Curriculum Vitae

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

Dr. J Sarat Chandra Babu has received his Ph.D. in 2001, from Indian Institute of Technology, Delhi. He joined Regional Engineering College (NIT) Trichy as a Lecturer in 1991. He acted as the Head of the Department from 2012 to 2015 and as a Chief Warden from 2017-2019. His research interest lies in handling particulate material and its characterization, synthesis of Nano-CNT based composite materials for industrial applications. He received various research grants from different funding agencies such as Indian Space Research Organization (ISRO), Defense Research and Organization (DRDO), Department of Science and Technology (DST), Department of Biotechnology (DBT), MHRD-SPARC, Bharat Heavy Electricals Limited (BHEL) and Bhabha Atomic Research Centre (BARC).

He established the Pilot Plant Test Facility for dense phase pneumatic conveying for studies on flow regimes during horizontal dense phase conveying in 2002 as part of MHRD R&D project. The test rig is useful in design and analysis of pneumatic conveying of food grains. He established test facility for characterization of powder materials for design of silos and cyclone separators. The facilities resulted in industrial consultancy from BHEL in design of cyclone separators for circulating fluidized bed gasifiers and combustors. Also, established a Pilot Plant Test Facility with Downer Flow Reactor for Exothermic Gas-Solid Reactions with the State-of the-art facilities as part of BARC Project. Established an innovative fluidized bed process for synthesis of carbon nanotubes, which has been used in studies on preparation of solar cells.

1. Name: Dr. J. Sarat Chandra Babu
2. Designation: Professor (HAG)
3. Office Address: Department of Chemical Engineering, NIT-Trichy-620015.
4. Telephone (Direct) (Optional):

   Telephone: 431 - 2503107 Extn (Optional):

   Mobile (Optional):
5. Email (Primary): sarat@nitt.edu Email (Secondary):
6. Field(s) of Specialization: Particulate Material Handling and characterization, Fluid Particle Dynamics, Nano-CNT based composite materials, Process Modeling and Simulation, CFD, and Multiphase flows
7. Employment Profile

Job Title	Employer	From	To
Lecturer	NIT-Trichy	1991	1996
Senior Lecturer	NIT-Trichy	1996	2001
Assistant Professor	NIT-Trichy	2001	2006
Associate Professor	NIT-Trichy	2006	2009
Professor	NIT-Trichy	2009	2019
Professor - HAG	NIT-Trichy	2019	Till date

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

Examination	Board / University	Year	Division/ Grade	Subjects
Ph.D.	IIT Delhi	2001		Particle Technology
M. Tech	IIT Delhi	1986-1988		Chemical Engineering
B. Tech	College of Engineering, Andhra University, Waltair	1982-1986		Chemical Engineering

9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/Institution	From	To
Warden	NIT-Trichy	2000	2002
NSS Coordinator	NIT-Trichy	2002	2007
Associate Dean Students	NIT-Trichy	2007	2009
Hostel Convener	NIT-Trichy	2007	2009
Head of the Department	NIT-Trichy, Department of Chemical Engineering	Nov 2012	Nov 2015
NSS Program Coordinator	NIT-Trichy	2004	2007

10. Academic/Administrative Responsibilities outside the University

Position	Institution	From	To

11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization
2019	Best Faculty Award	NIT-Tiruchirappalli

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

Developed specialized courses at NIT Trichy

a) Multi-disciplinary, graduate course "Ecology for Engineers" that is focused on the science of various advanced technologies and strategies to address climate change,
b) A lecture and laboratory curriculum course "Nanotechnology" for final year UG students.

(ii) Courses taught at Postgraduate and Undergraduate levels

S. No	**Subject Name**	**Course Credits**	**UG/PG**
1	Ecology for Engineers (CL625)	03	PG
2	Advances in Fluidization Engineering (CL 601)	03	PG
3	Computational Techniques in Chemical Engineering (MPD 201)	03	PG
4	Pinch Technology (CL 608)	03	PG
5	Nanotechnology (CLPE15)	03	UG
6	Particulate Science and Technology (CL208)	03	UG
7	Chemical Process Design and Drawing (BCL 702)	03	UG
8	Transport Phenomena (CL 404)	03	UG

