

# National Institute of Technology, Tiruchirappalli: Performa for CV of Faculty/ Staff Members

## Curriculum Vitae

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

Please attach your  
recent  
Photograph

in the form of  
softcopy/hardcopy  
(Optional)

**DR.(MRS.).P.KALAICHELVI**, born on second June 1969, completed B.Tech, M.Tech and Ph.D. in chemical engineering from A.C.Tech., Anna University, Chennai, Tamilnadu. She worked with Madras Refineries Ltd., R&D Centre, Chennai, as a Project Trainee during June 1991-January 1992. She has been working for Ramani Chemasea Entech Systems Private Ltd., Chennai as a Project Engineer during April 1992-September 1994. She also served as Lecturer at SRM Engineering College, Kancheepuram for a period of 11 months in 1999. She has been with National Institute of Technology, Tiruchirappalli, since January 2000 as a faculty of Chemical Engineering department. As a faculty of Chemical engineering department of NITT, she was selected as BOYSCAST fellow by Department of Science and Technology, New Delhi and got trained at National University of Singapore for a period of 6 months. She also visited and had research interactions with foreign universities viz., School of Chemical Engineering, Engineering Campus, University Sains Malaysia (USM), Malaysia and Institute for Chemical Research, Kyoto University, Japan. She had an opportunity to attend Entrepreneurship courses like Kick-Starting Entrepreneurial Campus at PSG Institute of Management, Coimbatore, 14<sup>th</sup> – 16<sup>th</sup> July 2011 ( 3 days) and NEN Faculty Development Course on “Building Technology Ventures” at VIT University, Chennai, 16-18<sup>th</sup> August 2012 conducted by National Entrepreneurship Network (NEN), sponsored by WADHWANI foundation. With this background, she has been serving as one of the faculty advisor for the E-Cell NITT for the three years. She has been supporting in carrying out the project “Business and Management Capacity Development of Rural Women Entrepreneurs of India and Sri Lanka” as one of the co-investigators. Have been playing the initiating role in setting up NITT community Radio station as a part her duty assigned as Associate Dean (R&C).

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1. Name: Dr.(Mrs.) P. Kalaichelvi
2. Designation: Associate Professor
3. Office Address:  
Department of Chemical Engineering,  
National Institute Of Technology,  
Trichy - 620015. Tel. :- +91 - 431 - 2503110
4. Telephone (Direct) (Optional):  
Telephone : +91 - 431 - 2503110  
Extn (Optional):  
Mobile (Optional): +91- 9486066990
5. Email (Primary): kalai@nitt.edu  
Email (Secondary) :  
ponrajkalai@gmail.com
6. Field(s) of Specialization:
  - Heat Transfer Augmentation
  - Effluent Treatment
  - Crystallization
7. Employment Profile

Job Title	Employer	From	To
Lecturer	NIT,Trichy	2000	2004
Senior Lecturer	NIT,Trichy	2004	2007
Assistant Professor	NIT,Trichy	2007	2010
Associate Professor	NIT,Trichy	2010	present

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

Examination	Board / University	Year	Division/ Grade	Subjects
Ph.D.	Anna University, Chennai	1999	Highly commented	Chemical Engg.

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M.E. / M.Tech.	Anna University, Chennai	1992	First class with Distinction	Chemical Engg.
B.E. / B.Tech.	Anna University, Chennai	1990	First class	Chemical Engg.
12th	Matriculation	1986	85%	Maths, Physics, Chemistry and Biology

9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/Institution	From	To
Organizer	Medical camp for the Women staff and women in the campus	2011	
Convener	Staff Recreation Club	2006	2015
Organizer	Spoken English class along with Sprit-ed Club of NITT	2011	
Organizer	Women's Day Celebration	2012	
Member	Department Time Table committee	2000	2004
Member	Department Maintenance Committee	2001	2005
Attendance In charge for all PG students	M.Tech Plant Design and Process Control & Instrumentation	2005	2006
Office in-charge of stocks verification in different departments	REC (NIT), Trichy	2002	2005
Department Technical Representative for Pragyan '07	REC (NIT), Trichy	2007	
Hospitality Committee for the second convocation	REC (NIT), Trichy	2006	
Member in Ph.D. admission	REC (NIT), Trichy	2011	2012
Staff In-charge	Alchemy'07 committee, REC (NIT), Trichy	2007	
Member	Lecturer Application Verification	2006	2007

