, Chennai
Opportunities for Industry 4.0 applications in Indian Industries	3 rd January 2020	Siemens CoE-NITT and The Institution of Engineers (India) , NIT, Trichy
Research Scope in Laser Materials Processing, CIT - TEQIP Sponsored Industry Connect Workshop	5 th December 2019	CIT, Coimbatore
Siemens CoE in Manufacturing and its facility	1 st August 2019	JP College of Engineering, Tenkasi
Laser Welding Techniques	29 th April 2019	IIITDM Kancheepuram, Chennai
Unconventional machining process	26 th February 2019,.	K.Ramakrishnan college of Technology, Trichy
Advances and Challenges in Surface Engineering	2 nd April 2018	Aalim Muhammed Salegh College of Engineering, Chennai
Scope of laser based additive manufacturing in aerospace industry	22 nd February 2018	Veltech Dr.RR & Dr.SR University, Chennai
3D Printing	7 th September 2017	Bannari Amman Institute of Technology, Sathi
Writing Proposals for Grants	07 th October 2017	Kumaraguru College of Technology, Coimbatore

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Recent Advances in Mechanical Engineering (ICRAME-2017)	02 nd September 2017	Kingston Engineering College, Vellore
Exploratory studies on Laser Surface patterning for high temperatre protective coatings,	03 rd May 2017	DRDO, Bangalore
Sharing the Success Track of University- Industry Collaboration,	17 th March 2017	ED Cell, Anna University, Coimbatore
Critical Applications of Laser in Turbine Industry	16 th March 2017	IIT Madras, Chennai
Laser based Manufacturing Technologies	04 th March 2017	ASM Chapter, VIT, Vellore
Advances in Laser Material Processing	03 rd March 2017	Kingston Engineering College, Vellore
Prevention of Failures during Manufacturing and Production	03 rd February 2017	Anna University, MIT, Chennai
Advances in Manufacturing Technology	25 th July 2016,	Mount Zion College of Engineering and Technology, Pudukottai
Laser Surface Engineering - State of Art	11 th April 2016,	GCE, Srirangam
Coatings for high temperature applications through Laser	16 th February 2016	NLC, Neyveli
Laser based manufacturing processes	02 nd February 2016	Hindusthan Engineering college, Coimbatore
Small Gas Turbine Engines	28 th January 2016	K.S. Rangasamy college of Technology, Tiruchengode
Advanced Research in Materials for Engineering and Technological	17 th July 2015	Anna University, Trichy

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Applications,		
Laser Based Material Processing Techniques for SGT Applications	15 th June 2015	GTRE, DRDO, Bangalore
Laser Surface Treatments in Composites	24 th April 2015	Dr. Mahalingam College of Engineering and Technology, Pollachi
Laser Surface Engineering	, 13 th April 2015	Madurai Institute of Engineering and Technology Sivagangai
Laser Surface Engineering for Industrial Solutions	27 th March 2015	KPR Institute of Engineering and Technology, Coimbatore
Laser Surface Engineering for Tribological Solutions	11 th February 2015	National Engineering College, Kovilpatti
Laser physics to tailor surface chemistry	07 th February 2015,	PSGRKC, Coimbatore
Laser Surface Engineering	27 th December 2014	Annamalai University, Chidambaram
Laser Surface Engineering	12 th November 2014	Periyar Maniammai University, Thanjavur
Laser Materials Processing	05 th September 2014	KSK College of Engineering & Technology, Kumbakonam
Nanoscience and Laser Materials Processing	09 th March 2013	Jamal Mohamed College, Trichy
Critical Industrial Applications of Laser	28 th January 2012	Annai College of Engineering and Technology, Kumbakonam
Composite based Surface Engineering for Industrial Tribo components	08 th November 2011	Jayaram College of Engineering and Technology, Tiruchirappalli
Laser Science and Technology	13 th October 2010	PRIST University, Tiruchirappalli Campus, Tiruchirappalli
Surface Engineering for Improved Tribological Properties of Industrial Components	30 th April 2010	Kongu Engineering College, Erode

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Recent Trends in Laser Based Applications,	22 nd April 2010	Sethu Institute of Technology, Virudhunagar
Tribology	08 th March 2010	PSG College of Technology, Coimbatore
Laser Technology for Modern Industries,	04 th February 2010	JJ College of Engineering, Tiruchirappalli
Modern Manufacturing applications based on Laser	07 th September, 2009	Mookambigai College of Engineering, Kalmavur, Pudukkottai
Lasers for composite Materials Processing, Composite Materials: Processing challenges and opportunities	14 th July 2009	National Institute of Technology, Tiruchirappalli
Laser micromachining	06 th July 2009	MAM College of Engineering, Tiruchirappalli
Laser Materials Processing	16 th March 2009	Jamal Mohamed College, Tiruchirappalli
Lasers in Industry	09 th January 2009	Thanthai Rovever Institute of Polytechnic College, Perambalur
Laser Processing of Materials - An Overview, Emerging Industrial Applications of laser	01 st July 2008	National Institute of Technology, Tiruchirappalli
Laser Based Manufacturing for Competitive Advantage	08 th April 2008	Institution of Engineers, Tiruchirappalli Chapter
Lasers in Manufacturing, Recent Trends in Advanced Manufacturing	18 th March 2008	National Institute of Technology, Tiruchirappalli.
Laser Surface Engineering, Radiant Energy welding processes	15 th March 2008	National Institute of Technology, Tiruchirappalli.
Role of Lasers in Industry	13 th March 2008	EGS Pillai Engineering College, Nagapattinam

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Industrial Applications of Laser, Laser Processing of Materials	06 th March 2008	National Institute of Technology, Tiruchirappalli
Lasers for Indian Automobile Industry	26 th August 2009	Oxford Engineering College, Tiruchirappalli
Laser alloying-an experimental perspective, Laser Materials Processing (LAMP 2007)	9 th January 2007	National Institute of Technology, Tiruchirappalli

