

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

Curriculum Vitae

Career Objective

To achieve excellence in teaching and research & development in the field of Manufacturing Technology and Computational Mechanics



1. Name : **Dr.V.Senthilkumar**
2. Designation : Assistant Professor
3. Office Address : Production Engineering,
National Institute of Technology,
Trichy, Tamilnadu, India.
4. Telephone (Direct) (Optional):
Telephone : 0431-2503519 Extn (Optional):
Mobile (Optional): 9500430991
5. Email (Primary): vskumar@nitt.edu Email (Secondary)
:guatham07@gmail.com
6. Field(s) of Specialization: Manufacturing Technology
7. Employment Profile

Job Title	Employer	From	To
Lecturer	Jayaram College of Engineering	Aug'1998	May'2000
Senior Lecturer	Jayaram College of Engineering	Jun'2000	Jun'2003
Assistant Professor	Jayaram College of Engineering, Trichy	Jun'2003	Apl'2007
Assistant Professor	National Institute of Technology, Tiruchirappalli	Apl'2007	Jun'2008
Assistant Professor (AGP 7000)	National Institute of Technology, Tiruchirappalli	Jul'2008	Jun'2010
Assistant Professor (AGP 8000)	National Institute of Technology, Tiruchirappalli	Jun'2010	Till date

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

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

Examination	Board / University	Year	Division/ Grade	Subjects
Ph.D.	NIT, Trichy	2007	Commended	Production Engineering
M.E.	Regional Engineering College, Trichy/ Bharathidasan University	1998	I	Manufacturing Technology
B.E.	Thiagarajar College of Engineering/Madurai Kamaraj University	1994	II	Mechanical Engineering
H.S.C	ER HR Sec School, Trichy/ State Board, Tamilnadu	1990	I	As per State Board Syllabus
S.S.L.C	ER HR Sec School, Trichy/ State Board, Tamilnadu	1988	I	As per State Board Syllabus

9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/ Institution	From	To
Nodal Officer (Procurement), TEQIP	NITT	February'2013	Till date
Deputy Chief Warden	NITT-Hostels	September'2015	Till date
Associate Dean (Faculty Welfare)	NITT	November'2015	Till date
Faculty Advisor (Second year B.Tech(Production))	Department		

10. Academic/Administrative Responsibilities outside the University

Position	Institution	From	To
Member (Board of Studies - UG)	Adhiyaman College of Engineering, Hosur	2016	2017

11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization

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

12. Fellowships

Year of Award	Name of the Fellowship	Awarding Organization	From (Month/Year)	To (Month/Year)

13. Details of Academic Work

(i) Curriculum Development

Degree	Courses
P.G.	Modelling and manufacturing process
U.G.	Finite Element Methods
U.G.	Engineering Mechanics
U.G.	Design for manufacturing and assembly
U.G.	Design of production tooling

(ii) Courses taught at Postgraduate and Undergraduate levels

Degree	Courses
P.G.	Modelling and manufacturing process
U.G.	Finite Element Methods
U.G.	Machine Drawing
U.G.	Engineering Mechanics
U.G.	Engineering Graphics
U.G.	Design for manufacturing and assembly
U.G.	Design of production tooling

(iii) Projects guided at Postgraduate level

Project Title	Name of the Candidate	Year
Mathematical modelling and prediction of drilling parameters for aluminum metal matrix composites using neural networks	Pamidi Kondapa Naidu	Dec-07
Modelling and prediction of tool wear and cutting force in turning operation using ANFIS	Snehaseel Naidu.A	May-08
Modelling and prediction of drilling parameters of aluminium metal matrix composites using adaptive Neuro-Fuzzy Inference system and Neural networks.	Pamidi Kondapa Naidu	May-08
Electical discharge machining of Al/TiC as-sintered metal matrix composites	Bidwai Uday Omprakash	Dec-08
Effect of SiCp addition in Al 6061 alloy composites on EDM process parameters and hole quality	Bidwai Uday Omprakash	May-09
Effect of secondary processing and nano scale reinforcement on the mechanical properties of Al/TiC composites	Stephen Small Kalapala	Dec-09
Performance analysis of B4C-Cu composite as an	M. Chandra Sekhar	Dec-09

