

National Institute of Technology, Tiruchirappalli:

Performa for CV of Faculty/ Staff Members

Curriculum Vitae

My teaching and research interests are in the area of Process Metallurgy. For research, I apply various physical and mathematical modeling techniques and data analysis, particularly in the area of iron and steel making processes. During my graduate studies I developed various mechanistic models to characterize steelmaking process units using computational fluid dynamics and mass and population balances. During my professional experience, I developed CFD models for enhanced iron ore recovery and to assess dust and fume emission characteristics in EAF and BOF steel making shops. I also undertook analyses of large historical operational data to deduce optimal addition patterns during BOF operation and to deduce cooling characteristics of torpedo fleet in an integrated steel plant.



1. Name: Anand
2. Designation: Assistant Professor
3. Office Address: MME/NAB/103
4. Telephone (Direct) (Optional):
Telephone :
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Mobile (Optional): 7685933853
5. Email (Primary): anands@nitt.edu Email (Secondary) :
6. Field(s) of Specialization: Modeling of reactive and transport processes in Extractive Metallurgy

7. Employment Profile

Job Title	Employer	From	To
Consultant	M.N. Dastur & Co. Pvt. Ltd	May 2017	Oct 2022

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

Examination	Board / University	Year	Division/ Grade	Subjects
PhD	McMaster Univ. Hamilton, Canada	2016	3.5/4	Materials Science & Engg.
M.Tech	IIT Kanpur, India	2008	9.3/10	Metallurgical & Materials Engg.
B.E	GCE Salem, India	2006	80%	Metallurgical Engg.

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Higher Secondary	Govt. Boys School, Ch-44, India	2002	90%	Maths, Physics, Chemistry
Matric	Holy Angels Matric, Ch-44, India	2000	85%	

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

11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization
2014	Jerry Silver Award for best paper in AIST 2013	Association of Iron and Steel Technology, USA
2013	Dante Cosma Memorial Scholarship	School of Grad Studies, McMaster Univ. Canada
2010	Stelco McMaster Scholarship	School of Grad Studies, McMaster Univ. Canada

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
- (ii) Courses taught at Postgraduate and Undergraduate levels
- (iii) Projects guided at Postgraduate level
- (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

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

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
2010	Conf	Intl	Participant	AISTech, USA	Pennsylvania
2017	Conf	Intl	Speaker	Science & Tech of Iron and Steel making	IIT Kanpur
2019	Conf	Intl	Speaker	ESTAD, Germany	Dusseldorf

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

18. Invited Talks delivered

Topic	Date	Inviting Organization
Simulations of Slag Entrainment in Ladle Metallurgy	Dec 2017	STIS 2017, IIT Kanpur, India
Physical and Mathematical modeling in Ladle Metallurgy	March 2017	ICAMMM-17, GCE Salem, India
Introduction to Modeling Ferrous Process Metallurgy	April 2022	MME, NIT Tiruchirappalli

19. Membership of Learned Societies

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

20. Academic Foreign Visits

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Country	Duration of Visit	Programme

21. Publications

(A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year
Anand Senguttuvan, Saikat Chatterjee	Improvement of Energy Efficiency of Emissions Capture in Steel Melt Shops through a Robust Simulation Framework.	Iron & Steel Review	64	1-4	2020
Arnab Adak, Achintya Das, Saikat Chatterjee, Anand Senguttuvan, Atanu Mukherjee	Optimization of Dephosphorization Practice in BOF Shops Using Advanced Analytics	AIST Transactions, Iron & Steel Technology	April	74-80	2019
Anand Senguttuvan, Gordon A Irons	Modeling of Slag Entrainment and Interfacial Mass Transfer in Gas Stirred Ladles	ISIJ	57	1962-1970	2017
Gordon A Irons, Anand Senguttuvan, Kumar Krishnapisharody,	Recent Advances in the Fluid Dynamics of Ladle Metallurgy	ISIJ	55	1-6	2015
Anand S, K. Rajasekar, D. Sathish, Joy Dutta, Dipak Mazumdar	Metallurgical Performance of Different Slab Casting Tundish Designs: Modeling and Industrial-Scale Trials	AIST Transactions, Iron & Steel Technology	12	1-10	2015
Anand Senguttuvan, Gordon A Irons	Model Studies on Slag Metal Entrainment in Gas Stirred Ladles	AIST Transactions, Iron & Steel Technology	11	230-241	2014

(B) Conferences/Workshops/Symposia Proceedings

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

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Anand Senguttuvan, Saikat Chatterjee	CFD analysis of Capture Efficiency of Secondary Off-gas in an EAF shop	4 th ESTAD, 2019	-	Steel Technology	Dusseldorf, Germany	2019
Anand Senguttuvan, Ganesh Chalavadi, Saikat Chatterjee, Achintya Das	CFD Simulation of Dry Density Separation of Iron Ore Fines	AISTech Conference	701-711	Iron and Steel Technology	Pittsburgh, USA	2019
Anand Senguttuvan, Gordon A Irons	Simulations of Slag Metal Entrainment in Ladle Metallurgy	AISTech Conference	1453-1464	Iron and Steel Technology	Indianapolis, USA	2014
Anand Senguttuvan, Gordon A Irons	Model Studies on Slag Metal Entrainment in Gas Stirred Ladles	AISTech Conference	1231-1241	Iron and Steel Technology	Pittsburgh, USA	2013

(C) Books & Monographs

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