19. Membership of Learned Societies

Type of Membership (Ordinary Member/ Honorary Member / Life Member)	Organization	Membership No. with date
Life Member	The Institution of Engineers (India)	M-136079-5
Regular Member	International Society of Automation	000033823609
Life Member	Laser Institute of America	MEM79803

20. Academic Foreign Visits

Country	Duration of Visit	Programme
Germany	2004- 2006	To do PhD in Germany
Switzerland	2005	Research Collaboration
France	2007	Research Collaboration
Taiwan	2019	Indian Nominee to Participate in smart manufacturing forum

21. Publications

(A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Volume (N	Page numbers	Year	Impact Factor of the Journal

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			o.)			(Optional)
Pradeep, G. V., Muthukannan Duraiselvam, and K. Sivaprasad	Tribological Behavior of Laser Surface Melted γ -TiAl Fabricated by Electron Beam Additive Manufacturing	Journal of Materials Engineering and Performance		1-12	2021	1.819
Prabu, G., Muthukannan Duraiselvam, N. Jeyaprakash, and Che-Hua Yang	Microstructural evolution and wear behavior of AlCoCrCuFeNi high entropy alloy on Ti-6Al-4V through laser surface alloying	Metals and Materials International	27(7)	2328 - 2340	2021	3.642
Varatharajulu, M., Muthukannan Duraiselvam, M. Bhuvanesh Kumar, G. Jayaprakash, and N. Baskar	Multi criteria decision making through TOPSIS and COPRAS on drilling parameters of magnesium AZ91	Journal of Magnesium and Alloys			2021	10.088
Varatharajulu, M., Muthukannan Duraiselvam, G. Jayaprakash, N. Baskar, P. Karthick, and R. Anbarasu	Modeling and optimization of hole accuracy and drilling time in magnesium az31 plate	Surface Review and Letters	28		2021	1.152
Bagade, Vishal Uttamra, Muthukannan Duraiselvam, Niranjan Sarangi, and K. Parthiban	Effect of Laser surface texturing on coating adherence and tribological properties of CuNiIn and MoS2 coating	Transactions of the Indian Institute of Metals	75	239-250	2021	
Varatharajulu, M., Muthukannan Duraiselvam, K. Arun Kumar, C. Gabriel Kanniyar, and Ramkumar Sathiyamurthy	Experimental Investigation of the Effect of Independent Parameters in the Face Milling of Aluminum 6082 Alloy	Transactions of the Indian Institute of Metals	74(3)	659-677	2021	1.14
Anaz Khan, Muhammed, Annakodi Vivek Anand, Muthukannan Duraiselvam, Koppula Srinivas Rao, Ramachandra Arvind Singh, and Subramanian Jayalakshmi	Thermal Shock Resistance and Thermal Insulation Capability of Laser-Glazed Functionally Graded Lanthanum	Materials	14(14)		2021	3.623

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	Magnesium Hexaluminate/Yttria-Stabilised Zirconia Thermal Barrier Coating					
Maideen, A. Haja, Muthukannan Duraiselvam, and M. Varatharajulu	Surface modification of aluminium 7075 by electrical discharge alloying and influence of surface roughness using RSM	Materials Today: Proceedings	39	1440 - 1449	2021	0.97
Prakash, F. Peter, N. Jeyaprakash, Muthukannan Duraiselvam, G. Prabu, and Che-Hua Yang	Droplet spreading and wettability of laser textured C-263 based nickel superalloy	Surface and Coatings Technology	397		2020	4.158
Bagade, Vishal Uttamrao, Muthukannan Duraiselvam, Niranjana Sarangi, and K. Parthiban	Laser Surface Texturing to Enhance CuNiIn Anti-Fretting Coating Adhesion on Ti6Al4V Alloy for Aerospace Application	Lasers in Manufacturing and Materials Processing	7	141-153	2020	1.24
Pradeep G V Krishna, Muthukannan Duraiselvam, Katakam Siva Prasad, and Ashfaq Mohammad	Tribological Behavior of Additive Manufactured γ -TiAl by Electron Beam Melting	Transactions of the Indian Institute of Metals	73(6)	1661 - 1667	2020	1.14
Sokkalingam R, K. Sivaprasad, M. Duraiselvam, V. Muthupandi, and K. G. Prashanth	Novel welding of Al _{0.5} CoCrFeNi high-entropy alloy: Corrosion behavior	Journal of Alloys and Compounds	817		2020	4.17
Jeyaprakash N, Che-Hua Yang, Muthukannan Duraiselvam, and S. Sivasankaran	Comparative study of laser melting and pre-placed Ni-20% Cr alloying over nodular iron surface	Archives of Civil and Mechanical Engineering	20(1)	1-12		3.46
Sathiyamurthy Ramkumar, Muthukannan Duraiselvam, and P. Sevel	Acoustic emission based deep learning technique to predict adhesive bond strength of laser processed CFRP composites	FME Transactions	48(3)	611-619	2020	1.37
Peter Prakash F, Muthukannan	Laser Microtexturing	Lasers in	46		2020	0.34