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	Committee		
Staff Advisor for Alchemy	REC (NIT), Trichy	2008	
Faculty In-charge	Printing committee for Festember, REC (NIT), Trichy	2010	
Judge for the Delta T event of Pragyant	REC (NIT), Trichy	2012	
Member	DAC of Chemistry Department, REC (NIT), Trichy	2011	2014
Faculty advisor	E-Cell of NITT	2010	2013
Associate Dean (Research & Consultancy)	REC (NIT), Trichy	2012	2015
Member	Strategic Transformation Group (STG) of NITT	Since 2013	

**10. Academic/Administrative Responsibilities outside the University**

Position	Institution	From	To
Member in BOS	Periyar Maniammami University, Vallam, Thanjavur	2008	2009
Member in DC for Ph.D.	Anna University, Trichy	2009	2014
Member in DC for Ph.D.	Anna University, Coimbatore	2010	
Member in Staff Selection Committee	NIT, Uttarakhand	2014	
Examiner for M.Tech. Project	Anna University, Chennai	2013	
Examiner for Ph.D.	Anna University, Trichy	2014	
Examiner for Ph.D.	SRM University, Chennai	2015	

**11. Awards, Associateships etc.**

Year of Award	Name of the Award	Awarding Organization
2005	22nd Edition of "Who's Who in the world"	International Biographical Centre, England.
2005	International Educator of the year	International Biographical Centre, England.
2006	24th Edition of "Who's Who in the world"	International Biographical Centre, England.

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2007	22nd Edition of "Who's Who in Asia"	International Biographical Centre, England.
2007	Who's Who of Emerging Leaders"	International Biographical Centre, England.
2007	24th Edition of "Who's Who in the world"	International Biographical Centre, England.
2008	"TOP 100 EDUCATORS 2008"	International Biographical Centre, England.
2010	"2000 OUTSTANDING INTELLECTUALS OF THE 21ST CENTURY"	International Biographical Centre, England.
2011	RASHTRIYA GAURAV AWARD 2011	
2011	SHIKSHA RATTAN PURASKAR AWARD 2011	
2011	BEST CITIZENS OF INDIA AWARD 2011	
2011-2012	NEN Entrepreneurship Educator	NEN

12. Fellowships

Year of Award	Name of the Fellowship	Awarding Organization	From (Month/Year)	To (Month/Year)
1996	Senior Research Fellowship	Council For Scientific and Industrial Research, New Delhi	1996	1999
2004	BOYSCAST fellowship	DST, New Delhi	2004	2005

13. Details of Academic Work

(i) Curriculum Development :

Have updated the syllabus on heat transfer.

Have developed videos for four undergraduate heat transfer lab experiments.

Have equipped the heat transfer lab with extra experiments to handle the increase in student's strength.

Have incorporated seminars on research topics related to heat transfer for assignment component.

Have conducted academic conclave for chemical engineering curriculum upgradation.

Have conducted a course on piping technology for PG students.

Have conducted course on data analysis for undergraduate students.

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### (ii) Courses taught at Postgraduate and Undergraduate levels

Undergraduate level : Heat Transfer, Chemical Engineering Thermodynamics, Petroleum Refining and Petrochemicals, Polymer Technology, Heat Transfer Lab  
Postgraduate level : advanced heat transfer, Chemical process flowsheeting.

### (iii) Projects guided at Postgraduate level:

- 01 Performance enhancement of condenser by additives 2015
- 02 Dynamic prediction and control of plate heat exchanger using ANN 2015
- 03 Numerical Analysis of Fluid Flow and Heat Transfer of an Impinging air Jet 2015
- 04 Use of Artificial Neural Network for Prediction of Overall Heat Transfer Coefficient and Modelling of Plate Heat Exchanger 2015
- 05 Development of Control Scheme for prevention of Thermal runaway in the production of Dimethoxy Thiophosphate Acid (DMTA) in a Semi-Batch Process 2015
- 06 Fluid Flow and Heat Transfer of an Impinging Air Jet 2014
- 07 Numerical Studies of Heat Transfer in 6 Channelled Dimpled Plate Heat Exchanger 2014
- 08 Study of Thermal Performance of Plate Heat Exchanger with Sodium Alginate Solution 2014
- 09 Development of control scheme for prevention of thermal runaway in he production of dimethoxy thiophosphoric acid in a semibatch process 2014
- 10 Study on Rheology and Thermophysical Properties of Sodium Alginate Solution 2013
- 11 Studies on Microwave Assisted Emulsified Oil Removal from Synthetic Waste water 2013
- 12 Removal of Emulsified Oil From Waste Water Using Rice Straw As An Adsorbent 2012
- 13 Removal of Emulsified Oil From Waste Water Using Rice Straw As low Cost Adsorbent 2011
- 14 Experimental Analysis of Mixing Characterization of Carboxymethyl Cellulose Solution In A Double Jet Mixer Using Tracker Technique By UV Vis Spec Analysis 2011
- 15 Effectiveness Charts For Thermal Analysis of Seven Corrugated Plate Heat Exchanger Using Carboxymethyl Cellulose Solution as Cold Fluid 2011
- 16 Modelling And Simulation of Plate Heat Exchanger Using Power Law Fluid as Cold Fluid 2010

