

RESUME

1. Name	Rajeev Kumar Garg		
2. Designation	Professor		
3. Correspondence Address	Department of Chemical Engineering, Shaheed Bhagat Singh State University (Formerly SBSSTC Ferozepur), NH-05, Ferozepur, 152004		
4. Phone No./ email	+91-8288012013		
5. Date of Birth	07 May 1971		
6. Educational Qualification	PhD (Chemical Engg.) [2009]	Indian Institute of Technology Delhi, Hauz Khas, New Delhi	
	M.E. (Chemical Engineering) [1995]	Panjab University, Chandigarh	
	B.E. (Chemical Engineering) [1992]	Panjab University, Chandigarh	
7. Work Experience	Teaching Experience: 25 years Dean Academics Controller of Examinations Head of Department, Chemical Engineering Department	Administrative: 16 years 8/1/25 onwards 4/6/2015 – 8/1/25 18/7/2009- 04/06/2015, 13/8/2001- 23/01/2004	
	Dean Academics/ Officer-in-Charge Academic Affairs	Nov 2008-March 2011	
	Coordinator M Tech Chemical Engineering Member Board of Studies Chemical Engineering, IKGPTU Jalandhar	August 2007 – Aug 2009	
	Member Board of Studies Chemical Engineering, MRSPTU Bathinda	2010 onwards	
	Member Board of Studies Chemical Engineering, SBSSTC, Ferozepur	2015 onwards	
	Industrial experience : 3 years 9 months Assistant Manager, HPL Chemicals Pvt Ltd, Dera Bassi, Patiala	2015 onwards	
	GET, BPCL, Mahul, Bombay	14/07/1995 – 26/08/1998 04/01/1993- 07/08/1993	
8. Area of Specialization	Research : 6 years Modeling & Simulation		
9. Research	International Journal	17	



	Publications (Annexure- A)	Book Chapters	03
		International Conferences	16
		National Conferences	29
10.	Ph. D. Guidance	--	02 awarded
11.	M Tech Guidance	01 in progress	13 completed
12.	Professional Membership	Life Member IChE	Life Member ISTE
13.	Funded Projects	03 completed Modernization of Process Instrumentation, Dynamics & Control Laboratory Modernization of Computational Laboratory Modernization of Heat Transfer Laboratory	Rs. 10 lacs Rs 5.75 lacs Rs 1.5 lacs
14.	Invited Talks	03	
15.	FDPs / STCs	Conducted: 01 in collaboration with CIPET Amritsar Attended (Annexure-B) One week Two weeks	Recent Trends in Polymers, Composites & Their Engineering Applications 11 10
16.	Conference Organization	Co-convener of National Conference Frontiers in Material Research and Applications FMRA 2015 Member of organizing team of FMRA 2017	
17.	Workshops Attended	05 Energy Efficiency & Energy Conservation conducted by PEDA Energy Efficient Building Materials conducted by Saakar Foundation Chandigarh & VK Environmental Pune at SBSSTC, Ferozepur Applications of Chemical Engineering in Alternative Sources of Energy at SBSSTC Ferozepur COMSOL - Multiphysics Modeling Workshop Industry-Academia workshop on “Design of Refinery Distillation Columns” conducted by Petroleum Federation of India in association with EIL, IOC and PCRA NBA Workshop at Thapar	18/12/19 17/01/2019 30 th October 2015 2nd Aug 2013 23rd -24th October 2013 9-11 May 2013

18. Achievements

University Patiala

Set up the examination cell in the college for conduct and evaluation of examinations and conducted the examinations successfully

Department of Chemical Engineering was granted accreditation by NBA during my tenure as HOD
Passed M.E. in First class with distinction