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

EDM electrode	Reddy	
Application of ANN RSm for the modelling and optimization of EDM performance of sintered electrode	M. Chandra Sekhar Reddy	May-10
Modelling of hot processing parameters of HAYNES 230 alloy using neural networks	Stephen Small Kalapala	May-10
Experimental investigation of copper based nanocomposites as EDM electrodes	Ganesh Ramesh Rao Pandit	Dec-10
Optimization of process parameters for the processing Al5083/TiC nano composites	S Abhishek	Dec-10
Tribological behavior of surface engineered steel composite	Ganesh Ramesh Rao Pandit	May-11
Effect of TiC particle reinforcement on the mechanical behavior of Al alloy composite	Ahmad Omar	May-11
Mathematical modeling and neural network prediction of hot processing parameters of Al alloy nano composite	S Abhishek	May-11
To predict spring back error in steel pipes using response surface methodology and compare the results using thermal cycle simulator	K. Vinodh Kumar	Nov-11
Tribological behavior of Al-Mg based alloy composite reinforced with TiC particles produced through powder metallurgy route	Shivasharanappa Kalemakal	Dec-11
Experimental investigation of effect of surface textures on tribological behavior of high speed steel cutting tool	Vivek Lomesh Chilamwar	Dec-11
Constitutive modeling and numerical simulation of thermo mechanical behavior of Al5083/TiC nanocomposite during hot deformation process	Shivasharanappa Kalemakal	May-12
Effect of micro textures on frictional behavior of cutting tools	Vivek Lomesh Chilamwar	May-12
Performance analysis of micro textured tool in machining of Titanium alloy(Ti-6Al-4V)	Devarshi Kashyap	Dec-12
Design and analysis of anti friction bearings using analytical tools	Abhishek Sharma	May-13
Experimental studies and numerical simulation of hard machining of Ti-6Al-4V alloy using micro grooved tools	Vijay Kumawat	May-14
Experimental studies and numerical simulation of large strain deformation in machining	Suresh Maloth	Dec-14
Comparison of intelligent decision making tools in prediction of machining quality	Ramya C	Dec-14
Experimental studies on improvement of vibration stability during turning of Ti alloys using micro textured tool	Chodapuneedi Soma Sekhara Sriram	Dec-14
Machinability studies of Ti alloy using coated grooved	Manoj Gupta	May-14

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

tools		
Evaluation of optimum cutting parameters for cryogenic machining of Magnesium alloy using response surface methodology	Ramya C	May-15
Experimental investigation on machinability of Magnesium alloys using cryogenic machining	Chodapuneedi Soma Sekhara Sriram	May-15
Improvement of corrosion behavior of Magnesium alloys using cryogenic machining	Suresh Maloth	May-15
Improvement of surface characteristics of ZK60 magnesium alloy through cryogenic machining	Manish Gupta	Dec-15
Machinability studies on P91 steel with cryogenic coolants	Mulesh Kumar	Dec-15
Numerical modelling and simulation of machining of P91 steel under cryogenic condition	Mulesh Kumar	Jun-16
Microstructural modelling and experimental validation of machining of magnesium alloy	Manish Gupta	Jun-16

(iv) Other contribution(s)

14. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
Neural network based prediction of deformation, densification and workability behaviour of nano titanium carbide particles reinforced Aluminium matrix nanocomposites	DST (Rs.12.68 Lakhs)	2008	2011	Completed
Experimental Investigations on the Performance of Nano Composite Surface Coatings for Boiler Applications	BHEL (Rs.13.5 Lakhs)	2010	2011	Completed
Electrical discharge alloying of Ni-WC metal matrix composite on D53 die steel for improved wear resistance	CSIR (Rs.18.90 Lakhs)	2011	2013	Completed

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

Improvement of Surface Characteristics of Bio-Degradable Magnesium Alloys through Cryogenic Machining	DST-SERB (Rs.21.75 Lakhs)	2013	2016	Ongoing
---	---------------------------	------	------	---------