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- 17 Analysis of Mixing Characteristics of Power Law Liquids in a Jet Mixer 2010
- 18 Simulation on Jet Aerator 2010
- 19 Analysis of Mixing Characteristics in Two phase Jet Mixer Using Dissolved Oxygen Method 2009
- 20 Optimum configuration of a double jet mixer using DOE 2009
- 21 Thermal analysis of plate type heat exchanger 2009
- 22 Thermal Analysis Of Plate Type Heat Exchanger 2008
- 23 Effect Of Radial Angle On Mixing Time For A Double Jet Mixer 2008
- 24 Performance Analysis Of Two Phase Jet Mixer 2008
- 25 Simulations Of Two Phase Jet Mixer 2007
- 26 Control System Design For Ideal Reactive Distillation Column 2007
- 27 Jet Mixing Using CFD 2007
- 28 Control System Design For Ideal Reactive Distillation Column 2006
- 29 Jet mixing using CFD 2006
- 30 Studies On Jet Mixing 2004
- 31 Extraction Equilibrium Studies With-Dual Solvent 2004
- 32 Studies On Bioleaching 2004
- 33 Simulation of Multiple Effect Evaporator 2003
- 34 Debottlenecking of Propylene Glycol Mono Methyl Ether (PGMME) Plant to improve its existing capacity 2003
- 35 Studies on extraction of p-hydrobenzoic acid using dual solvent technique 2002

(iv) Other contribution(s)

Have been part of women development through various workshops and project.  
Have been part of setting up NITT community radio station during my tenure as Associate Dean (R & C).

#### 14. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
Studies on Dual Solvent Extraction	Tamil Nadu State Council for Science and Technology	2000	2001	Completed
Analysis of Flow and Heat Transfer Characteristics of Single and Two Phase Flow through Plate Heat Exchanger	Council of Scientific and Industrial Research	2010	2013	Completed
Monitoring of Seabed, Sea water quality, Ambient Air	V.O.Chidambaranar Port Area, Tuticorin - 628	2012	2014	Completed

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Quality, Noise Pollution & Potable Water Quality	004.			
Business and Management Capacity Development of Rural Women Entrepreneurs of India and Sri Lanka	The Asia Foundation	2014	2015	Completed

15. Number of PhDs guided

Name of the PhD Scholar	Title of PhD Thesis	Role(Supervisor/ Co-Supervisor)	Year of Award
Mr.S.Ramachandran	Two phase Experimental heat transfer studies in spiral plate heat exchanger	Co-Supervisor	2007
Mr.T.Raja	Experimental and Simulation Studies on Jet Mixers	Supervisor	2008
Mr.K.V.Selvakumar	Studies on integration of electro chemical and microbial processes for the treatment of textile dye effluents	Co-Supervisor	2011
Ms.K.Muthamizhi	Thermal performance of plate heat exchanger using power law fluids	Supervisor	2014

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
28.09.1999-30.09.1999(3 Days)	Induction Training for Teachers	National	Participant	AICTE	SRM Engineering College
07.05.2001-18.05.2001 (12 Days)	ESI'S Pipeline Application software	National	Participant	-----	Regional Engg. College, Trichy
28.03.2002	Recent advances in	National	Participant	-----	A.C.Tech,