ANNEXURE-A

Journals

1. **Garg R.K.**, Krishnan V.V., Srivastava V.K., Prediction of Concentration and Temperature Profiles for Non Isothermal Ethane Thermal Cracking in a Pipe Reactor, Korean J. Chem. Engg., 23(4), 531-539, 2006
2. **Garg R.K.**, Srivastava V.K., Modeling and Simulation of Non Isothermal Thermal Cracker, J. Chem. Engg. of Japan, 39(10), 1057-4, 2006
3. **Garg R.K.**, Vashishta, M., Srivastava V.K., A Modeling Approach to Reaction of Non Newtonian Fluids in Tubular Reactor, Polymer-Plastics Technology and Engg, 46 (10), 965-971, 2007
4. Kalra P, **Garg R K**, Grover N. K., Kumar A, Structural Properties of Anode Composite Precursor of a Solid Oxide Fuel Cell Prepared via Combustion Synthesis Route, Asian Journal of Engineering and Applied Technology Vol-1 No. 2, 36-39, July-Dec 2012, ISSN 2249-068X.
5. Kumar B, **Garg R K** and Singh U, Utilization of Fly ash as Filler in HDPE/ Fly ash Polymer Composites: A Review, International Journal of Applied Engineering Research, Vol 7, 11, 1679- , 2012, ISSN 0973-4562
6. Kalra P, **Garg R K**, Kumar A, Electrical characterization of NiO-CGO composites SOFC anode precursor- prepared via combustion synthesis route, International Journal of Innovative Research in Science, Engineering and Technology, Volume 3 Issue 5, 12071-12077, May 2014, ISSN: 2319-8753.
7. Sareen D, **Garg R K**, Grover N K, A Study on Removal of Methylene Blue Dye from Waste Water by Adsorption Technique using Fly Ash Briquettes, International Journal of Chemical & Environmental Engineering, Vol. 5 (4), 231-217, 2014 ISSN:2078-0737
8. Kalra P, **Garg R K**, Kumar A, Modeling of a High Temperature Solid Oxide Fuel Cell, Journal of Energy Technologies and Policy Vol.5, No.2, 2015, ISSN 2224-3232 (Paper) ISSN 2225-0573 (Online).
9. Yadav P.K., **Garg R K**, Catalytic Cracking MAT Reactor Performance using Pseudo Reaction Kinetics, International Journal of ChemTech Research, Vol 10(5), 150-165, 2017, ISSN:0974-4290, ISSN - Online :2455-9555
10. Yadav P.K., **Garg R K**, Modeling and Simulation of Fluidized Catalytic Cracking Riser Reactor Using Pseudo Reaction Kinetic: A Review, International Journal of Engineering and Technology, Vol 9 (3), 1667-1681, Jun-July,2017. DOI:10.21817/ijet/2017 / v9i3/170903017
11. Yadav P.K., **Garg R K**, Study of Modeling Approach for Fluid Catalytic Cracking Riser Reactor Using Pseudo Component Reaction Kinetics, International Journal on Recent and Innovation Trends in Computing and Communication (IJRITCC), Vol 5 (5), 646 – 651, 2017. ISSN: 2321-8169
12. Kalra P, **Garg R K**, Grover N. K., Modelling of a One Dimensional Anode Supported High temperature Tubular SOFC, International Journal of ChemTech Research, Vol 10 (6), 784-792, 2017, ISSN: 0974-4290, online 2455-9555
13. Kalra P, **Garg R K**, Kumar A, Electrochemical Analysis of an Anode Supported Axially Symmetrical One Dimensional Solid Oxide Fuel Cell, Indian Journal of Science & Technology, Vol.10, No.19, 1-9, 2017, ISSN 0974-6846 (Paper) ISSN 0974-5645 (Online).
14. Kalra P, **Garg R K**, Kumar A, Design of a High Temperature Solid Oxide Fuel Cell: A Review, International Journal for Research in Applied Science & Engineering Technology, Vol.5, No.9, 1089-1096, 2017, ISSN 2321-9653.

15. Kalra P, **Garg R K**, Kumar A, Kinetic Analysis of Reactions at Triple Phase Boundaries of anode supported Tubular SOFC, Asian Journal of Chemistry, Vol. 30, 3, 561-566, 2018.
16. Kalra P, **Garg R K**, Kumar A, Parametric sensitivity analysis for a natural gas fueled high temperature tubular solid oxide fuel cell, Heliyon, Volume 6, Issue 7, 2020, e04450, ISSN 2405-8440
17. Goyal V., Asati A.K., **Garg R. K.**, Arora A., Experimental studies on natural bank type heating/cooling energy saving Air conditioning system, Proceedings of Institution of Mechanical Engineers Part E: Journal of Process Mechanical Engineering, Vol. 238, 1, 2022