15. Number of PhDs guided

Name of the PhD Scholar	Title of PhD Thesis	Role(Supervisor/ Co-Supervisor)	Year of Award
Hafeez Ahamed	A study on hot deformation behavior of mechanically alloyed Al6063/Al ₂ O ₃ /Y ₂ O ₃ nanocomposite	Supervisor	2012
Balaji A	Experimental investigation and modelling of thermo-mechanical processing of Al/mg based nanocomposite	Supervisor	2013

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
21.08.08 - 27.08.08	Instruction Design and Delivery System	National	Participant	NITTR, Chennai	NITTR, Chennai
01.06.2009 - 12.06.2009	Recent advances in materials and processing technologies	National	Participant	NIT, Tiruchirappalli	NITT

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

15.06.2009 - 27.06.2009	Engineering Practices On Fuzzy Logic, Neural Networks And Hybrid Intelligent Systems	National	Participant	NIT, Tiruchirappalli	NITT
21.12.09 - 02.01.10	Quantitative Research Techniques For Engineers And Researchers	National	Participant	NIT, Tiruchirappalli	NITT
13.12.10 - 17.12.10	Winter workshop on joining of materials	National	Participant	UGC Networking Resource Centre For Materials	NITT
29.11.11 – 10-12-11	Two weeks ISTE workshop(ICT) on Heat Transfer	National	Participant	National Mission on Education through ICT	NITT
08,09-04- 2011	RAMM-2011	National	Chair person	Chendhuran College of Engg & Tech, Pudukkottai.	Chendhuran College of Engg & Tech, Pudukkottai.

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

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

Title of Activity	Level of Event (International/ National/ Local)	Date (s)	Role	Venue
Processing of Smart materials	National	11th to 16th July, 2016	Co-ordinator	NITT
Application of CFD in Mechanical Engineering	National	08 & 09 October, 2014	Co-ordinator	NITT
Modelling of Manufacturing processes	National	25 - 27 July 2013	Co-ordinator	NITT
Composite Materials: Opportunities and Challenges	National	13 - 24 July 2009	Co-ordinator	NITT
Metal Forming and Powder Metallurgy	National	28 - 30 January 2008	Co-ordinator	NITT

18. Invited Talks delivered

Topic	Date	Inviting Organization
Finite Element Method	16-11-2009	Thiagarajar Polytechnic College, Salem
Nanocomposite(Basic Concept)	05-05-2011	Karaikal Polytechnic College, Karaikal
Forming of composites	08-06-2008	National Institute of Technology
Advanced manufacturing processes	31-08-2015	MIET-Trichy

19. Membership of Learned Societies

Type of Membership (Ordinary Member/ Honorary Member / Life Member)	Organization	Membership No. with date
Life Member	Indian Society for Technical Education	

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

20. Academic Foreign Visits

Country	Duration of Visit	Programme
Singapore	June-2008	NUS, Singapore, International Collaboration

21. Publications

(A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year	Impact Factor of the Journal (Optional)
D.Arulkirubakaran V.Senthilkumar S.Dinesh	Effect of textures on machining of Ti-6Al-4V alloy for coated and uncoated tools: A numerical comparison	International journal of advanced manufacturing technology	In Print	1-14	2016	
D. Palanisamy, P. Senthil, V. Senthilkumar	The effect of aging on machinability of 15Cr-5Ni precipitation hardened stainless steel	Archives of Civil and Mechanical Engineering	16	53-63	2016	
S Dinesh, V Senthilkumar, P Asokan	Experimental Studies on Cryogenic Machining of Bio-Degradable ZK60 Mg Alloy Using Micro-Textured Tools	Materials and manufacturing processes	Accepted		2016	
C. Velmurugan, V. Senthilkumar, S. Sarala, J. Arivarasan	Low temperature diffusion bonding of Ti-6Al-4V and duplex stainless steel	Journal of material processing technology	234	272-279	2016	
S. Dinesh V. Senthilkumar P. Asokan D.Arulkirubakaran	Effect of cryogenic cooling on machinability and surface quality of bio-degradable ZK60 Mg alloy	Materials and Design	87	1030-1036	2015	