9	Particulate Science and Technology Lab (CL 313)	02	UG
10	Fluid Mechanics Lab (BCL408)	02	UG

(iii)Projects guided at Postgraduate level

S. No	Title of the Dissertation	Year
M.Tech (Process Control and Instrumentation)		
1	Design of process control scheme for monitoring surface temperatures of a tubular reactor: PLC programming using SCADA	May 2017
2	Design of Process Control Scheme for Monitoring Surface Temperature of a Tubular Reactor: System Identification Using CFD simulation.	Dec 2016
3	Static and dynamic control of crude oil distillation process	May 2016
4	Controller design to monitor outlet temperature of exhaust gas cooled in a shell & tube heat exchanger	May 2016
5	Control of porosity in fluidized Bed Solid Feeder	Dec 2015
6	Controller design to monitor outlet temperature of exhaust gas cooled in a shell & tube heat exchanger	Dec 2015
7	Design of a Downer Reactor System for Studying Gas- Solid Reactions	May 2015
8	Modelling Rejection Behaviour of Nickel Ions from Synthetic Waste water Containing Slats by Nano filtration by a Membrane	May 2015
9	Dynamics of gas solids system in downer reactor	Dec 2014
10	A case study on continuous up flow stacked thin film bed for adsorption of endosulfan kinetic prediction and break through curves for devising a sensor	Dec 2014
11	Controller performance monitoring: performance classification with low frequency data	May 2014
12	Optimal trajectory profile generation using multi-model framework	May 2014
13	Synthesis of aluminum doped Nano silica film	May 2014
14	Design of controller for cascade of bioreactors	May 2014
15	Auto tuning of cascade controllers	May 2014
16	Auto tuning of PID Controllers	Dec 2013
17	Design of a normalised PI/PID Controller in a Networked Control Systems with varying Time Delays	Dec 2013
18	Synthesis of Nano Silica Film	Dec 2013
19	Design of Controller for Cascade of Bioreactors	Dec 2013
20	Improved Control of Unstable Processes with Time Delays	Dec 2013
21	Power Management of PV battery system	May 2013
22	Analysis of physiological condition using flat surface tomography	May 2013
23	Study of Photovoltaic System for Stand Alone Power Demand	Dec 2012
24	Development of Hardware for Flat surface Electrical Tomography	Dec 2012
25	Lattice Boltzmann method – study on electro kinetic flow characteristics of non-Newtonian fluids	May 2012

26	Embedded system design: 3D electrical capacitance tomography applications	May 2012
27	Modelling and simulation of fixed bed catalytic micro reactor in Fischer tropsch synthesis using COMSOL	May 2012
28	Electrical capacitance tomography for 4-dimensional analysis	Dec 2011
29	Modelling and simulation of fixed bed micro reactor in Fischer Tropsch Synthesis using COMSOL	Dec 2011
30	Multiphase fluid flow through microchannel	Dec 2011
31	Optimisation of product size in milling process	May 2011
32	Automation of Blaine's Apparatus	May 2011
33	Optimization of product size in milling process	Dec 2010
34	Automation of Blaine's Apparatus	Dec 2010
35	Development of an integrated instrument for powder characterisation and implementation of LabVIEW environment	May 2010
36	Evaluation and analysis of rheological parameters of suspension using image processing of flow profile of gas phase flow through suspension	Dec 2009
37	Synthesis of ceramic fibers by using electrospinning	May 2009
38	Modelling and simulation of a moving bed reactor	May 2009
M.Tech (Chemical)		
39	Strategic sequence of reactor process for minimization of CO_2 emissions and maximization of H2 production	May 2021
40	Modelling of particle Breakage in an Impactor mill	May 2021
41	Dynamics of fluid flow and catalytic reaction in micro channel reactor	May 2019
42	Optimization of Biomass to Biomethane system	May 2019
43	Design of Silo for cohesive powder	May 2018
44	Development and characterisation of graphene-based epoxy adhesive for structural application	May 2018
45	Design study of fluidized bed solid (pet-coke) preheater	Dec 2015
46	Experimental Studies on Hydrodynamics of Downer reactor	May 2015
47	Modelling and simulation of crystallization process in micro channels	May 2014
48	Experimental studies on drug coefficient for irregular shaped particles	May 2014
49	Modelling and Simulation of Crystallization Processes	Dec 2013
50	Experimental Studies on Drag Coefficient for Irregular Shaped Particles	Dec 2013
51	Super capacitor using multi-walled carbon nanotubes	May 2013
52	Studies on microalgae growth: Influence of carbohydrate bicarbonate and ammonium ions	May 2013
53	Studies on Microalgae Growth at Various Condition	Dec 2012
54	Rheological Characterization of Carbon Nanotube Based Nano fluids	Dec 2012
55	Functionalised Multiwall Carbon Nanotubes-Study and Electrochemical Oxidation of Textile Effluent	May 2012
56	Studies on Algae for Biological Hydrogen Production and Network Modelling Using System Biology	May 2012
57	Synthesis of Carbon Nanotubes	Dec 2011
58	Studies on Algae for Biological Hydrogen Production	Dec 2011

