

# National Institute of Technology, Tiruchirappalli:

## Performa for CV of Faculty/ Staff Members

### Curriculum Vitae

Dr. Karthik V has obtained his Bachelor's Degree in Metallurgical Engineering from Government College of Engineering, Salem. He has completed his Masters and Doctoral degree in the Department of Metallurgical and Materials Engineering, IIT Kharagpur. He served as Assistant Professor in the Department Of Metallurgical Engineering, GCE, Salem for five years before joining at NIT, Tiruchirappalli.



1. Name Dr. Karthik V
2. Designation: Assistant Professor
3. Office Address: MME/NAB/201
4. Telephone (Direct) (Optional):  
Telephone : Extn (Optional):  
Mobile (Optional): 9788444987
5. Email (Primary): karthikv@nitt.edu Email (Secondary) : karthikvnitt@gmail.com
6. Field(s) of Specialization: Computational Materials Science,  
Nano(fluids)materials, Material  
Characterization, Process Metallurgy

#### 7. Employment Profile

Job Title	Employer	From	To
Assistant Professor	NIT Tiruchirappalli	10.07.2018	Till date
Assistant Professor	Government College of Engineering, Salem	25.04.2013	09.07.2018
Apprenticeship Trainee	Magna Electro Castings Pvt Ltd, Coimbatore	21.08.2006	03.07.2007

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

Examination	Board / University	Year	Division/ Grade	Subjects
PhD	IIT Kharagpur	2014		Metallurgical and Materials Engineering
MTech	IIT Kharagpur	2009	9.10	Metallurgical and Materials Engineering
BE	Anna University, Chennai	2006	74% / First Class	Metallurgical Engineering

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

HSC	State Board, Tamilnadu	2002	92 %	Mathematics, Physics, Chemistry, Computer Science
SSLC	State Board, Tamilnadu	2000	88.8%	Mathematics, Science, Social Science

### 9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/Institution	From	To

### 10. Academic/Administrative Responsibilities outside the University

Position	Institution	From	To
Assistant Controller of Examination	Government College of Engineering, Salem	Oct 2017	June 2018

### 11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization
2015	Best Paper Award	IGMIGM 2015, Erode Sengunthar Engineering College, Perundurai

### 12. Fellowships

Year of Award	Name of the Fellowship	Awarding Organization	From (Month/Year)	To (Month/Year)
2007	GATE Fellowship	IIT Kharagpur	July 2007	May 2009
2009	Institute Fellowship for PhD	IIT Kharagpur	July 2009	March 2013

### 13. Details of Academic Work

#### (i) Curriculum Development

Involved in development of BE Metallurgical and Engineering and ME Welding Technology Curriculum at GCE, Salem

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

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(ii) Courses taught at Postgraduate and Undergraduate levels

PG Level

Materials Technology  
Special Experimental Techniques  
Material Characterization

UG Level

Transport Phenomena  
Nanomaterials  
Experimental Techniques in Metallurgy  
Phase Transformation

(iii) Projects guided at Postgraduate level (at GCE, Salem)

1. Design and Optimization of Different Tool Pin Profile on Friction Stir Welding of AA1100 by Nithyanandan D., (1563011)
2. Preparation and Characterization of Dissimilar Weld Joint of Austenitic and Duplex Stainless Steels by Using TIG welding by Thirumoorthi G (1563015)
3. Evaluation of Microstructure and Mechanical Properties of Activated TIG welded Joint of 321 Stainless Steel with Various Flux Powders by Manivannan P. (1463009)
4. Optimization of Gas Tungsten Arc Welding Parameters Using Grey Relational Analysis for Dissimilar DSS2205/SS316L Joints by Vijayaraj M. (1463016)
5. Parametric Optimization on Ultrasonic Metal Welding of Al-Al, Cu-Cu and Al-Cu Joints by Kumar P., (1363005)

(iv) Other contribution(s)

14. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed

15. Number of PhDs guided

Name of the PhD Scholar	Title of PhD Thesis	Role(Supervisor/ Co-Supervisor)	Year of Award

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

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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
17.11.2009	Development of Bionanocomposite for prosthesis implants	National	Paper presenter	Indian Institute of Metals	Kolkata
09.12.2011	Thermal Conductivity of Ethylene Glycol Based Nickel Aluminide Dispersed Nanofluids	International	Paper presenter	IIT Kharagpur	Kharagpur
18.11.2012	Multi-scale mathematical model for estimation of thermal conductivity enhancement in nanofluids	National	Paper presenter	Indian Institute of Metals	Jamshedpur
16.11.2015	Ultrafine Silver Nanoparticles Dispersed Aqueous Colloidal Solution: A Solution for Enhanced Heat Transfer	National	Session Coordinator, Paper presenter	Indian Institute of Metals	Coimbatore
18.03.2016	International Conference on Sustainable Materials Design and Applications (ICSMDA 2016)	International	Chairperson	Kongu Engineering College, Perundurai	Perundurai
05.04.2016	National Conference on Recent Advances in Materials and Manufacturing (RAMM2K16)	National	Speaker	Dhirajlal Gandhi College of Technology	Salem