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Duraiselvam, S. Natarajan, and K. G. Balamurugan	of NiCrAlY Coated Nickel-based Superalloy for Improved Adhesion Bond Strength	Engineering				
Prakash F. Peter, N. Jeyaprakash, Muthukannan Duraiselvam, G. Prabu, and Che-Hua Yang	Droplet spreading and wettability of laser textured C-263 based nickel superalloy	Surface and Coatings Technology	397		2020	3.38
Haja Maideen A, Muthukannan Duraiselvam, and M. Varatharajulu	Surface modification of aluminium 7075 by electrical discharge alloying and influence of surface roughness using RSM	Materials Today: Proceedings			2020	0.97
Arulbrittoraj A., Gurumoorthy A, Karthikeyan S and Muthukannan Duraiselvam	Study the effect of roller hardness on the surface properties of burnished AISI 1211 steel	International Journal of Computational Materials Science and Surface Engineering	9(1)	53-69	2020	0.17
Sathiyamurthy Ramkumar, and Muthukannan Duraiselvam	Selective laser ablation of CFRP composite to enhance adhesion bonding	Materials and Manufacturing Processes	34(11)	1296-1305	2019	3.69
Jeyaprakash N, Che-Hua Yang, Muthukannan Duraiselvam, G. Prabu, Sheng-Po Tseng, and D. Raj Kumar	Investigation of high temperature wear performance on laser processed nodular iron using optimization technique	Results in Physics	15		2019	3.28
Anil Kumar K, Natarajan S, Muthukannan Duraiselvam, and S. Ramachandra	Effect of Titanium Dioxide Particles on the Morphology, Mechanical, and Wear Properties of the Aluminum Alloy 3003-Based Composites	Arabian Journal for Science and Engineering	44	10207-10217	2019	1.47
Selvan B M Muthamizh, Veeramani Anandakrishnan, Muthukannan Duraiselvam,	Wear testing of in situ cast AA8011-TiB2 metal matrix	Materials Testing	61(8)	779-786	2019	0.64

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and Sivaraj Sundarameenakshi	composites					
Karuppasamy S, V. Sivan, S. Natarajan, S P Kumaresh Babu, M. Duraiselvam, and R. Dhanuskodi	"Establishment of Wear Resistant HVOF Coatings for 50CrMo4 Chromium Molybdenum Alloy Steel as an Alternative for Hard Chrome Plating."	Journal of The Institution of Engineers (India): Series C	10 0(4)	635- 645	2019	0.75
Anil Kumar K, S. Natarajan, Muthukannan Duraiselvam, and S. Ramachandra	"Synthesis, characterization and mechanical behavior of Al 3003-TiO ₂ surface composites through friction stir processing."	Materials and Manufacturing Processes	34(2)	183- 191	2019	3.69
Kumar B. Anil, P. Dinesh Babu, P. Marimuthu, and Muthukannan Duraiselvam	Effect of laser surface texturing on tribological behaviour of grey cast iron	International Journal of Surface Science and Engineering	13(2- 3)	220- 235	2019	1.21
Sathish, S. Anandkrishnan, V Dillibabu, V. Muthukannan, Duraiselvam, Balamuralikrishnan, N	Optimization of Coefficient of Friction for Direct Metal Laser Sintered Inconel 718	Advances in Manufacturing Technology		371- 379	2019	2.92
Haja Maideen A, Muthukannan Duraiselvam, and M. Varatharajulu. 72(7)	Application of desirability function approach for optimized process parameters of electrical discharge alloying of Al 7075 with nickel powder	Transactions of the Indian Institute of Metals		1901 - 1916	2019	1.27
Jeyaprakash, N, Che-Hua Yang, Muthukannan Duraiselvam, and G. Prabu	. "Microstructure and tribological evolution during laser alloying WC-12% Co and Cr ₃ C ₂ -25% NiCr powders on nodular iron surface."	Results in Physics	12	1610 - 1620	2019	3.28
Peter Prakash F, Muthukannan Duraiselvam, S. Natarajan and Kannan Ganesa Balamurugan	Effect of laser surface texturing on wear resistance of nickel-based	Industrial Lubrication and Tribology			2019	1.22

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	superalloy					
B.K. Narayanan, M. Duraiselvam, S. Natarajan and M. A. Khan	Hot Corrosion and Oxidation Behaviour of a Laser Processed Nickel-based Superalloy	Lasers in Eng.	1-18		2019	0.34
N. Jeyaprakash, Muthukannan Duraiselvam, S. V. Aditya	Numerical Modeling Of WC-12% Co Laser Alloyed Cast Iron in High Temperature Sliding Wear Condition Using Response Surface Methodology	Surface Review and Letters	26(1)	1-19	2019	0.77
Manikandan, Esakkimuthu, Balakrishnapillai S. Sreeja, Sankararajan Radha, Muthukannan Duraiselvam, Abhishek Gupta, and Shriganesh Prabhu	Microfabrication of terahertz frequency-selective surface by short-and ultrashort laser ablation	Optical Engineering	58(1)		2018	1.28
N. Jeyaprakash, M. Duraiselvam, R. Raju	Modelling of Cr3C2-25% NiCr laser alloyed cast iron in high temperature sliding wear condition using response surface methodology	Arch. Metall. Mater.	63(3)	1303 - 1315	2018	0.69
K. Parthiban, Muthukannan Duraiselvam, R.Manivannan	TOPSIS based parametric optimization of laser micro-drilling of TBC coated nickel based superalloy	Optics and Laser Technology	102	32-39	2018	3.23
K. Parthiban, Muthukannan Duraiselvam, Shashank Kumar Jain, Saad Riaz and S. V. Aditya	Numerical Simulation on the Effect of Cooling Hole Configuration on the Film Cooling Effectiveness in TBC Coated Turbine Vanes	Int J Turbo Jet Eng			2018	0.73
V. Dillibabu, Muthukannan Duraiselvam, S. Natarajan, U. Chandrasekhar, Muhammed Anaz Khan	High Temperature Tribological Characterisation of Laser Nitrided	Transactions of the Indian Institute of Metals	71(1)	99-106	2018	1.27

