
CONTACT	arvindgupta@iisc.ac.in , arvgup29@gmail.com (Ph. +91 8500384480)	
INTERESTS	Renewable energy systems, energy efficiency, sustainable technologies, hydrogen energy, solid fuel combustion, thermochemical conversion of biomass, solar thermal systems, modeling and simulation of physical systems, energy trading and risk management (ETRM)	
EDUCATION	Indian institute of Science, Bangalore, India	
	Ph.D., Engineering , CGPA: 6.4/8	
	<ul style="list-style-type: none">• Thesis Topic: <i>Green hydrogen production by thermochemical conversion of biomass</i>• Advisor: Dr. S. Dasappa	
	Indian Institute of Technology, Roorkee, India	June 2014
	M.Tech., Alternate Hydro Energy Systems , CGPA: 8.515/10	
	<ul style="list-style-type: none">• Thesis Topic: <i>Design and simulation of solar thermal cooling and heating system</i> [PDF]• Advisor: Dr. R. P. Saini	
	Dr. MGR Educational & Research Institute, Chennai, India	June 2011
	B.Tech., Mechanical Engineering, CGPA: 9.22/10 (second rank in university)	
	<ul style="list-style-type: none">• Thesis Topic: <i>Performance and optimization analysis of external longitudinal fin through Finite Element</i>	
	Jawahar Navodaya Vidyalaya Amarkantak, Dist. Anuppur, M.P.	June 2006
	XII (CBSE), 87.6%, X (CBSE), 86.2%	
INDUSTRY EXPERIENCE	Associate Consultant, Infosys, Bangalore	March 2022 - Present
	<ul style="list-style-type: none">• Responsibilities include reporting on power portfolios of the client for each business day to help them make decisions on trading and hedging. The process requires understanding of ETRM and databases. Responsibility also includes as a Business Analyst to interact with the clients and understand the business requirements convert them to technical requirements for the delivery of IT products and services.	
	Intern	June 2010
	Amarkantak Thermal Power Station (MPPGCL) Chachai, Anuppur (M.P.)	
ACADEMIC EXPERIENCE	Lecturer	July 2014 to July 2015
	Department of Mechanical Engineering, Rajiv Gandhi University of Knowledge Technologies , Basar (Govt. of Telangana), India <i>Subjects taught:</i> Thermodynamics, Applied Thermodynamics, Solar Energy Technologies	
RESEARCH EXPERIENCE	Graduate Researcher - Ph.D.	July 2015 - Present
	<ul style="list-style-type: none">• Conducted extensive experiments on downdraft gasifier with different types of biomass to study the influence of steam to biomass ratio, injection temperature on composition of the output gases.• Conducted separate experiments to study the influence of hot char in homogeneous and heterogeneous reactions in the reduction zone of a gasification system. This study helps optimize the gasifier operation in order to maximize hydrogen efficiently in product gas without using an additional reformer.• Research included analyzing data acquired during the experiments which included temperature, composition and flow rates.	

	Graduate Researcher - M.Tech.	2012 - 2014
	<ul style="list-style-type: none"> • Designed a solar thermal cooling and heating system for Students' Computer Lab at AHEC, IIT Roorkee. • This involved generating solar irradiation data at the location along with cooling and heating load calculations. • Vapor absorption cooling system with LiBr - water as the working fluid was considered for the design and required flat plate collector area was calculated. 	
RESEARCH TRAINING	2020 NCKU International Summer School Entrepreneurship for Global Challenge (Online)	August 2020
	7th Annual International Sotacarbo Summer School at Sotacarbo Research Centre, Carbonia, Italy	June 2019
	2nd National Workshop on Hydrogen Energy and Fuel cells at National Institute of Solar Energy, Gurugram, Haryana	November 2017
	ICIWS - India Attended <i>International Combustion Institute Winter School</i> at IIT Madras organized by NCCRD.	December 2015
	Courses taken Transport phenomena, Numerical methods, Energy systems and sustainability, Applied combustion	2015 - 2016
EXTRA COURSES (ONLINE)	Fundamentals of Quantitative Modeling (Certificate) Programming for Everybody (Getting Started with Python) (Certificate) Financial Markets (Certificate) Fundamentals of Global Energy Business (Certificate) Mastering Digital Twins (Certificate)	
SKILLS	Computer languages C, C++, Python, SQL Softwares Microsoft Office, Matlab, LaTeX, Ansys Instruments Gas chromatography (Perkin Elmer - Clarus 680), Gas analyser (Sick S715), BET surface area analyzer	
EXTRA CURRICULAR	Art and Literature Club, IISc Bangalore Convened the club for a year and organized monthly poetry and storytelling sessions for the institute community.	2018 - 2019
	Cognizance'13 - Spectrum Organized the quiz program for the department which also involved preparation of questions and hosting the event, in the national level technical festival of IIT Roorkee.	2013
	Yantram'09 Won first prize in robotic competition at technical festival of Dr. MGR University, Chennai.	2009
PATENTS	Srinivasaiah Dasappa, Anand Malhar Shivapuji, Arashdeep Singh, Gautham Srinivas Ganesh, Shirish Kumar Sharma, Arvind Gupta . (2022). A system for processing biomass and a method thereof. WO2022153232A1. (Published). (link) Srinivasaiah Dasappa, Anand Malhar Shivapuji, Arvind Gupta . (2022). Oxy-steam biomass gasification system for generating hydrogen rich syngas. (Published. IP India Application no. 202241037110).	

PUBLICATION

Arashdeep Singh*, **Arvind Gupta***, Rakesh N, Anand M Shivapuji, S Dasappa, 2021. "Syngas Generation for Methanol Synthesis: Oxy-steam Gasification Route Using Agro-residue as Fuel". Biomass Conversion and Biorefinery. ([link](#)) (*equal contribution).

Arvind Gupta, S. Dasappa. 2018. "Hydrogen from Biomass by Oxy-Steam Gasification - A Quantitative Analysis of Cases." Poster presented at 26th European Biomass Conference and Exhibition, Copenhagen, Denmark, 14-17 May 2018. 778 – 781, ISBN:978-88-89407-18-9, DOI: 10.5071/26thEUBCE2018-2CV.4.22. ([link.](#)).

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