59	Synthesis of Nano Tubes by Using Fluidized Bed	May 2011
60	Synthesis of Ceramic Nanofibers by Using Electrospinning	May 2010

(iv) Other contributions

Commercialization Activities: Active consultancy in providing complete design and testing information using test rigs developed for Pneumatic Conveying and Cyclone Separator Designs

14. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
Boosting the H2-Economy by Harnessing the beauty of Encapsulation Chemistry: Augmented Kinetics for water splitting reaction under confinement – Co-PI contributing to establish	DST - Research	3 years		Completed
Encapsulation Driven Reduction of Carbon Dioxide to establishing collaboration with Mission Insstitute aborad with Mahendra K Sunkara, Director, Conn Center for Renewable Energy, Univ. of Louisville, Kentucky, USA and design of demo reactor	DST-Research	3 years		Completed
Experimental and Numerical Investigation of Gas solid reactions in a	BARC	2013	2018	Completed

Tubular reactor and established a pilot scale setup with state of the art instrumentation with contribution of equipment worth Rs. 1.23 Cr. The facility can work with reaction systems as high as 800 deg C.				
Synthesis of cellulosic nanofibers from aquatic weeds- A Joint Project between Annamalai University and NIT Trichy as Co-PI	DBT-Research	2007	2010	Completed
Project on Improvement of teaching and networking facility	DST-FIST-Level-I	2003	2008	Completed
Photo Induced Electron Transfer and Facile Charge Separation for Energy Applications – As Co-PI	MHRD-SPARC	2 years		Completed
Gainful Reclamation of E-Waste suing a catalytic reactor – A demo unit for processing 10 kg/day of E-waste	BHEL-Trichy, Tamilnadu. Consultancy	9 months		Completed
Development of design methodology for sizing multi-cyclone separator	BHEL, Ranipet, Tamil Nadu. Consultancy	6 months		Completed

Monitoring of seabed, sea water quality, ambient air quality, noise pollution and potable water quality in V.O. Chidambaram Port area.Tuticorin	VOC PORT, Tuticorin, Tamil Nadu. Consultancy	2011	2013	Completed
Development of models to evaluate the performance and determination of circulating loads for CFB Gasifier in BHEL	BHEL, Trichy, Tamilnadu. Consultancy	1 year		Completed
Fracture of Ammonium Percholarate Crystal Particles under compression, shear and impact	ISRO	2021	-	Ongoing
Design & Development of 'In-situ Indigenous Soil Analysis System'	DST through CDAC (T)	2019	2022	Ongoing

15. Number of PhDs guided

Name of the PhD Scholar	Title of PhD Thesis	Role (Supervisor/ Co-Supervisor)	Year of Award
Mr. N. Sivakumaran	Identification and control of Nonlinear process suing Recurrent Neural Networks	Co- Supervisor	2007
Mr. S . Sathiyamoorthy	Multiphase flow identification studies using electrical capacitance tomography	Supervisor	2008
Ms. K.N.Sheeba	Experimental studies on a circulating	Supervisor	2009

	fluidized bed biomass gasifier		
Ms. Kavita	Experimental studies on OPV Cell: Influence of multi-wall carbon nanotubes on conversion efficiency	Supervisor	2015
Ms. S. Sivasankari	Empirical approach to energy prediction studies and solar irradiance for photovoltaic systems	Supervisor	2016
Ms. Bhuvaneswari G	Process intensification through numerical experimentation: A Case study on Ultrafine Cohesive shrinking particle reaction characteristics of a Heterogeneous Gas-solid system in a Downer Reactor	Supervisor	2020