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	Nickel-Based Superalloy						
Balamurali Krishnan Narayanan, Muthukannan Duraiselvam, S Natarajan, Muhammed Anaz Khan	Laser material processing of nickel superalloy for improved erosion resistance	Materials and Manufacturing Processes	32	1596 - 1605	2017	3.69	
S.R. Dhineshkumar, Muthukannan Duraiselvam, S. Natarajan, S.S. Panwar, Trilochan Jana, Muhammed Anaz Khan	Effect of Laser Glazing on Thermo Mechanical Properties of Plasma Sprayed LaTi2Al9O19 Thermal Barrier Coatings	Materials and Manufacturing Processes	32	1573 - 1580	2017	3.69	
Muhammed Anaz Khan, Muthukannan Duraiselvam, S. S. Panwar, Trilochan Jena, S.R. Dhineshkumar	Improvement of strain tolerance of functionally graded TBCs through laser surface micro-texturing	Journal of Materials Science	52	696-708	2016	2.302	
S.R. Dhineshkumar, Muthukannan Duraiselvam, S. Natarajan, S.S. Panwar, Trilochan Jana, Muhammed Anaz Khan	Enhancement of strain tolerance of functionally graded LaTi 2Al9O19 thermal barrier coating through ultra-short pulse based laser texturing	Surface Coatings & Technology	304	263-271	2016	2.139	
Mohammed Mohaideen Ferozhkhan, Muthukannan Duraiselvam, Kottaimathan Ganesh Kumar, Rajanbabu Ravibharath	Plasma transferred arc welding of satellite 6 alloy on stainless steel for wear resistance	Procedia Technology	25	1305 - 1311	2016		
S.R. Dhineshkumar, Muthukannan Duraiselvam, S. Natarajan, S.S. Panwar, Trilochan Jana, Muhammed Anaz Khan	Enhanced ablation resistance through laser glazing of plasma sprayed LaTi2Al9O19-based functionally graded thermal barrier coating	Ceramics International	42	10184-10190	2016	2.60	
V. Dillibabu, M. Duraiselvam, U. Chandrasekhar and R. Raju	Microstructural Studies on Laser Dissimilar Welded Ni and Steel Alloys for Aeronautical	Lasers in Engineering		1-10	2016	0.40	

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	Turbine Applications						
A. Arulbrittoraj, P. Padmanabhan, Duraiselvam, R. Srinivasan, G. Ebenezer	The effect of sliding wear parameters on carburized AISI1040 steel	Journal of Mechanical Science and Technology	30	1825 - 1833	2016	0.761	
M Adam Khan, S Sundarrajan, M Duraiselvam, S Natarajan, A Senthil Kumar	Sliding wear behaviour of plasma sprayed coatings on nickel based superalloy	Surface Engineering		1-7	2016		
K.E. Sarath Raghavendra Babu and Muthukannan Duraiselvam	Surface nano-texturing of silicon by picosecond laser irradiation through TiO ₂ nanotube arrays	Applied Surface Science	353	1112 - 1116	2015	2.71	
Ramesh Raju, Muthukannan Duraiselvam, Vijay Petley, Shweta Verma, R. Rajendran	Microstructural and mechanical characterization of Ti6Al4V refurbished parts obtained by laser metal deposition	Materials Science and Engineering	643	64-71	2015	2.88	
V Senthilkumar, B Thiyagarajan, M Duraiselvam, K Karthick	Effect of thermal cycle on Ni-Cr based nanostructured thermal spray coating in boiler tubes	Transactions of Nonferrous Metals Society of China	25	1533 - 1542	2015	1.340	
M Hashim, Muthukannan Duraiselvam	Enhancing Tribological and Corrosion Resistance of Hastelloy C-276 through Laser Surface Treatment	Materials Science Forum	830	659-662	2015		
D.Sudhakar, D.Jeyasimman, M.Duraiselvam	Dry Sliding Wear Behavior of Cr ₃ C ₂ -NiCr Coating on Austenitic Stainless Steel	International Journal Of Core Engineering & Management	12	215-225	2015		
Ramesh Raju, Muthukannan Duraiselvam, Arun G. K	Numerical Finite Element Investigation on Laser Cladding of Aerospace Components	International Journal of Life Cycle Reliability and Safety Engineering	3-4	13-23	2014		
V. Dillibabu, Muthukannan	Finite Element	International	3-1	13-	2014		

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Duraiselvam, Rahul V. S	Simulation and Optimization of Dissimilar Welding for Gas Turbine Applications	Journal of Life Cycle Reliability and Safety Engineering		23		
Ilangovan Arun, P. Vaishnavi, Muthukannan Duraiselvam, V. Senthilkumar, and V. Anandakrishnan	Development of carbide intermetallic layer by electric discharge alloying on AISI-D2 tool steel and its wear resistance	International Journal of Materials Research	10 5	544- 551	2014	0.69
Ilangovan Arun, Muthukannan Duraiselvam, V. Senthilkumar, R. Narayanasamy, V. Anandakrishnan	Synthesis of electric discharge alloyed nickel-tungsten coating on tool steel and its tribological studies	Materials and Design	63	257- 262	2014	3.171
Muthukannan Duraiselvam, A. Valarmathi, S. M. Shariff, G. Padmanabham	Laser surface nitride Ti-6Al-4V for light weight automobile disk brake rotor application	Wear	30 9	269- 274	2014	1.862
S. Baskaran, V. Anandakrishnan, Muthukannan Duraiselvam	Investigations on dry sliding wear behavior of in situ casted AA7075-TiC metal matrix composites by using Taguchi technique	Materials and Design	60	184- 192	2014	3.171
S. Baskaran, V. Anandakrishnan, Muthukannan Duraiselvam, S. Raghuraman, V. M. Illayaraja Muthaiyaa	Taguchi Grey Relational Analysis of Dry Sliding Wear Behaviour of Annealed AA7075-TiC metal matrix composites	Applied Mechanics and Materials	54 1- 54 2	258- 262	2014	
S. Baskaran, B. M. Muthamizh Selvan, V. Anandakrishnan, R. Venkatraman, Muthukannan Duraiselvam	Effect of Heat Treatment on Wear Behaviour of Hot Extruded AA7075-4% TiC in-situ metal matrix composite	Applied Mechanics and Materials	54 1- 54 2	263- 267	2014	
S. Rajesh, A. Gopala Krishna, P. Rama Murthy Raju, M. Duraiselvam	Statistical Analysis of Dry Sliding Wear of Graphite Reinforced	Procedia Materials Science	6	1110 - 1120	2014	

