

National Institute of Technology, Tiruchirappalli:

Performa for CV of Faculty

Curriculum Vitae



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

Thanks for choosing to read my profile. This is Dr. Jaganathan VM, Assistant Professor, Department of Energy and Environment, NIT Trichy. I have completed undergraduate studies in Mechanical engineering and post-graduation in Energy studies. After completing my PG, I have worked for 4.5 years in industries and in an academic institute. My work experience was in areas related to renewable energy systems and conventional power plant design. After that, I pursued by PhD in mechanical engineering department (Energy-Thermal sciences) of Indian Institute of technology Madras. After my doctoral studies, I started to pursue my career as an academician/researcher in NIT Trichy. I wish to be a successful researcher in the field of sustainable energy and a good academician all in my life. Once again thanks for reading my profile!

1. Name: Dr. Jaganathan VM

2. Designation: Asst Prof Grad II

3. Office Address:

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National Institute of Technology,
Tiruchirappalli - 620 015.

4. Telephone (Direct) (Optional):

Telephone : +91 - 431 - 2503135

Extn (Optional):

Mobile (Optional): 9710829732

5. Email (Primary): vmjagan@nitt.edu

Email (Secondary): jagan.energy@gmail.com

6. Field(s) of Specialization:

1. Thermo-chemical conversion of solid fuels.
2. Bio-Char applications.
3. Energy efficient technologies.
4. Solar Energy.
5. Energy storage methods.

7. Employment Profile

Job Title	Employer	From	To
Assistant Professor	Department of Energy and Environment, NIT Tiruchirappalli-15	March 2020	Till date

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Post-Doctoral Fellow	Indian Institute of Technology Madras	November 2019	March 2020
Assistant Professor	R.M.K College of Engineering and Technology	June 2012	December 2013
Design Engineer	Fichtner Consulting Engineers (India) Pvt. Ltd	Jan 2011	May 2012
Senior Engineer	Wipro EcoEnergy Pvt. Ltd	June 2009	Jan 2011
Graduate Engineer Trainee	Super Auto Forge Pvt. Ltd	December 2006	August 2007

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

Examination	Board / University	Year	Division/ Grade	Subjects
Ph.D.	Indian Institute of Technology Madras	2019	First class	Mechanical Engineering
M.E	College of Engineering, Guindy campus	2009	First class	Energy Engineering
B. E	Anna University	2006	First class	Mechanical Engineering

9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/Institution	From	To
Member In LAC Committee	National Institute of Technology Tiruchirappalli	08.12.2020	Till date
Faculty Advisor Of Environmental Club	National Institute of Technology Tiruchirappalli	28.07.2021	Till date
Institute Level SOP Coordinator	National Institute of Technology Tiruchirappalli	22.09.2020	Till date
Warden For Jasper And Coral Hostel	Hostel/ National Institute of Technology Tiruchirappalli	23.11.2021	Till date
Department Timetable Coordinator	Department of Energy and Environment/NIT/ Tiruchirappalli	01.07.2020	Till date
Department MIS Coordinator	Department of Energy and Environment/ NIT/ Tiruchirappalli	01.07.2020	Till date
Panel Member Of PhD Selection Committee	Department of Energy and Environment/ NIT/ Tiruchirappalli	01.07.2020	Till date
PG Project Evaluation Committee Member	Department of Energy and Environment/ NIT/ Tiruchirappalli	01.07.2020	Till date

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Department Guest Lecture Coordinator	Department of Energy and Environment/ NIT/ Tiruchirappalli	01.07.2020	Till date
Purchase Committee Member Of DEE Plan Fund	Department of Energy and Environment/NIT/Tiruchirappalli	01.07.2020	Till date
Department Level SOP Coordinator	Department of Energy and Environment/NIT/Tiruchirappalli	22.09.2020	Till date
PhD Admissions Committee	National Institute of Technology Tiruchirappalli	May 2022	Till date
NIRF/Data Inside Teams	National Institute of Technology Tiruchirappalli	04.01.2022	Till date

10. Academic/Administrative Responsibilities outside the University

Position	Institution	From	To
Member of the Doctoral Committee	VIT, Vellore	17.06.2022	Till date
Subject matter expert	Mepco Schlenk Engineering college, Sivakasi	02.10.2022	02.10.2022