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
Dec 2nd – Dec 6th 2002	Workshop cum symposium on complex fluids	National	Participant	Department of chemical engineering, IISC, Bangalore	IISC, Bangalore
Feb 15th – 19th	Workshop on systems management	National	Participant	ERC, New Delhi	ERC, New Delhi

	capacity development				
11th – 16th December	Workshop on MEMS and Smart structures	National	Participant	ISSS	IISc, Bangalore
24th Feb – 8th Mar 2019	Leadership for Academic Program	National	Participant	IIT Bombay	IIT Bombay
-	Educational Excellence in Colleges and Universities	National	Participant	IIM Calcutta	IIM Calcutta
-	Academic Leadership programme for TEQIP Institutions	National	Participant	IIM Kozhikode, Kerala	IIM Kozhikode, Kerala

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
Powder Technology	National	-	Resource Person	SHAR, Sriharikota, Andhra Pradesh
Advance Materials for Renewable Energy Challenges- MHRD – GIAN Program	National	-	Organizer	NIT-Trichy
Innovative and Sustainable Chemical and Process Analysis, design and synthesis	International	-	Organizer	NIT-Trichy
Powder technology	National	-	Resource person	BHEL - Trichy and BHEL - Hyderabad
Faculty Training Program New Teaching – Learning Aid and Course	National	03rd to 05th October,	Coordinator	NIT-Trichy

Module Development using Aspen Plus		2019		

18. Invited Talks delivered

Topic	Date	Inviting Organization
Production methods for Nano-Aluminum for Rocket solid fuel, HEMSI, Chennai Chapter	2nd June 2006	SHAR, Sriharikota
New Materials for Photochemical Reactions to convert Carbon Dioxide to Energy Rich Material	Visakhapatnam, Andhra Pradesh from 24th February, 2020 to 27th February, 2020	ReOpen 2020 Research Opportunities in Petroleum, Energy and Natural Gas 2020
Could CO2 be a Green Feed Stock? Recent Developments	16th to 18th September 2021	RICBE-2021 RGUKT-Nuzvid

19. Membership of Learned Societies

Type of Membership (Ordinary Member/ Honorary Member / Life Member)	Organization	Membership No. with date
Life	ISTE	LM310
Fellow	IE	-
Individual	IWA (International Water Association)	-

20. Academic Foreign Visits

Country	Duration of Visit	Programme
USA	May 6th 2006 – July 30th 2006	Visitor/Training-TEQIP
Germany	Oct 27th 1997 – Apr 15th 1998	Research
Singapore	March 18th 2019 – Mar 22 2019	LEAP Participant

21. Publications

(A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year	Impact Factor of the Journal (Optional)
Ullas Krishnan, Sarat Chandra Babu Jakka	TiO_2 nanorod supported Multi-metallic Heterogeneous Catalyst for Conversion of CO2 to Methanol under moderate operating conditions	Inorganic Chemistry Communications	139	1-10	2022	
Ullas Krishnan, Sarat Chandra Babu Jakka	Carbon dioxide: No longer a global menace: A future source for chemicals	Materials today Proceedings	58(3)	812-822	2022	
Sourav Poddar, J. N. Ullas Krishnan & J. Sarat Chandra Babu	Non-catalytic and catalytic pyrolysis of citrus waste (orange peel)	Indian Chemical Engineer			2022	
Poddar, S., Sarat Chandra Babu, J.	Non-catalytic and Catalytic Co-pyrolysis of Lignocellulosic-Lignocellulosic Waste.	Advances in Chemical, Bio and Environmental Engineering		1003-1035	2022	
Bhuvaneswari Govindan, A. K Tiwari, Ullas Krishnan J.N, Jakka Sarat Chandra Babu, Radhakrishnan T.K, Sashi Kumar G.N, Manoj Kumar S,	Numerical Experimentation and Validation of Shrinking Particle - Gas Reaction in a Pilot Plant Downer Reactor	Combustion Science and Technology			2021	