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	Aluminium MMCs					
Rajesh Siriyala, A. Gopala Krishna, P. Rama Murthy Raju, M. Duraiselvam	Multi-response optimization of tribological characteristics of aluminium MMCs using PCA	International Journal of Multidiscipline Modeling in Material and Structures	10	276-287	2014	
A Parthiban, R Ravikumar, H Abdul Zubar, M Duraiselvam	Experimental investigation of CO2 laser cutting on AISI 316L sheet	Journal of Scientific & Industrial Research	73		2014	0.385
S. Rajesh, A. Gopala Krishna, P. Rama Murthy Raju, M. Duraiselvam	, “Statistical Modeling and Analysis of Dry Sliding Wear of SiC Reinforced Aluminium MMCs”,	International Journal of Surface Engineering and Interdisciplinary Material Science	1	57-90	2013	
M. Hashim, K.E. Sarath Raghavendra Babu, Muthukannan Duraiselvam, Harshad Natu, V.Muthupandi, K.Sivaprasad, K.R. Rajith	Tribological studies on laser surface melted Hastelloy C-276	Surface Engineering			2013	1.51
M. Hashim, K.E. Sarath Raghavendra Babu, Muthukannan Duraiselvam, Harshad Natu	Improvement of wear resistance of Hastelloy C-276 through laser surface melting	Materials and Design	46	546-551	2013	3.171
N.L. Parthasarathi, Muthukannan Duraiselvam, Utpal Borah	Effect of plasma spraying parameter on wear resistance of NiCrBSiCFe plasma coatings on austenitic stainless steel at elevated temperatures at various loads	Materials and Design	36	141-151	2012	3.171
G.M. Balamurugan, Muthukannan Duraiselvam, V. Anandakrishnan	Comparison of high temperature wear behaviour of plasma sprayed WC-Co coated and hard chromium plated AISI 304 austenitic stainless steel	Materials and Design	35	640-646	2012	3.171
Rajesh Siriyala, Gopala Krishna Alluru, Rama Murthy Raju Penmetsa, Muthukannan	, “Application of grey-taguchi method for optimization of	Frontiers in Mechanical Engineering	7	279-287	2012	

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Duraiselvam	dry sliding wear properties of aluminum MMCs”,					
C. Anand Chairman, S. P. Kumaresh Babu, Muthukannan Duraiselvam, K.R.Balasubramanian	Investigation on two-body abrasive wear behavior of titanium carbide filled glass fabric-epoxy composites- a Box-Behnken approach	International Journal of Engineering, Science and Technology	3	119-129	2011	
M. Prince, P. Gopalakrishnan, M. Duraiselvam, S. Natarajan	Dry Sliding Wear Behavior of HVOF Sprayed Molybdenum and Nickel/Chromium Coatings	International Journal of Applied Engineering Research	5	75-86	2010	
Muthukannan Duraiselvam, N.L. Parthasarathi	Dry sliding wear behavior of NiCrBSiCFe Plasma coating on austenitic stainless steel	Journal of Manufacturing Engineering	5	118-123	2010	
Balamurugan G M, Muthukannan Duraiselvam, Subramaniam Arunachalam	Sliding wear behaviour of AISI 304 austenitic stainless steel at elevated temperature	Journal of Manufacturing Engineering	5	137-142	2010	
Balamurugan G M, Muthukannan Duraiselvam	Influence of temperature on the wear behaviour of WC-Co plasma sprayed AISI 304 austenitic stainless steel	Computer Modelling and New Technologies	14	30-40	2010	
N.L. Parthasarathi, Muthukannan Duraiselvam	Effect of sliding velocity and plasma spraying parameters on wear resistance of NiCrBSiCFe plasma sprayed on austenitic stainless steel at high temperature	Computer Modelling and New Technologies	14	17-29	2010	
N.L. Parthasarathi, Muthukannan Duraiselvam	Improvement of high temperature wear resistance of AISI 316 ASS through NiCrBSiCFe plasma spray coating	Journal of Minerals and Materials Characterization and Engineering	9	653-670	2010	

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N. L. Parthasarathi, Muthukannan Duraiselvam	High temperature tribological properties of NiCrBSiCFe plasma-sprayed coating on austenitic stainless-steel substrate	Journal of Alloys and Compounds	50 5	824- 831	2010	2.726
M. Prince, P. Gopalakrishnan, Muthukannan Duraiselvam, S. Natarajan	Study of Dry sliding wear of Plasma Sprayed Mo-Ni/Cr - Ti-6Al-4V Tribo Pair	European Journal of Scientific Research	37	41- 48	2009	
Muthukannan Duraiselvam, Rolf Galun, Volker Wesling, Barry L. Mordike, Rolf Reiter, Jörg Oligmüller, G. Buvanashekar	Cavitation erosion resistance of Ti-6Al-4V laser alloyed with TiC-reinforced dual phase intermetallic matrix composites	Materials Science and Engineering	45 4- 45 5	63- 68	2007	2.409
Muthukannan Duraiselvam, Rolf Galun, Stephan Siegmann, Volker Wesling, Barry L. Mordike	Study of liquid impact erosion in B2-NiTi and Ti3Al Based intermetallic matrix composites on laser alloyed Ti-6Al-4V	Advanced Engineering Materials	9	171- 176	2007	1.508
Muthukannan Duraiselvam, Rolf Galun, Stephan Siegmann, Volker Wesling, Barry L. Mordike	Investigation of hydro-abrasive erosion of laser alloyed nickel and titanium based intermetallic matrix composites with TiC reinforcement	Surface Engineering	23	425- 430	2007	1.51
Muthukannan Duraiselvam, Rolf Galun, Volker Wesling, Barry L. Mordike, Rolf Reiter, Jörg Oligmüller	Cavitation erosion resistance of AISI 420 martensitic stainless-steel laser-clad with nickel aluminide intermetallic composites and matrix composites with TiC reinforcement	Surface and Coatings Technology	20 1	1289 - 1295	2006	2.199
Muthukannan Duraiselvam,	Improvement of the	Lasers in	16	423-	2006	0.298