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29.03.2002 (2 Days)	computing Techniques in Chemical Engineering Curriculum					Anna University
20.05.2002 - 25.05.2002(6 Days)	Computer control of Processes	National	Participant	QIP		Indian Institute of Technology, Chennai
10.08.2002 - 11.08.2002 (2 Days)	Trends in Industrial Instrumentation	National	Participant	-----		ICE Department, REC (NIT), Trichy
11.11.2002 - 22.11.2002(12 days)	Biotechnology - Emerging trends & Challenges Ahead	National	Participant	AICTE-ISTE		Annamalai University
03.12.2002 - 07.12.2002(5 Days)	National Workshop-cum-Symposium on Complex Fluids	National	Participant	IISc, Bangalore		IISc, Bangalore
12.05.2003 - 16.05.2003(5 Days)	Modelling, Simulation and Analysis of Enhanced Distillation Processes	National	Participant	QIP		Indian Institute of Technology, Chennai
09.06.2003- 20.06.2003(12 days)	Safety and Environment Management Trends	National	Participant	AICTE-ISTE		Regional Engg. College, Trichy
15.12.2003 - 27.12.2003(13 days)	Modelling, Simulation and Optimization of Chemical Process Industries	National	Participant	AICTE-ISTE		National Institute of Technology, Warangal
03.06.2004 to 07.06.2004 (5 days)	Application of Melt Rheology in polymer processing	National	Participant	AICTE-ISTE		Amirtha University
25.07.2004 (One day)	Recent Trends in Industrial Effluent treatment	National	Participant	AICTE		Annamalai University
24.09.2004 (One day)	Innovative Pollution control Techniques for Sustainable Environmental Management	National	Participant	AICTE		Pondicherry Engineering College
22.11.2004	-Emerging Trends in	National	Participant	AICTE-ISTE		National

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03.12.2004 (12 days)	Energy Management and Non-Conventional Energy					Institute of Technology, Trichy
20.12.2004 – 31.12.2004 (12 days)	Emerging trends in CAD/CAM – Theory and Practice	National	Participant	AICTE-ISTE		National Institute of Technology, Trichy
12 <sup>th</sup> May 2005	Control Structure Selection and Controller Design for a Reactive Distillation Process”	National	Participant	Prof. Dr.-Ing. Sebastian Engell, University of Dortmund		Department of Chemical and Biomolecular Engg., NUS
4 <sup>th</sup> July 2005	NUS Centennial Nobel Laureate Public Lecturer on “Molecular Biology and Nanotechnology”	National	Participant	Steven Chu, Nobel Laureate in Physics, Lawrence Berkeley National Laboratory, USA		Department of Chemical and Biomolecular Engg., NUS
12 <sup>th</sup> July 2005	Characterization and Modelling of the Adsorption Properties of a Carbon Monolith”	National	Participant	Prof. Stefano Brandani, University College London		Department of Chemical and Biomolecular Engg., NUS
4-6 February 2007 (2 days)	International Conference on Nanomaterial and its Applications	National	Participant	TEQIP		Department of Chemistry, NIT, Trichy – 15.
17 <sup>th</sup> and 18 <sup>th</sup> September 2007 (2 days)	Workshop on Computational Fluid Dynamics	National	Participant	TEQIP		Department of Mathematics, NIT, Trichy - 15.
21 <sup>st</sup> February 2008 (1 day)	Non-Linear Control Systems	National	Participant	TEQIP		Department of Chemical Engineering and Mathematics, NIT, Trichy - 15.
25 <sup>th</sup> to 29 <sup>th</sup> February 2008	Advanced Tools and Techniques for	National	Participant	AICTE-QIP		Department of Production

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(5 days)	Research in Engineering Problems				Engineering, NITT
25 <sup>th</sup> – 27 <sup>th</sup> March 2008 (3 days)	Ultrasonics and Sonochemistry as an emerging technology	National	Participant	TEQIP	Department of Chemistry, NITT

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
<b>WORKSHOPS</b>				
Bio Separation Techniques	TEQIP- I	14th April 2007	Coordinator	NITT
Advanced Fluid Dynamics - High Viscous Fluids	TEQIP- I	4 - 5th January 2008	Coordinator	NITT
Entrepreneurship	NITT(E-CELL)	September 2011 to March 2012.	Coordinator	NITT
E-Week 2012	NITT(E-CELL)	01 Feb to 08 Feb 2012	Coordinator	NITT
WEDP Entrepreneurship Development Programme for Women	Canara Bank, Thuvakudi, Trichy	9th August 2012	Coordinator	NITT
E- Week 2013	NITT(E-CELL)	1nd February to 7 the February 2013	Coordinator	NITT
Genesis 2013	NITT(E-CELL)	9th March 2013	Coordinator	NITT
Ventura 2013	NITT(E-CELL)	10th March 2013	Coordinator	NITT
Applications of chemical engineering Principles in Biotechnology	TEQIP - II	28th to 29th June 2013	Coordinator	NITT
Entrepreneurship Development	The Asia	15th - 20th	Coordinator	WEAT