Book Chapters

1. Kalra P, **Garg R K**, Kumar A, Solid Oxide Fuel Cells- A Future Source of Power and Heat Generation, Engineering Applications of Nano-Science & Nano-Materials, Special edition of Material Science Forum 757, TransTech publications, edited by Rajesh Tayade and Ajay Bansal, pp 217-241, ISSN print 0255-5476 ISSN cd 1662-9760 ISSN web 1662-9752
2. Sood N, **Garg R K**, Jha M.K., Arora A., Treatment of Leachate by Using Natural Adsorbents, Recent Advances in Bioenergy Research Volume II, Sardar Swaran Singh National Institute of Renewable Energy, Kapurthala-2013, Electronic version published by SSS-NIRE edited by Sachin Kumar, S. K. Tyagi, pp 217-241
3. Goyal V., Asati A., **Garg R. K.**, A Review on the Performance of Earth Air Heat Exchanger Coupled with Other Systems, Technology Innovation in Mechanical Engineering. Lecture Notes in Mechanical Engineering, Chaurasiya, P.K., Singh, A., Verma, T.N., Rajak, U. (eds), 2022, Springer Nature Singapore, pp 521-531, Print ISBN978-981-16-7908-7, Online ISBN978-981-16-7909-4

Conference

International

1. **Garg R.K.** and Srivastava V.K., Modeling of Ethane Thermal Cracker- a 2-D Approach, Proceedings of CHEMCON 2005, Indian Chemical Engineering Congress, IIT Delhi, India, 2005
2. **Garg R. K.** and Srivastava V.K., Modeling of Non-Newtonian Reactive Systems in Tubular Reactor, Proceedings of AIChE Annual Meeting, San Francisco, California, USA, Nov 12-17, 2006
3. **Garg R. K.** and Srivastava V.K., A Modeling Approach to Thermal Cracking in an Annular Reactor-Quencher, Proceedings of AIChE Annual Meeting, Salt Lake City, Utah, USA, Nov 4-9, 2007
4. **Garg R. K.** and Krishnan V.V., Multi-Reaction Equilibria in SOFC's Operating Directly on Hydrocarbons, Proceedings of Millennium Energy Summit 2007, CGCRI, Kolkata, India, Sept 27-29, 2007
5. Arora R., Grover N. K. and **Garg R. K.**, Renewable Energy Resources in India: Sustainable Development Through Eco-Friendly Approach, International Conference on Business Ethics and Human Values, Panjab University, Chandigarh, India, Dec 23-24, 2010.