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Rolf Galun, Volker Wesling, Barry L. Mordike, Rolf Reiter, Jörg Oligmüller, G. Buvanashakaran	cavitation erosion resistance of Ti-6Al-4V through laser alloying titanium aluminide based intermetallic matrix composites	Engineering		436		
Muthukannan Duraiselvam, Rolf Galun, Stephan Siegmann, Volker Wesling, Barry L. Mordike	Liquid impact erosion characteristics of martensitic stainless-steel laser clad with Ni-based intermetallic composites and matrix composites	Wear	26 1	1140 - 1149	2006	1.862
Muthukannan Duraiselvam, Rolf Galun, Volker Wesling, Barry L. Mordike	Laser clad WC reinforced Ni-based intermetallic-matrix composites to improve cavitation erosion resistance	Journal of Laser Applications	18	297-304	2006	
Muthukannan Duraiselvam, Rolf Galun, Stephan Siegmann, Volker Wesling, Barry L. Mordike	Particle-laden liquid impact erosion characteristics of laser clad Ni-based intermetallic matrix composites with TiC and WC reinforcements	Lasers in Engineering	15	355-373	2005	0.298
R. Narayanasamy, Muthukannan Duraiselvam	CAD/CAM of streamlined extrusion Dies	Journal of the Institution of Engineers Singapore	40	35-39	2000	
Muthukannan Duraiselvam, G. Buvanashakaran, A. Noorul Haq	Wear resistance enhancement through laser surface alloying - an overview	Metals Materials and Processes	17	14-160	2005	
Muthukannan Duraiselvam, R. Narayanasamy	A knowledge-based system for process sequence design in deep drawing operation	Metals Materials and Processes	12	63-68	2000	

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(B) Conferences/Workshops/Symposia Proceedings

Author(s)	Title of Abstract/ Paper	Title of the Proceedings	Page numbers	Conference Theme	Venue	Year
Pitchaikani Selvaraj, Muthukannan Duraiselvam	Evaluation of impacting parameters of Thermal Interface Materials for Thermoelectric generator in waste heat power generation	I-DAD 2020			Vel Tech Rangarajan Dr.Sagunthala R&D Institute of Science & Technology, Chennai	2020
Panneer Selvam R, Muthukannan Duraiselvam, Sanjay G. Barad, and Dilip Kumar	Dynamic Characterization of an Additive Manufactured Turbine Wheel of Turbocharger	In Gas Turbine India Conference, American Society of Mechanical Engineers				2019
Panneer Selvam R, Muthukannan Duraiselvam, Sanjay G. Barad, and T. N. Suresh	Process Qualification and Evaluation of a Metal Rapid Prototype Turbine Blisk Through Dynamic Spin Testing	International Conference on Advanced Materials and Processes for Defence Applications (ADMAT 2019)			DMRL, DRDO, Hyderabad	2019
Pitchaikani Selvaraj, Muthukannan Duraiselvam, Krishnadass Karthick	Effect of HST for optimising the electric array configuration of the TEG system	IMME 19			National Institute of Technology, Trichy	2019
R. Ravichandran, Muthukannan Duraiselvam, F. Peter Prakash	Effect of Tribological Behaviours On Laser Surface Textured Hard Forged Steel	International Conference on Recent Developments in Mechanical Engineering			Chennai, India	2019
Ramesh Raju, Muthukannan Duraiselvam, N. Manikandan, N. Jeyaprakash S.	Processing Optimization of Multiple Quality Characteristics on Electrical Discharge Machining Of Haste	CDAMIES 2018			National Institute of Technology, Tiruchirappalli	2018

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R. Dhinesh Kumar	Alloy Using TOPSIS					
R. Dinesh Kumar K. Ganesa Balamurugan, S. Muthukumaran Muthukannan Duraiselvam	A Study on The Effect of Process Parameters on Mechanical Property of Friction Stir Additive Manufactured Al100 Aluminium Plates	CDAMIES 2018			National Institute of Technology, Tiruchirappalli	2018
Arulbrittoraj, P. Padmanabhan, Muthukannan Duraiselvam, M. Pandikumar	Study on Abrasive Wear Behaviour of Pack Borided AISI 1040 Steel	CDAMIES 2018			National Institute of Technology, Tiruchirappalli	2018
G.V.Krishna Pradeep, Muthukannan Duraiselvam, B.Devaraj Naik	Tool Wear Measurement Of Multipoint Triangular Milling Insert	CDAMIES 2018			National Institute of Technology, Tiruchirappalli	2018
N.Jeyaprakash, Muthukannan Duraiselvam, Deep Chakravorty, Ramesh Raju, S. R. Dhinesh Kumar, G. Prabu	Microstructure And Wear Resistance Enhancement Of Nodular Cast Iron By Laser Surface Melting	CDAMIES 2018			National Institute of Technology, Tiruchirappalli	2018
S.R. Dhinesh Kumar, Muthukannan Duraiselvam, N Manikandan, N. Jeyaprakash, Ramesh Raju	Investigations On Laser Glazing Of Lanthanum Based TBCs Using Taguchi Approach	CDAMIES 2018			National Institute of Technology, Tiruchirappalli	2018
M. Gunasekhar Reddy, Muthukannan Duraiselvam	Mechanical Characterization of Epoxy-Glass/Poly Propylene Fiber Reinforced Composite	CDAMIES 2018			National Institute of Technology, Tiruchirappalli	2018
S. Ramkumar, Muthukannan Duraiselvam	A Combined Artificial Neural Network and Acousto-Ultrasonic Approach Towards Prediction of Tensile Strength Of Glass Fiber Reinforced Composite	CDAMIES 2018			National Institute of Technology, Tiruchirappalli	2018
Uthirapathi, D. Lenin	Experimental Investigation on	CDAMIES 2018			National Institute of Technology,	2018