Rao S.V.G, Tulsyan P & Kalburgi A.K						
Bhuvaneswari Govindan and Parthiban Mohanmani and Sarat Chandra Babu Jakka and A. K. Tiwari and A. K. Kalburgi and T. M. Sudhakar and A. Sanyal and S. Sarkar	Shape descriptors - settling characteristics of irregular shaped particles	Chemical Engineering Communications	208(3)	295-303	2021	
Sourav Poddar, J. Sarat Chandra Babu	Modelling and optimization of a pyrolysis plant using swine and goat manure as feedstock	Renewable Energy	175	253-269	2021	
Bhuvaneswari Govindan, J. Sarat Chandra Babu, T. K. Radhakrishnan, Anil K. Tiwari, A.K. Kalburgi, G.N. Sashi Kumar & S. Manoj Kumar	Optimization of interaction parameters for CFD modelling of multiphase flow using NR method.	International journal of computational fluid-dynamics	34	249-266	2020	
Bhuvaneswari Govindan, Parthiban Mohanmani, Sarat Chandra Babu Jakka, A. K. Tiwari, A. K. Kalburgi, T. M. Sudhakar, A. Sanyal & S. Sarkar	Shape descriptors settling characteristics of irregular shaped particles	Chemical engineering communications	208	295-303	2020	
Bhuvaneswari Govindan, Sarat Chandra Babu Jakka, T. K.	Investigation on kinetic parameters of combustion and	Energy and fuels	32	3995-4007	2018	

Radhakrishnan, Anil K. Tiwari, T. M. Sudhakar, P. Shanmugavelu, A. K. Kalburgi, A. Sanyal, and S. Sarkar	oxy-combustion of calcined pet coke employing thermo gravimetric analysis coupled to artificial neural network modelling					
Kavita Soma, T. K. Radhakrishnan & J. Sarat Chandra Babu	Carbon nano tubes; Their role in engineering applications and challenges ahead	Inorganic metalorganic and Nano metal chemistry	47	188-196	2017	
Sivasankari Sundaram, K. N. Sheeba, Jakka Sarat Chandra Babu	Grid connected photovoltaic systems: Challenges and control solution-a potential review	International journal of Electronics and electrical engineering	4	463-473	2016	
Sivasankari sundaram, Jakka Sarat Chandra Babu	Theoretical prediction and validation of global horizontal solar irradiance for a tropical climate in India	Frontiers in Energy	9(3)	311-321	2015	
Sivasankari Sundaram, Jakka Sarat Chandra Babu	Performance evaluation and validation of 5 MWp grid connected solar photovoltaic plant in South India	Energy conversion and management	100	429-439	2015	
S Kavita, B Mohan and J Sarat Chandra Babu	Performance evaluation of photovoltaic cells using functionalized carbon nanotubes and poly aniline film	Advances in natural sciences; Nano science and nano technology	6	1-5	2015	
Sivasankari	Exergy analysis	International	18	2	2015	

Sundaram and Jakka Sarat Chandra Babu	of a 100 KWp multicrystalline solar photovoltaic array system in tropical savanna climate in India	journal of Exergy				
L. D. Naidu, S. Saravanan, M. Chidambaram, Mukesh Goel, Ashutosh Das, and J. Sarat Chandra Babu	Nano filtration in transforming surface into healthy water: comparison with reverse osmosis	Journal of Chemistry	2015	1-6	2015	
Kavita, B. Mohan, A. Ramya and J. Sarat Chandra Babu	Influence of carbon source on synthesis of CNT using chemical vapor deposition	International of pharmaceutical, chemical and biological sciences	4(1)	188-193	2014	
K.N.Sheeba, J. Sarat Chandra Babu, S.Jaisankar	Steam gasification characteristics of coir pith in a circulating fluidized bed gasifier	Energy sources Part A: recovery, utilization and environmental effects	35	110-121	2013	
K.N.Sheeba, J. Sarat Chandra Babu, S.Jaisankar	The reaction kinetics for coir pith pyrolysis in thermo gravimetric analyser	Energy sources Part A: recovery, utilization and environmental effects	32	1837-1850	2010	
K.N.Sheeba, J. Sarat Chandra Babu, S. Jaisankar	Air gasification characteristics of coir pith in a circulating fluidized bed gasifier	Energy for sustainable development	13	166-173	2009	