6. Arora R., Grover N. K. and **Garg R. K.**, Simulation of Thermodynamic Properties for n-Heptane Nitrogen Mixture at Equilibrium, Proceedings of International Conference on Emerging Trends in Technology & Education, Sri Sukhmani Institute of Engg. & Tech., Dera Bassi, Punjab, India, April 15-16, 2010.
7. Arora R., **Garg R. K.**, Grover N. K, Toor A., Comparative Study of Cubic Equations of State for Predicting Phase Behaviour of n-Heptane Nitrogen Systems, 2nd International Conference and Exhibition on Waste to Wealth and 6th International Conference On Combustion, Incineration Pyrolysis & Emission Control, Malaysian Nuclear Agency, Kuala Lumpur, Malaysia, July 26-29, 2010
8. Kalra P., **Garg R K**, Kumar A, Nano NiO-CGO SOFC Anode Composites Precursor-Combustion Synthesis and Characterization, International Conference on Frontiers in Nanoscience, Nanotechnology and their Applications, NanoSciTech-2012, Deptt. of Chem. Engg. & Technology, Panjab University, Chandigarh, Feb 16-18, 2012
9. **Garg R K**, Arora A, Kumar R, The Role of communication technology in enhancing the accessibility of higher education, International conference of role of technology in enhancing the quality of higher education at Kanya Mahavidyalaya, Jalandhar, Oct 26-27, 2012
10. Arora A, Mehra R, **Garg R K**, Tyagi A K, Measurement of indoor radon concentration in the dwellings of Bathinda district of Punjab from June – August 2010, ICRM-2011 (International Conference on Recycling and Reuse of Materials), Mahatma Gandhi University, Kerala, August 5-7 2011
11. Kalra P., **Garg R K**, Modeling of a Solid Oxide Fuel Cell with Internal Reforming, International conference on Frontiers of Material Research and Application (ISBN: 978-93-83842-92-6) held at SBSSTC, Ferozepur, Oct 30-31 2014.
12. Kalra P., **Garg R K**, Advanced Materials for a Solid Oxide Fuel Cell, International conference on Frontiers of Material Research and Application (ISBN: 978-93-83842-92-6) held at SBSSTC, Ferozepur, Oct 30-31 2014.
13. Yadav P., **Garg R K**, Modeling Approach for Fluid Catalytic Cracking Reaction Kinetics, International conference on Frontiers of Material Research and Application (ISBN: 978-93-83842-92-6) held at SBSSTC, Ferozepur, Oct 30-31 2014.
14. Kumar B, **Garg R K** and Singh U, Evaluation of Polypropylene Composites filled with Talc Particles as Filler, International conference on Frontiers of Material Research and Application (ISBN: 978-93-83842-92-6) held at SBSSTC, Ferozepur, Oct 30-31 2014.
15. Agarwal D, **Garg R K**, Removal of Chromium (+6) & Flouride (F-) from Water by Adsorption on Peepal (*Ficus Religiosa*) Leaves Biomass, International conference on Harnessing Engineering, Technology and Innovation for Sustainable Growth, HETIS 2016 held on 30 Sept – 1 October 2016, held at Dr SSB University Institute of Chemical Engg & Tech, Panjab University, Chandigarh
16. Goyal V., Asati A., **Garg R. K.**, A review on the Effect of Soil Composition, Climate and Rainfall on the Performance of Earth Air Heat Exchanger, International Conference on Latest Trends in Civil, Mechanical and Electrical Engineering (LTCMEE-2021) held on April 12-13 2021 at Maulana Azad National Institute of Technology, Bhopal

National

1. **Garg R. K.** and Srivastava V.K., Modeling of Ethane Thermal Cracker- a 2-D Approach, Proceedings of CHEMCON 2005, Indian Chemical Engineering Congress, IIT Delhi, India, 2005
2. **Garg R. K.** and Srivastava V.K., Modeling of Thermal Cracker, Proceedings of the seminar on Recent Trends in Science, Technology and its Applications, Muzaffarnagar, UP, India, 2006
3. **Garg R. K.** and Srivastava V.K., Modeling and Simulation of Ethane Thermal Cracker: A Comparative Study, Proceedings of CHEMCON 2007, Indian Chemical Engineering Congress, IICChE Kolkata, India, 2007
4. **Garg R. K.** and Krishnan V.V., Prediction of Nernst Voltage in a Direct Hydrocarbon Solid Oxide Fuel Cell, Proceedings of ICAER 2007, IIT, Mumbai, India, 2007
5. **Garg R. K.** and Srivastava V.K., Modeling of Ethane Thermal Cracking under Non-Isothermal Constant Heat Flux Condition, Proceedings of CHEMCON 2008, Indian Chemical Engineering Congress, Department of Chemical Engineering, Panjab University, Chandigarh, India, 2008
6. Arora R, **Garg R K**, Grover N K, Calculation of thermo physical properties of n-heptane & nitrogen mixture using vapour liquid equilibrium, National Conference on Global Trends in Mechanical Engineering, Rayat & Bahra Institute of Engineering & Bio-Technology, Mohali, India, April 16-17 2010
7. Arora R, **Garg R K**, Grover N K, Simulation of Thermodynamic properties for n-heptane-nitrogen mixture at equilibrium, International Conference on Emerging Trends in Technology & Education, Sri Sukhmani Institute of Engineering & Tech., Dera Bassi, Punjab, India, April 15-16, 2010
8. **Garg R. K.** and Srivastava V.K., Mathematical Treatment of Thermal Cracker for Ethane, Proceedings of CHEMCON 2011, Indian Chemical Engineering Congress, Department of Chemical Engineering, MS Ramaiah Institute of Technology Bangalore & Bangalore Regional Centre IICChE, Bangalore, India, 2011
9. Kalra P., **Garg R K**, Kumar A, Effect of fuel concentration on electrical properties of NiO-CGO composites-SOFC anode precursor- prepared via combustion synthesis route, Advanced Materials & Radiation Physics, AMRP-2011, Dept. of Physics, SLIET Longowal 2nd National Conference, 4-5 Nov. 2011
10. **Garg R K**, Modelling and Simulation of Distillation Column, Advances in Modelling, Optimization and Computing (AMOC-2011), Dept. of Mathematics, IIT Roorkee International Conference, 5-7 Dec, 2011
11. Arora A, **Garg R K**, Mehra R, Tyagi A K, Measurement of indoor radon concentration in the dwellings of Bathinda district of Punjab for the period September-November 2010, WMR-2011 (National conference on waste management and recycling), SLIET Longowal Punjab, Dec 9-10 2011
12. 17. Arora A, **Garg R K**, Mehra R, Tyagi A K, Statistical model of lifetime fatality risk due to indoor radon concentration of Bathinda District for period Dec 2010 to Feb 2011, National conference on advances and applications in statistics, Punjab University, Chandigarh Feb. 20 2012
13. Arora A, **Garg R K**, Sharma S, Wasson B, Kaur S, Radiation pollution in human habitat, National Conference on Material Science Application in energy and environment, DAV college Jalandhar. March 3 2012
14. Kalra P, **Garg R K**, Kumar A, Grover N. K., Structural Properties of Anode Composite Precursor of a Solid Oxide Fuel Cell Prepared via Combustion Synthesis Route, AFTMME-2012 at PTU Jalandhar, Oct 5-7 2012