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Singaravelu, Muthukannan Duraiselvam	Machining of Ti-6Al-4V Alloy Using Powder Mixed Electrical Discharge Machining				Tiruchirappalli	
Balamurali Krishnan Narayanan, Muthukannan Duraiselvam, G. Prabu	The Effect of Micro-Shapes of Laser Surface Texture on The Corrosion Behavior of Nickel Based Superalloy	CDAMIES 2018			National Institute of Technology, Tiruchirappalli	2018
G. Prabu, Muthukannan Duraiselvam, N. Jeyaprakash, S. R. Dhinesh Kumar	Wear Behaviour Of Partially Dissolved Graphite Cast Iron Using Laser Surface Melting in Corrosive Medium	CDAMIES 2018			National Institute of Technology, Tiruchirappalli	2018
M. Ravi Kumar, Muthukannan Duraiselvam, S. Natarajan	A Study of Erosive Wear of Intermediate Plate in Beater Wheel Mill by Pulverized Lignite Fuel	CDAMIES 2018			National Institute of Technology, Tiruchirappalli	2018
A. Haja Maideen, Muthukannan Duraiselvam, V. Anandakrishnan	Experimental investigation and optimization of electrical discharge alloying of Al 7075 alloy with Nickel powder	CDAMIES 2018			National Institute of Technology, Tiruchirappalli	2018
M. Periya karuppan, Muthukannan Duraiselvam,	Critical Factors for Implementation of Lean In Indian Government Sectors	CDAMIES 2018			National Institute of Technology, Tiruchirappalli	2018
R Ravichandran, Muthukannan Duraiselvam and Natarajan S	Laser Hardening of Wheel Surface for Rail Wheel Contact of LHB Coaches to reduce the problem of Wheel Shelling	CDAMIES 2018			National Institute of Technology, Tiruchirappalli	2018
S.V. Aditya, Muthukannan Duraiselvam, K. Parthiban, Vishal Bagade	Simulation on the effect of laser surface texturing in enhancing bond strength of thermal barrier coating	International Conference on Design and Manufacturing IConDM-2016	67-71		Chennai, India.	2016
S.V. Aditya, Muthukannan Duraiselvam, K. Parthiban, Vishal Bagade	Laser Surface Texturing of Nickel Superalloy to Improve Adhesion Bond Strength of Thermal Barrier Coating	International conference on Engineering & Technology, Computer, Basic & Applied			Sydney, Australia	2016

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		Science ECBA-2016				
K.E. Sarath Raghavendra Babu, L. Manikanta Reddy, Muthukannan Duraiselvam	Surface Micro-texturing of Silicon by Picosecond Laser to Enhance Antireflection Effect	International Conference on Application of Lasers in Manufacturing 2015			New Delhi, India	2015
Ramesh Raju, Muthukannan Duraiselvam, Arun G. K.	Finite Element Modeling and Experimental Investigation of Laser Clad Inconel 718 for Aerospace Structural Materials	International Conference on Application of Lasers in Manufacturing 2015			New Delhi, India	2015
S. Baskaran, V. Anandakrishnan, Muthukannan Duraiselvam, N. Keerthivasan	A study on dry sliding friction behavior of TiC reinforced AA7075 in-situ composites by Taguchi technique	2nd IRF International Conference	1-4		Singapore	2014
Ramesh Raju, Muthukannan Duraiselvam, Arun G. K, Vijay Petley, Shweta Verma, Rajendran R	Mechanical and metallurgical characterization of laser metal deposited aero-engine blade materials	28 th International Conference on Surface Modification Technologies,			Tampere University of Technology, Tampere, Finland.	2014
Duraiselvam M, Ramesh, Sai Balagi T. S, Ranajyoti Dutta, Sai Prashanth T. S, Vamshi Krishna	Optimization of Process Parameters for Laser Surface Cladding using Geometric Programming	International Mechanical Engineering Congress 2014			National Institute of Technology: Tiruchirappalli	2014
Ramesh Raju, Muthukannan Duraiselvam, Arun G. K	Numerical Finite Element Investigation on Laser Cladding of Aerospace Components	International Conference on Reliability and Safety Engineering			Anna University – BIT Campus, Tamilnadu, India	2014
V. Dillibabu, Muthukannan Duraiselvam, Rahul V. S	Finite Element Simulation and Optimization of Dissimilar Welding for Gas Turbine Applications	International Conference on Reliability and Safety Engineering			Anna University – BIT Campus, Tamilnadu, India	2014
M. Hashim, K.E. Sarath	A comparative study of laser surface treated	Second International			Anna University, Chennai, India	2013

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Raghavendra Babu, Muthukannan Duraiselvam, Ha rshad Natu	Hastelloy C-276 in argon and nitrogen atmosphere	Conference on Advances in Materials Processing and Characterisation				
Muthukannan Duraiselvam, G. M. Balamurugan	Tribological analysis of AISI 304 Austenitic stainless steel at high temperature	International Conference on Advances in Mechanical and Computer Engineering (ICAMCE-2013)			Haryana, India	2013
Rajesh. S, A. Gopala Krishna, P. Rama Murthy Raju, M. Duraiselvam	Statistical Analysis of Wear Characteristics of Aluminum Metal Matrix Composites	, International Conference on Intelligent Manufacturing Systems (ICIMS 2012)			SASTRA University, Tamilnadu, India	2012
Muthukannan Duraiselvam, S.M. Shariff, G. Padmanabham	,Application of laser surface engineering in power generation and automobile industries	Asia Pacific Interfinish 2010			Singapore	2010
N. L. Parthasarathi, Muthukannan Duraiselvam, G. M. Balamurugan	Influence of temperature in dry sliding wear of AISI 316 austenitic stainless steel	Advances in Materials, Mechanics and Management			College of Engineering Trivandrum, Kerala, India	2010
Muthukannan Duraiselvam, More Satish Dashrathrao, Naveen R, S. Natarajan	Simulation and Analysis of Dry Sliding Wear of Automobile Brake pad – Ti-6Al-4V disc pair using Finite Element Method	International Conference on Latest Trends in Simulation Modelling and Analysis (COSMA 2009)	46 1- 46 4		NIT Calicut, Kerala, India	2009
Muthukannan Duraiselvam, R. Naveen, S. Natarajan, More Satish	Wear analysis of Ti6Al4V alloy - brake pad pair for automobile/aircraft disc brakes at elevated temperatures	Surface Modification Technologies, SMT 23	33 9- 34 3		Mamallapuram, India	2009
G. M. Balamurugan, Muthukannan Duraiselvam , N. L. Parthasarathi	Sliding wear behaviour of WC-Co plasma sprayed coating on AISI 304 steel at room temperature	India-Japan conference on Advances in materials processing			Annamalai University, Chidambaram, India	2009