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

V. Sudharsanam V. Senthilkumar N. Raju R. Vetriselvan	Evaluation of post weld heat treatment quality of modified 9Cr-1Mo (P91) steel weld by magnetic coercive force measurements	Archives of Civil and Mechanical Engineering	15	847-853	2015	
D.Arulkirubakaran V. Senthilkumar Vijay Kumawat	Effect of Micro-Textured Tools on Machining of Ti-6Al-4V alloy: An Experimental and Numerical Approach	International Journal of Refractory Metals and Hard Materials	54	165-177	2015	
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(5)	1533-1542	2015	
V. Senthilkumar M.G. Hari Prasath V. Lomesh Chilamwar	Role of surface texture on tribological behavior of HSS	Surface Engineering	30(4)	277-282	2014	
Ilangovan Arun, P. Vaishnavi, Muthukannan Duraiselvam, V. Senthilkumar , V. Ananthkrishnan,	Development of carbide Intermetallic layer by electrical discharge alloying on AISI -D2 die steel	International Journal of Materials Research	105(6)	544-551	2014	
V. Senthilkumar , A. Balaji, D.Arulkirubakaran	Application of constitutive and neural network models for prediction of high temperature flow behavior of Al/Mg based nano-composite	Transactions of Nonferrous Metals Society of China	23(6)	1737-1750	2013	
M. Srinivasan, C. Loganathan, R. Narayanasamy, V. Senthilkumar Q.B. Nguyen,	Study on hot deformation behavior and microstructure evolution of cast-	Materials and Design	47	449-455	2013	

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

M. Gupta	extruded AZ31B magnesium alloy and nano-composite using processing map					
Hafeez Ahamed, V. Senthilkumar	Prediction of flow stress during hot deformation of mechanically alloyed hybrid aluminium nano-composite employing artificial neural network and Arrhenius constitutive model	Multidiciplene Modelling in Materials and structure	8(2)	136-158	2012	
Hafeez Ahamed, V. Senthilkumar	Hot deformation behavior of mechanically alloyed Al6063/0.75Al ₂ O ₃ /0.75Y ₂ O ₃ nano-composite–A study using constitutive modeling and processing map	Materials Science and Engineering: A	539	349-359	2012	
V. Senthilkumar, A. Balaji, R. Narayanasamy	Analysis of hot deformation behavior of Al 5083–TiC nanocomposite using constitutive and dynamic material models	Materials and Design	37	102-110	2012	
V. Senthilkumar, M. Chandrasekar Reddy	Performance analysis of Cu-B ₄ C metal matrix composite as an EDM electrode	International Journal of Machining and Machinability of materials	11(1)	36-50	2012	
Hafeez Ahamed, V. Senthilkumar	A comparative study on the milling speed for the synthesis of nanostructured Al6063 alloy powder by mechanical	Journal of Minerals and Materials Characterization & Engineering	10(6)	507-515	2011	

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

	alloying					
V. Senthilkumar, Bidwai Uday Omprakash	Effect of Titanium Carbide particle addition in the aluminium composite on EDM process parameters	Journal of Manufacturing Processes	13(1)	60-66	2011	
V. Senthilkumar, A. Balaji, S. Abhishek, Hafeez Ahamed,	Constitutive modeling for the prediction of peak stress in hot deformation processing of Al alloys based nanocomposites	Advanced Materials Research	328-330	1602-1605	2011	
V. Anandhakrishnan V. Senthilkumar	Mathematical Modeling of Machining Parameters in Electrical Discharge Machining with Cu-B ₄ C Composite Electrode	Advanced Materials Research	488-489	871-875	2012	
V. Senthilkumar, A.Balaji, Hafeez Ahamed,	Effect of Secondary Processing and Nanoscale Reinforcement on the Mechanical Properties of Al-TiC composites	Journal of Minerals and Materials Characterization & Engineering	10 (14)	1293-1306	2011	
Hafeez Ahamed, V. Senthilkumar,	Consolidation behavior of mechanically alloyed Aluminium based nanocomposites reinforced with nanoscale Y ₂ O ₃ /Al ₂ O ₃ particles	Materials Characterization	62 (12)	1235-1249	2011	
Hafeez Ahamed, V. Senthilkumar	Role of nano-size reinforcement and milling on the synthesis of nano-crystalline	Journal of Alloys and Compounds	505 (2)	772-782	2010	