S. Sathiyamoorthy, J. Sarat Chandra Babu	Design of high-speed pulse input-based capacitance measurements for electrical capacitance tomography	Sensor and transducer	75	896-903	2007	
N. Sivakumaran, T. K. Radhakrishnan & J. Sarat Chandra Babu	Identification and control of bio reactor using recurrent networks	Instrumentation science and technology	34	635-651	2006	
R. Rani Hemamalini, P. Partheeban, J. Sarat Chandra Babu, S. Sundaram	The effect on pressure drop across horizontal pipe and control valve for air/palm oil two phase flow	International journal of heat and mass transfer	48	2911-2921	2005	
Rajagopalam viknesh, Natarajan Sivakumaran, Jakka Sarat Chandra, and Thota K. Radhakrsignan	A critical study of de centralized controllers for a multivariable system	Chemical engineering and technology: Industrial chemistry- plant equipment – process engineering – bio technology	8	27	2004	
N Prabhu, J Sarat Chandra Babu, S Sundaram	L-glutamic acid production in a continuous stirred tank bio reactor using co-immobilised bio catalyst using fluorosensor	Bio medical sciences, Instrumentation	27(8)	495-500	2002	
Baskar R, Anantharaman N, J. Sarat Chandra Babu, S. Sundaram	L-glutamic acid production in a novel three phase fluidized bed reactor using co-immobilised bio catalyst	Bio medical sciences, Instrumentation	37	457-462	2001	

P. Ramanan, P. Srinivasa Rao, Sarath Chandra Babu and B. Pitchmani	The effect of size distribution and fines on the flow properties of raw mix in a cement plant	Bulk solids handling	17	253-256	1997	

(B) Conferences/Workshops/Symposia Proceedings

Author(s)	Title of Abstract/ Paper	Title of the Proceedings	Conference Theme	Venue	Year
Sarat Chandra Babu Jakka	New materials for photo chemical reactions to convert carbon dioxide to energy rich materials	Research opportunities in petroleum, energy and natural gas (ReOPEN 2020)	Research opportunities in petroleum, energy and natural gas (ReOPEN 2020)	Indian institute of Petroleum Engineering, Vizag, Andhra Pradesh	2020
Bhuvaneswari G, Jakka Sarat Chandra Babu, T.K. Radhakrishnan	CFD simulation of heterogeneous gas solid multiphase flow in a co-current downer	International conference on energy and environment: Global challenges (ICEE 2018)	International conference on energy and environment: Global challenges (ICEE 2018)	National Institute of Technology, Calicut, Kozhikode, Kerala	2018
Sarat Chandra Babu Jakka	Powder science technology	5th International Symposium on Reliable Flow of Particulate Solids (RELPOWFLOV)	Reliable flow of particulate solids V (RELPOWFLOV) Skien, Norway	Power science technology, Norway	2018

Bhuvaneswari G, Jakka Sarat Chandra Babu, T.K. Radhakrishnan	Numerical study of gas solid hydro dynamics in downer	Global Conference and Exhibition 2017 – "Innovative Solutions in Flow Measurement and Control, Oil, Water and Gas", Fluid Control Research Institute, Palakkad-Kerala, India	Innovative solutions in flow measurements and control – oil, water, gas	Fluid control research institute, Palakkad, Kerala	2017
Kavia, Sarat Chandra Babu Jakka	Nano porous anodic alumina engineered support with carbon nanotubes for treatment of ground water contaminated with pesticide	TEQIP –II Sponsored international conference on nano technology: Chemical energy and environment	TEQIP – II Sponsored international conference on nano technology: Chemical energy and environment	SVNIT, Surat, Gujarat	2017
Kavia, Sarat Chandra Babu Jakka	Application of response surface methodology based central composite design for validation and optimization of solar photovoltaic characteristics through MATLAB	2013 International conference on Green computing, communication and conservation of energy (ICGCE2013)	2013 International conference on Green computing, communication and conservation of energy (ICGCE 2013)	IIT Madras, Chennai	2013
Sivasankari, S. and J.S.C.	Modelling and performance	5^{Th} international conference on	5^{Th} internati	IIT Roorkee	2013