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N. Parthasarathi, Muthukannan Duraiselvam, G. M. Balamurugan	Dry sliding wear behaviour of plasma sprayed NiCrBSi coating on AISI 316 steel at room temperature	India-Japan conference on Advances in materials processing			Annamalai University, Chidambaram, India	2009
Hemalatha Thiagarajan, M. Duraiselvam, Srisankaraswaminathan J. V	Integration of aggregate production planning and distribution optimization using ACO with fuzzy forecasting	6 th International Conference on Supply Chain management and Information Systems (SCIMS 2008)			National Institute of Technology, Tiruchirappalli, India.	2008
Muthukannan Duraiselvam, N.L. Parthasarathi	Experimental Investigations of the impact of laser process parameters on the microstructural outcome	International Conference of Fascinating Advancements in Mechanical Engineering (FAME 08)	50 9- 51 1		Sivakasi, India	2008
Muthukannan Duraiselvam, Rolf Galun, Stephan Siegmann, Volker Wesling, Barry L. Mordike	Correlation of liquid impact erosion resistance of laser alloyed nickel and titanium based intermetallic matrix composites with instrumented indentation-derived properties	Surface Modification Technologies, SMT 22	32 1- 32 7		Trollhattan, Sweden	2008
V. Sivaraman, M. Duraiselvam, S. Ananthakumar, R. Krishnamurthy	Ultrasonic machining of ZrO ₂ /Al ₂ TiO ₅ ceramic composites	IISc Centenary-International Conference on Advances in Mechanical Engineering, IC-ICAME			Bangalore, India	2008
N.L. Parthasarathi and M. Duraiselvam	Process Parameter Optimization Involved in Laser Cladding of AISI 420 Martensitic Stainless Steel	International Conference on Advanced Manufacturing Technology			Central Mechanical Engineering Research Institute Manufacturing Technology & Foundry Groups, Durgapur, India	2007
M. Duraiselvam	Experimental Investigations of the Impact of Laser Process Parameters on the Microstructural Outcome	International Conference on Advanced Manufacturing Technology			Central Mechanical Engineering Research Institute Manufacturing Technology & Foundry Groups,	2007

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					Durgapur, India	
V. Sivaraman, M. Duraiselvam	Influence of Nano-Coating on Cutting Tools	International Conference on Advanced Materials and Composites,			National Institute for Interdisciplinary Science & Technology (NIIST), CSIR Thiruvananthapuram, India	2007
Muthukannan Duraiselvam, R.Galun, V.Wesling, B.L. Mordike	Laser clad WC reinforced Ni-based intermetallic-matrix composites to improve cavitation erosion resistance	24 th International Congress on Applications of Lasers and Electro-Optics ICALEO	61 1- 62 0		Miami, Florida, USA	2005
Muthukannan Duraiselvam, G. Buvashekarana, A. Noorulhaq	Laser surface alloying of SiC coating on AISI 430 Ferritic stainless steel	International Conference on Advances in Surface Treatment: Research and Applications (ASTRA)	21 3- 21 7		Hyderabad, India	2003
G. Buvashekarana, Muthukannan Duraiselvam, A. Noorulhaq Hyderabad, India.	Laser surface modification technique to improve metallurgical properties of AISI 304 stainless steel	International Conference on Advances in Surface Treatment: Research and Applications (ASTRA)	22 9- 23 4		Hyderabad, India	2003
Muthukannan Duraiselvam, G. Buvashekarana, A. Noorulhaq	Analysis of laser surface alloying using factorial experiment design- A case study	National conference on modeling and analysis of production systems (MAPS),			Tiruchirappalli, India	

(C) Books & Monographs

Author(s)	Title of Book/Monograph	Name of Publishers	Year of Publication	ISSN/ISBN Number
K. Ganesa Balamurugan, Dr. M. Duraiselvam	Effect of Laser Scan Speed on Microstructure and Microhardness on Titanium Clad Magnesium,	Springer	2021	2195-4356

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	Recent Advances in Manufacturing, Automation, Design and Energy Technologies, Proceedings from ICoFT			
A. Arockiarajan, Dr. M. Duraiselvam, Ramesh Raju	Advances in Industrial Automation and Smart Manufacturing - Select Proceedings of ICAIASM 2019	Springer	2019	ISBN 978- 981-15- 4738-6
Dr. M. Duraiselvam	Laser Surface Engineering for Turbine Industries,	VDM Verlag Dr. Muller GmbH & Co.KG	2011	ISBN 978- 363928783 7
M. Adam Khan, D. Chellaganesh, M. Uthayakumar, J. T. Winowlin Jappes, Muthukannan Duraiselvam Book chapter	Electrochemical Behaviour and Surface Studies on Austenitic Stainless Steel and Nickel-Based Superalloy Dissimilar Weld Joints in Materials Forming, Machining and Post Processing	Springer	2019	
Muthukannan Duraiselvam Book chapter	Laser surface modification of metals for liquid impingement erosion resistance in Laser Surface Modification of Alloys for Corrosion and Erosion Resistance	Woodhead Publishing	2012	