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

	aluminium alloy composites by mechanical alloying					
V. Senthilkumar, K.Lenin	Synthesis and characterization of ultrafine grained 304 stainless steel through machining	Journal of Minerals and Materials Characterization & Engineering	10(5)	455-461	2010	
V. Senthilkumar, R. Narayanasamy, K.S. Pandey	Effect of initial perform geometry and friction on the cold deformation behavior of sintered titanium carbide composite steel	International Journal of Material Forming	1(4)	233-242	2008	
R. Narayanasamy, V. Senthilkumar, K.S. Pandey	Some features on hot forging of powder metallurgy sintered high strength 4% titanium carbide composite steel preforms under different stress state conditions	Materials and Design	29(7)	1380-1400	2008	
V. Senthilkumar, R. Narayanasamy,	Influence of Titanium Carbide particle addition on the forging behavior of powder metallurgy composite steels	Journal of Engineering Manufacture	222 (11)	1333-1345	2008	
R. Narayanasamy, V. Senthilkumar, K.S. Pandey	Some aspects of workability studys on sintered high strength P/M steel preforms of varying TiC contents during hot forging	Journal of Materials Science	43(1)	102-116	2008	
R. Narayanasamy, V. Senthilkumar, K.S. Pandey	Some aspects of Hot forging features of P/M sintered High-Strength Titanium	Journal of Engineering Materials and Technology	129 (1)	113-129	2007	

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

	Carbide composite steel performs under different stress state conditions					
R. Narayanasamy, V. Senthilkumar , K.S. Pandey	Effect of titanium carbide particle addition on the densification behavior of sintered P/M high strength steel preforms during cold upset forming	Materials Science and Engineering: A	456 (1-2)	180-188	2007	
R. Narayanasamy, V. Senthilkumar , K.S. Pandey	Some aspects of hot forging features of P/M sintered iron preforms under various stress state conditions	Mechanics of Materials	38(4)	367-386	2006	
R. Narayanasamy, V. Senthilkumar , K.S. Pandey	Some aspects of workability studies on hot forging of sintered high strength 4% titanium carbide composite steel preforms	Materials Science and Engineering:A	425 (1-2)	121-130	2006	
R. Narayanasamy, V. Senthilkumar , K.S. Pandey	Workability studies on powder metallurgy pure iron preforms during hot forging under triaxial condition	International Journal of Mechanics and Materials Design	3(2)	175-184	2006	
R. Narayanasamy, V. Senthilkumar , K.S. Pandey	Some aspects of workability studies on P/M sintered high strength 4% titanium carbide composite steel preforms during cold upsetting	International Journal of Mechanics and Materials Design	3(1)	39-57	2006	

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

(B) Conferences/Workshops/Symposia Proceedings

Author(s)	Title of Abstract/ Paper	Title of the Proceedings	Page numbe rs	Confere nce Theme	Venue	Year
D.Arulkirubakaran, C.Velmurugan, V.Senthilkumar, P.Senthil	Study of machining characteristics of titanium alloy (Ti-6Al-4V) during orthogonal cutting using textured tool	PEC-DM			PSG College of Technology	2016
D.Arulkirubakaran, V.Senthilkumar, Ramyac	Study of cutting forces and prediction of surface quality analysis using neural network model, support vector regression model by various textured tool condition for Ti-6Al-4V alloy	PEC-DM			PSG College of Technology	2016
Dinesh S, V.Senthilkumar, Asokan.P	Experimental investigation on machinability of biodegradable magnesium alloy through cryogenic machining	PEC-DM			PSG College of Technology	2016
R.K.Prabhakaran, A.Naveen Sait, V.Senthilkumar	Compressibility studies on the effect of addition of TiC in pure aluminium during cold compaction	National conference on Recent advances in manufacturing and materials	226 - 229		Chenduran College of Engineering and Technology	2011
Hafeez Ahamed, V.Senthilkumar	Design and optimization of bulk metal processing - A review	Advances in Mechanical engineering	283 - 286		AME	2009

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

(C) Books & Monographs

Author(s)	Title of Book/Monograph	Name of Publishers	Year of Publication	ISSN/ISBN Number