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

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### 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
International Conference on Advances in Metallurgy, Materials and Manufacturing	International	6-8 <sup>th</sup> March, 2017	Organizing Secretary	Hotel CJ Pallazzo, Salem

### 18. Invited Talks delivered

Topic	Date	Inviting Organization
Introduction to Fracture Behaviour of Materials	25.06.2015	Kongu Engineering College, Perundurai, Erode
Nanofluids: A solution for enhanced heat transfer	05.04.2016	Dhirajlal Gandhi College of Technology, Salem
Ultrafast cooling using nanofluids	16.02.2017	JSW Steel Ltd., Salem Works

### 19. Membership of Learned Societies

Type of Membership (Ordinary Member/ Honorary Member / Life Member )	Organization	Membership No. with date
Associate Member	Indian Institute of Metals	AS-43753, 14.09.2009

### 20. Academic Foreign Visits

Country	Duration of Visit	Programme

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

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21. Publications

(A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year	Impact Factor of the Journal (Optional)
S Chidambaram, Ashok Kamaraj, R Saravana Kumar and V Karthik	Shear Fracture and Industrial Overload Failure of Mechanical Fuse Shear Pin	IOP Conference Series: Materials Science and Engineering	377	012004	2018	
V Karthik, SK Pabi, SKR Chowdhury	Development of hydroxyapatite/polyvinyl alcohol bionanocomposite for prosthesis implants	IOP Conference Series: Materials Science and Engineering	314	012031	2018	
S Chidambaram, K Ashok, V Karthik, PG Venkatakrishnan	Microbiological corrosion of ASTM SA105 carbon steel pipe for industrial fire water usage	IOP Conference Series: Materials Science and Engineering	314	012027	2018	
S Dhanalakshmi, N Mohanasundararaju, PG Venkatakrishnan, V Karthik	Optimization of friction and wear behaviour of Al7075-Al2O3-B4C metal matrix composites using Taguchi method	IOP Conference Series: Materials Science and Engineering	314	012025	2018	
S Mithra, PG Venkatakrishnan, D Noorullah, V Karthik	Failure Analysis of Gold Dust defect in 430 grade Stainless Steel	IOP Conference Series: Materials Science and Engineering	314	012003	2018	
SP Md. Meraj, Krishna Dutta, Ravindra Bhardwaj, Natraj Yedla, V. Karthik	Influence of Asymmetric Cyclic Loading on Structural Evolution and Deformation Behavior of Cu-5 at.% Zr Alloy: An Atomistic Simulation-Based Study	Journal of Materials Engineering and Performance	26	5197-5205	2017	1.340

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

J Krishan, P Gupta, Karthik Vaduganathan, N Yedla	Superplastic Pd50Pt50 monocrystalline bimetallic alloy nanowire: a molecular dynamics simulation study	Metallurgical Research & Technology	114	302	2017	0.574
D Noorullah, SSM Nazirudeen, A Mukesh, V Karthik	Development of Closed Cell Metallic Foams for Automotive Crashworthiness	International Journal of Vehicle Structures & Systems	7	141	2015	
V. Karthik, S. Sahoo, S.K. Pabi, S. Ghosh	On the phononic and electronic contribution to the enhanced thermal conductivity of water-based silver nanofluids	International Journal of Thermal Sciences	64	53-61	2013	3.361
V. Karthik, S. Ghosh, S.K. Pabi	Effects of bulk stoichiometry and surface state of NiAl nano-dispersoid on the stability and heat transfer characteristics of water based nanofluid	Experimental Thermal and Fluid Science	48	156-162	2013	3.204
Suresh Telu, V.Karthik, R. Mitra, S. K. Pabi	Effect of 10 at.% Nb addition on Sintering and High Temperature Oxidation of W <sub>0.5</sub> Cr <sub>0.5</sub> Alloy	Materials Science Forum	710	308-313	2012	

(B) Conferences/Workshops/Symposia Proceedings

Author(s)	Title of Abstract/ Paper	Title of the Proceedings	Page numbers	Conference Theme	Venue	Year

(C) Books & Monographs

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