15. Arora A, **Garg R K**, Koundle A, Maneet, Rajat, Supercritical fluid like CO₂ for the treatment of hospital waste, Biomedical Engineering and Assistive Technologies at NIT Jalandhar, 6-7 Dec 2012 ISBN-13: 978-81-925454-1-7
16. Arora A, **Garg R K**, Koundle A, Rajat, Sehgal R, Sources and Treatment Techniques of Hospital Waste Management: a Review, National conference on Green Chemistry held at SRM University, Ghaziabad, 18-19 Sept 2012 ISBN 978-93-81583-58-6
17. Kumar B, **Garg R K** and Singh U, Effect of fly ash as a filler on properties of HDPE/Fly ash Polymer Composites, International Conference on Sustainable Technology for Energy and Environment in Process Industries and Indo-US Joint International Conference on Energy and Environment. Chemcon-2012, NIT Jalandhar, Dec 2012
18. Sood Navneet, **Garg R K**, Jha M.K., Arora A., Treatment of Leachate by Using Natural Adsorbents, National Conference on Recent Advances in Bioenergy Research held at SSSNIRE, Kapurthala, 7-8 Dec 2012, ISBN 978-81-927097-1-0
19. Arora A, Upadhyaya S, Aditi, **Garg R K**, Koundle A, Isopropylation of m-cresol with isopropyl alcohol over zeolite catalyst, Chemcon-2012 at NIT Jalandhar, Dec 27-30, 2012
20. **Garg R. K.** and Srivastava V.K., Thermal Cracking of Methylcyclohexane: Mathematical Treatment and Optimization of Model Parameters, Proceedings of CHEMCON 2012, Indian Chemical Engineering Congress, Department of Chemical Engineering, NIT Jalandhar, India, 2012
21. Srivastava V. K. and **Garg R. K.**, Emergency Preparedness and Disaster Mitigation, Proceedings of Conference on Management and Technology of Control of Disasters, S.D. College of Engg. & Tech., Muzzaffarnagar, UP, India, 2013
22. Kumar R, Sharma L, **Garg R K**, Subhash, Arora A, Adsorption of Congo Red on Fly Ash, Chemical Constellation CHEMINAR -2012 at NIT Jalandhar, Sept 10-12, 2013
23. Kalra P, **Garg R K**, Kapoor S, Applications of Solid Oxide Fuel cells: A Review, National conference on Frontiers of Material Research and Application (ISBN: 978-93-85777-23-3) held at SBSSTC, Ferozepur, Oct 30-31 2015.
24. Kaur M., Kumar B, **Garg R K**, Effect of Modified Fly Ash as a Filler on Properties of Nylon-6, National conference on Frontiers of Material Research and Application (ISBN: 978-93-85777-23-3) held at SBSSTC, Ferozepur, Oct 30-31 2015.
25. Yadav P K, **Garg R K**, Catalytic Cracking Reactor Modeling and Simulation using Pseudo-Reaction Kinetics Approach, National conference on Frontiers of Material Research and Application (ISBN: 978-93-85777-23-3) held at SBSSTC, Ferozepur, Oct 30-31 2015.
26. Kaushik M, Koundle P, **Garg R K**, Adsorptive Removal of Chloropyrifos Insecticide using Watermelon Seeds as Adsorbent, National conference on Frontiers of Material Research and Application (ISBN: 978-93-85777-23-3) held on Oct 30-31 2015 at SBSSTC, Ferozepur.
27. Kalra P, **Garg R K**, Kumar A, Advanced Synthesis Techniques for Various Components of Solid Oxide Fuel Cells: A Review, National conference on Frontiers of Material Research and Application (ISBN: 978-93-86256-10-2) held at SBSSTC, Ferozepur, Oct 30-31 2015.
28. Suneja Aashna, **Garg R K**, Adsorptive Degradation of Malachite Green: A Comparative Study, 69th Annual Session of the Indian Institute of Chemical Engineers held at the Chennai Regional Centre of IICIChE, Chennai, Tamil Nadu CHEMCON 2016, December 27-30, 2016