11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization
2019	TCS best project award	Shastra-TCS Innovation event held at IIT Madras on 2019
2019	Won Best paper award(titled "Extinction of non-premixed 'volatiles' flame: Experiments on single biomass particles and connection to counter - current flame propagation in packed beds")	International Conference on Advances in Energy Research (ICAER)-IIT Bombay on 2019

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 :

- (a) New M. Tech courses: EN 652 – Applied thermodynamics
EN 653 - Carbon Sequestration techniques
- (b) New M.Tech lab experiment: Biomass thermos-chemical conversion – An experimental study
- (c) New B.Tech Minor course : ENMI21 – Green cooling technologies

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(ii) Courses taught at Postgraduate and Undergraduate levels

S. No.	Name of the theory Courses Taught	Session	No. of Credits	No. of Students	UG/PG
1	Power Plant Engineering(MEPE36)	Jul 2020 & Jan 2022	3	59	UG-Minor
2	Advanced Fossil Fuel Technologies (EN649)	Jul 2020	3	15	PG
3	Wind and Hydro power systems (EN646)	Jan 2021	3	15	PG
4	Hydrogen and Fuel cell technology(ENMI20)	Jan 2021	3	55	UG-Minor
5	Air Conditioning& Refrigeration(EN619)	July2021	3	12	PG
6	Energy and Environmental Engineering(ENIR11)	July2021	2	64	UG
7	Energy and Environmental Engineering(ENIR11)	Jan 2022	2	130	UG

(iii) Projects guided Postgraduate at level

S. No.	Title of the Thesis	Guide / Co-Guide	Roll Number of Student
1	Computational Analysis Of R134a And R1234yf In Bi-Evaporator Vapour Compression Refrigeration System With Regenerator	Guide	202319002
2	Design And Development Of Biomass Combustion System For Calcination Of Limestone And Biomass Availability Survey In India	Guide	202319017
3	Prediction Of Burn Rate Of Biomass Using Unified Ignition-Devolatilization Model	Guide	202319011
4	Solar E-Vehicle Development	Guide	202320013
5	Simulating And Analysis Of A Pulsating Heat Pipe Using CFD	Guide	202320010
6	Design, Development And Characterization Of Magneto-Mechano -Electric Generators Using 3D Printing For Energy Harvesting	Guide	202320019
7	Techno Economical Analysis Of Municipal Solid Waste Gasification	Guide	202320008
8	Investigation On Yield Of Producer Gas From Various Biomasses In Fixed Bed Gasifier	Guide	202320008
9	Parametric Study And Characterization Of Heat Pipe Using CFD And Experiments	Guide	202320010

(iv) Other contribution(s)

14. Details of Projects

(A) R & D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
Biomass driven trigeneration system				

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for improving the livelihood of Scheduled Tribes at Athanavur village, Yelagiri Hills	Department of Science & Technology (DST)	2021	Till date	Ongoing
Design and development of a fully automated prototype of the IITM Biomass Gasification system	Gas Authority of India Limited(GAIL)	2022	Till date	Ongoing
Development of Ammonia based Flexible heat pipe for space application	Indian Space Research Organization(ISRO)	2022	Till date	Ongoing
Bio-char from Gasification of Biomass for Sustainable Agriculture(SEED GRANT)	SEED GRANT /NIT/Tiruchirappalli	2021	Till date	Ongoing
B3D Toys India Private Limited (Start-up)	CEDI	2022	Till date	Ongoing

(B) Consultancy Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
Survey of Availability, Quality for biomass of relevance to cement industry (Phase II)	FL Smidth Germany	November 2020	March 2022	Completed
Physical model study for a 500 MW Anpara Power plant ESP	TryCAE Industrial Engineering Pvt.Ltd.	August 2021	Till date	Ongoing

15. Number of PhDs guided/currently guiding

Name of the PhD Scholar	Title of PhD Thesis	Role (Supervisor/ Co-Supervisor)	Year of Award
P Kannan	Design, Development, And Characterisation Of Polymer-Based	Supervisor	Ongoing

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	Flexible Heat Pipe For Next Generation Electronic Devices.		
K Manoj Prabhakar	Synthesis and Characterization of value added products from biomass	Supervisor	Ongoing

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
December,2019	Conference	International	Paper presenter	7 th International Conference on Advances in Energy Research (ICAER 2019)	Bombay India
April, 2017	Conference	International	Paper presenter	11th European Conference on Industrial Furnaces and Boilers	Portugal
December,2021	Conference	International	Paper presenter	AOSFST 2021 – 12th Asia-Oceania Symposium on Fire Science and Technology	Australia
November, 2015	Conference	National	Paper presenter	NCICEC	Dehradun India