Babu	analysis of MPPT algorithms and a simple MPPT algorithm for solar photovoltaic systems	Computer applications in electrical engineering	onal conferen ce on Comput er applicati ons in electrica l engineer ing		
M. Arivazhagan, Sarat Chandra Babu Jakka	Simulation of novel microreactor with porous catalytic surface for simultaneous separation	2010 Spring Meeting & 6th Global Congress on Process Safety	2010 AIChE Spring meeting and Global congress on process safety. San Antonio, Texas	AIChE	2010
K.N.Sheeba, J. Sarat Chandra Babu, S. Jaisankar	Influence of Equivalence Ratio on the Steam Gasification of Coir Pith in a Circulating Fluidised Bed Gasifier	International conference Advances in Energy Research	Internati onal conferen ce Advance s in Energy Researc h	IIT Bombay	Dec 2009
K.N.Sheeba, J.Sarat Chandra Babu, S.Jaisankar	Syngas characteristics of coir pith gasification in a circulating fluidized bed gasifier	International Congress of Environmental Research, BITS, Goa	Internati onal Congres s of Environ mental Researc h, BITS, Goa	BITS Goa	Dec 2008
K.N.Sheeba, J.Sarat Chandra Babu, S.Jaisankar	Development of a continuous powdery coir pith gasifier	International conference on Resource Utilization and Intelligent Systems	Internatio nal conferenc e on Resource	Kongu Engineering College, Erode	Jan 2008

		Kongu Engineering College, Erode	Utilization and Intelligent Systems Kongu Engineering College, Erode		
K.N.Sheeba, **J.Sarat Chandra Babu**, S.Jaisankar	Cold Flow Analysis of a Continuous Powdery Biomass Gasifier	Chemical Engineering Congress, CHEMCON	Chemical Engineering Congress, CHEMCON		Dec 2007
K.N.Sheeba, **J.Sarat Chandra Babu,** S.Jaisankar	Experimental Studies of a Biomass Circulating Fluidized Bed Gasifier	International conference on Advances in Energy Research, IIT, Bombay	International conference on Advances in Energy Research, IIT, Bombay	IIT Bombay	Dec 2007
K.N.Sheeba, **J. Sarat Chandra Babu,** S.Jaisankar and A.Sacithra	Analysis of biomass for thermal gasification	National Conference on Recent trends in Mechanical Engineering (RTME 2007), Department of Mechanical Engineering, Saranathan College of Engineering, Trichy	National Conference on Recent trends in Mechanical Engineering (RTME 2007), Department of Mechanical Engineering, Saranathan College of Engineering, Trichy	Saranathan College of Engineering, Trichy	February 2007
K.N.Sheeba, **J.Sarat Chandra Babu**,	Cleaner Fuel Technology-Biomass gasification	National Conference on Simulation, Modeling and	National Conference on Simulatio	Arunai Engineering college, Tiruvannamalai	Mar 2007

		Optimization, Department of Chemical Engineering, Arunai Engineering college, Tiruvannamalai	n, Modeling and Optimization, Department of Chemical Engineering, Arunai Engineering college, Tiruvannamalai		
K.N.Sheeba, **J.Sarat Chandra Babu**	Thermogravimetric analysis of biomass waste for Circulating fluidized bed gasification	National Conference on Simulation, Modeling and Optimization, Department of Chemical Engineering, Arunai Engineering college, Tiruvannamalai	National Conference on Simulation, Modeling and Optimization, Department of Chemical Engineering, Arunai Engineering college, Tiruvannamalai	Arunai Engineering college, Tiruvannamalai	Mar 2007
N.Sivakumaran, **J.Sarat chandra babu**,T.K.Radhakrishnan	Control of Bioreactors using Recurrent Networks	NCPICD05, MIT	NCPICD 05, MIT	MIT	Dec 2005
N.Sivakumaran, V.Kirubakaran, **J.Sarat chandra babu,**T.K.Radhakrishnan	Decentralized controller design for Multivariable process	ICECON05, NIT	ICECON 05, NIT	NIT	Dec 2005
N.Sivakumaran, B.H.	Model Based Predictive Control	International Conference on	Internatio nal		Dec 2004