29. Sharma A., Singh V. Garg A., **Garg R K.**, Study on COD Removal by Electrolysis, SLIETCON 2019 held at NITTR Chandigarh, March 1-2 2019

ANNEXURE-B

FDPs/STCs attended

One-week duration

S. No.	Title	Conducted by	From/to
1.	Modelling & Simulation using MATLAB	NITTTR Chandigarh	21/7/08 - 25/7/08
2.	Renewable Energy Based Technologies	NITTTR Chandigarh	28/7/08 – 1/8/08
3.	MATLAB programming	NITTTR Chandigarh	21/11/11 – 25/11/11
4.	Business and Soft Skills Development in Institutions	NITTTR Chandigarh	4/6/12-8/6/12
5.	Applied Soft Computing	SBSSTC, Ferozepur	26/11/12-30/11/12
6.	Research Methodology: Tools & Techniques	SBSSTC, Ferozepur	3/12/12-7/12/12
7.	Engineering Materials	SBSSTC, Ferozepur	17/12/12-21/12/12
8.	Soft skills for Technical Teachers	SBSSTC, Ferozepur	2/9/13-6/9/13
9.	Managerial Skills	SBSSTC, Ferozepur	9/9/13-13/9/13
10.	Recent Trends in Polymers, Composites & Their Engineering Applications	SBSSTC Ferozepur in collaboration with CIPET	16/9/13- 20/7/13
11.	Material Technology & Characterization Techniques	SBSSTC, Ferozepur	21/12/15-25/12/15

Two weeks' duration

S. No.	Title	Conducted by	From/to
1.	Recent Advances in Petrochemical Technology	NIT Jalandhar	20/11/2000-1/11/2000
2.	Induction Training Programme for Faculty of Engineering Colleges	NITTTR Chd	25/6/01-6/7/01
3.	Concepts of Renewable Energy Sources	Centre for Energy Studies, IITD	16/6/05-27/6/05
4.	Intelligent Computational Techniques	AICTE sponsored SBSSTC Ferozepur	4/7/11-15/7/11
5.	Modern Sophisticated Analytical Techniques and Their Application in Pharmaceuticals	AICTE sponsored ISF College of Pharmacy, Moga	16/7/11-30/7/11
6.	Multi Criteria Optimization Tools in Research	AICTE sponsored SBSSTC Ferozepur	21/5/12-1/6/12
7.	Nature Inspired Computational Intelligence	AICTE sponsored SBSSTC Ferozepur	6/5/13-17/5/13
8.	Analytical Techniques for Detection of	SBSSTC, Ferozepur	16/12/13-

	Environmental Pollutants		27/12/13
9.	Research Techniques	AICTE sponsored SBSSTC, Ferozepur	25/5/15 – 5/6/15
10.	Big data Analytics using Machine Learning Techniques	AICTE sponsored SBSSTC, Ferozepur	9/12/19- 20/12/19