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
Familiarization, Handling and Training on Sophisticated Analytical and Energy Audit Instruments for Engineers (Virtual Mode) - under KARYASHALA Scheme - A SERB initiative and sponsored event	National	18.10.2021 to 24.10.2021	Coordinator	National Institute of Technology Tiruchirappalli
ATAL FDP on “Biomass to Fuels, chemicals and Value-	National	20.12.2021 To	Coordinator	National Institute of

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added products for sustainable energy and environmental future”		24.12.2021		Technology Tiruchirappalli
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18. Invited Talks delivered

Topic	Date	Inviting Organization
Renewable hydrogen from Biomass	27 th May 2021	Association of Energy Engineers, VIT Vellore
Biomass gasification – basics and Future Research Directions	26 th April 2021	School of Mechanical Engineering (SMEC) , VIT Vellore
Biomass Gasification - facts and Future Research	9 th July 2020	Department of Mechanical Engineering, Francis Xavier Engineering College, Tirunelveli

19. Membership of Learned Societies

Type of Membership (Ordinary Member/ Honorary Member / Life Member)	Organization	Membership No. with date

20. Academic Foreign Visits

Country	Duration of Visit	Programme

21. Publications

(A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year	Impact Factor of the Journal (Optional)

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V M Jaganathan, Ambatipudi Mani Kalyani and S.Varunkumar	The phenomenon of flame jump in counter-current flame propagation in biomass packed beds - experiments and theory	Combustion Science and Technology	194	1199 To 1212	2020	2.174
V M Jaganathan and S.Varunkumar	A novel self-sustained single step process for synthesizing activated char from ligno-cellulosic biomass	Fuel Processing Technology	208	106516	2020	8.129
Ambatipudi Mani Kalyani, V M Jaganathan & Varunkumar S	Mechanisms governing the gasification to char oxidation transition in counter-current flame propagation in packed beds: insights from single-particle experiments	Particulate Science and Technology	39	490 To 494	2019	2.356
V M Jaganathan, Omex Mohan, S.Varunkumar	Intrinsic hydrogen yield from gasification of biomass with oxy-steam mixtures	International Journal of Hydrogen Energy 44	44	17781 To 17791	2019	7.139
V M Jaganathan and S Varunkumar	Net carbon-di-oxide conversion and other novel features of packed bed biomass gasification with O ₂ /CO ₂ mixtures	Fuel	244	545 To 558	2019	8.035
VMJaganathan, KalyaniAM & Varunkumar.S	Unified ignition-devolatilization model for fixed bed biomass gasification/combustion	Energy Procedia	120	643 To 648	2017	2.63

(B) Conferences/Workshops/Symposia Proceedings

Author(s)	Title of Abstract/ Paper	Title of the Proceedings	Page number	Conference Theme	Venue	Year
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V.M Jaganathan, S Varunkumar, R. Varun Kumar, Juan Cuevas and Cristian Maluk	The phenomenon of Extinction of Timber – Experiments and theory	Easy Chair Preprint	7782	AOSFST 2021 – 12th Asia-Oceania Symposium on Fire Science and Technology	Australia	2021
VMJaganathan,K alyaniAM & Varunkumar.S	Unifiedignition-devolatalizationmodelfor fixed bedbiomass gasification/combustion	Energy Procedia	643 To 648	INFUB - 11th European Conference on Industrial Furnaces and Boilers, INFUB-11	Portugal	2017

(C) Books & Monographs

Author(s)	Title of Book/Monograph	Name of Publishers	Year of Publication	ISSN/ISBN Number
Dr. Jaganathan VM and Dr. Varunkumar S	Recent Advances in Packed-bed Gasification of Lignocellulosic Biomass	Springer	2022	ISSN 2522-8374 ISBN 978-981-16-8681-8

22. Any other (Extracurricular Activities/ Social activities)

Date (s)	Title of Activity	Level of Event (International/ National/ Local)	Role	Event Organized by	Venue
2019	Tamil short story	National	Won best Tamil short story winner	Karka Kasadara Tamil confluence	Indian Institute of Technology Madras
2020	E Content Development	National	Participated	Government Of India Ministry Of Human Resource Development (MHRD)	Chennai
2021	Singing	Local	Second prize winner	National Institute of Technology Tiruchirappalli (Women day)	NIT Tiruchirappalli

23. Date of profile update: **07.07.2022**