Deepak Kumar**, J. Sarat chandra babu,** and T.K.Radhakrishnan	Using Recurrent Neural Network for Bioreactor Control	Trends in Industrial Measurements and Automation	Conference on Trends in Industrial Measurements and Automation		
N.Sivakumaran,**J. Sarat Chandra babu,** T.K.Radhakrishnan	Control of Multivariable Non Minimum Phase system using Recurrent Neural Networks	Proc. of CHEMCON	Proc. of CHEMCON		Dec 2004
T.K. Madhubala M.Boopathy, **J. Sarat Chandra Babu** T.K.Radhakrishnan	Development and Tuning of Fuzzy Controller for a Conical Level System	Proc. of the International Conference on Intelligent Sensing and Information Processing (ICISIP-2004) 450-455, IEEE Catalog 04EX783C	Proc. of the International Conference on Intelligent Sensing and Information Processing (ICISIP-2004) 450-455, IEEE Catalog 04EX783C		Jan 2004
N. Sudharani, **J. Sarat Chandra Babu** T.K.Radhakrishnan	Adaptive Control of Conical Tank using Neural Networks'	Proceedings of the Chemical Engineering Congress and CHEMCON 2003, Bhubaneshwar,	Proceedings of the Chemical Engineering Congress and CHEMCON 2003, Bhubaneshwar,	CHEMCON Bhubaneshwar	Dec 2003
K. Ramakrishna, **J. Sarat Chandra Babu,** S. Sundaram,	Level Control in an Industrial Gas Chiller	Proceedings of the Chemical Engineering Congress and CHEMCON 2003,	Proceedings of the Chemical Engineering	CHEMCON Bhubaneshwar	19-22 December 2003

T.K.Radhakrishnan		Bhubaneshwar,	Congress and CHEMCON 2003, Bhubaneshwar,		
Joe Ben Alphonse, **J. Sarat Chandra Babu** T.K.Radhakrishnan	Use of Process Simulator for Revamp Study of a Distillation Column: A Case Study'	Proceedings of the Chemical Engineering Congress and CHEMCON 2003, Bhubaneshwar,	Proceedings of the Chemical Engineering Congress and CHEMCON 2003, Bhubaneshwar,	CHEMCON Bhubaneshwar	19-22 December 2003.
Simhachalam, Dakshayani, T.K. Radhakrishnan, **J. Sarat Chandra Babu**	Application of Electrical Capacitance Tomoraphy (ECT) for Visualization of Gas Solid Distribution for Slug Flow Pneumatic Conveying in Horizontal Pipe	CHEMCON-2003, IIChE, page no.:139-140.	CHEMCON-2003, IIChE, page no.:139-140.	CHEMCON Bhubaneshwar	December 2003.
S. Ananth, P.Mohana Sundaram, T.K. Radhakrishnan, **J. Sarat Chandra Babu,**	Experimental Studies on Characteristics of Dense-Phase Pneumatic Conveying in Horizontal Pipe	CHEMCON-2003, IIChE, page no.:100	CHEMCON-2003, IIChE, page no.:100	CHEMCON Bhubaneshwar	December 2003.
J. Sarat Chandra Babu, T. K.Radhakrishnan, S. Ramakrishnan, S. Sundaram	Numerical Simulation And Experimental Studies of Transient Response of Porous Bed for Thermal Energy Storage'	CHEMCON-2003, IIChE, Page no.:51-52	CHEMCON-2003, IIChE, Page no.:51-52	CHEMCON Bhubaneshwar	
N. Viknesh, **J. Sarat Chandra Babu,** T.K. Radhakrishnan	Studies on Control of Multivariable Four-Tank System	Proceedings of the National Conference on Process Identification,	Proceedings of the National Conference on		August, 2003

		Control and Diagnostics (NCPICD-2003), pp125-133.	Process Identification, Control and Diagnostics (NCPICD-2003), pp125-133.		
Rajkumar, P. Vaidyanathan, **J. Sarat Chandra babu** and N. Anantharaman	Experimental Studies on Hydrodynamics of Three Phase fluidization	CHEMCON-2000 53rd Annual session of IIChE held at Science city, Calcutta.	CHEMCON-2000 53rd Annual session of IIChE held at Science city, Calcutta.	Calcutta	Dec 2000

(C) Books & Monographs

Author(s)	Title of Book/Monograph	Name of Publishers	Year of Publication	ISSN/ISBN Number
V.Kumaran, A.Vanav Kumar and J.Sarat Chandra Babu	Impulsive Boundary Layer Flow Past a Permeable Quadratically Stretching Sheet	Nonlinear Science and Complexity, Springer Science + Business Media	2011	978-90-481-9884-9
Sivasankari Sundaram and J.S.C. Babu	Empirical-Based Approach for Prediction of Global Irradiance and Energy for Solar Photovoltaic Systems	Advances in Solar Photovoltaic Power Plants, Green Energy and Technology, Springer-Verlag Berlin Heidelberg	2016	978-3-662-50521-2