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Programme on Women Entrepreneurship	Foundation	December 2014		office, Trichy
<b>SHORT TERM COURSES</b>				
Chemical Systems Modeling and Simulation	AICTE-MHRD	13th July 2009 to 17th July 2009.	Coordinator	NITT
Experimental Design And Optimization Techniques	Self-supporting	10th Sep - 14th Sep 2012	Coordinator	NITT
Awareness Conference on " Business and Management Capacity Development of Rural Women Entrepreneurs of India and Sri Lanka	The Asia Foundation	12 September 2014	Coordinator	WEAT office, Trichy
Piping Technology	TEQIP - II	27th - 28th March, 2014 and 19th April 2014	Coordinator	NITT
Conclave on Strengthening Chemical Engineering curriculum for Present and Future scenario'	TEQIP - II	March 13th – 14th, 2015	Coordinator	NITT
Women Entrepreneurship Ecosystem- Present and Future.	The Asia Foundation	27th October 2015	Coordinator	WEAT office, Trichy

18. Invited Talks delivered

Topic	Date	Inviting Organization
Bioleaching-The Institution of Engineers (India) Tiruchirappalli, Local Centre, BHEL Main Office Road, Tiruchirappalli	23rd March 2004	The Institution of Engineers (India) Tiruchirappalli
My areas of research	4th and 5th August 2005	School of Chemical Engineering, Engineering Campus, University Sains Malaysia (USM) , 14300 Nibong Tebal, Pulau Pinang, Malaysia
Pharmaceutical Drug Separation-Workshop "Recent Advances and	15th and 16th December 2006	Department of Chemical Engineering, National Institute of

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Challenges of Biotechnology Processes		Technology, Tiruchirappalli
Simulated Moving Bed System for Pharmaceutical Drug Separation- Special Lecture for the students of Department of Biotechnology	5 <sup>th</sup> September 2007	Periyar Maniammai University, Vallam, Thanjavur
Mixed Solvent Extraction technique for effluent treatment at the workshop	27th Feb' 2008	Department of Chemical Engineering, National Institute of Technology, Tiruchirappalli.
Fundamentals of High Viscous Fluid- the two day workshop on "Advanced Fluid Dynamics - High Viscous fluids	4th and 5th January 2008	Department of Chemical Engineering, National Institute of Technology, Tiruchirappalli. sponsored by TEQIP-I
Introduction to Chemical Process Flowsheeting- one day workshop on "Advanced Chemical Process Design	20th October 2008	Department of Chemical Engineering, National Institute of Technology, Tiruchirappalli, sponsored by TEQIP-I
Roll of preparative chromatographic column in chiral drug separation	October 9-10, 2009	Twenty Fifth National Convention of Chemical Engineers, Cochin
Business Plan Preparation- Faculty Development Programme On Entrepreneurship Development & Management	5th May - 17th May 2014	DST-NIMAT Sponsored, organized by Centre for Entrepreneurship Development and Incubation, NIT - Trichy.
Idea Generation and Oppurtunity evaluation-Entrepreneurship Development Programme (EDP),	June 30 - July 26, 2014	(DST)- NIMAT Project, Government of India and organized by Centre for Entrepreneurship Development and Incubation, NIT - Trichy.
Developing Business Based on Estimation EDP conducted for women	15th December 2015 to 20th December 2014.	Sponsored by The Asia Foundation

19. Membership of Learned Societies

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Type of Membership (Ordinary Member/ Honorary Member / Life Member )	Organization	Membership No. with date
Life Member	Indian Society for Technical Education	(LM-27972)
Life Member	Indian Institute of Chemical Engineers	(LM-32184)
Member	The Institution of Engineers (India)	(M-139323-5)
Life Member	National society of fluid mechanics & fluid power (India)	(LM-522)
Life Member	Indian Society for Heat and Mass Transfer	(ISHMT NO.:622)

20. Academic Foreign Visits

Country	Duration of Visit	Programme
Singapore	6 months	BOYSCAST
Malaysia	3 days	BOYSCAST
Japan	1 month	TEQIP
Malaysia	5 days	Conference
Singapore	10 days	Conference
Srilanka	9 days	The ASIA FOUNDATION funded project
Dubai	5 days	Conference

21. Publications

(A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year	Impact Factor of the Journal (Optional)
Ramachandran.S, Kalaichelvi.P and Sundaram.S	“Experimental heat transfer correlations for a liquid – liquid	Chemical Technology (TSI)		14-19	2006	

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	two phase system in a compact heat exchanger”	Journals,				
Ramachandran.S, Kalaichelvi.P and Sundaram.S	“Studies on heat transfer correlations for water – oleic acid two phase system in a compact heat exchanger’	Process & Plant Engineering .	Vol. XXIV	53-56	2006	
Raja.T, Kalaichelvi.P , Ananthraman .N	“CFD simulation & experimental validation of jet mixer with conical bottom”	Process & Plant Engg. O-D'07.	Vol: XXV. NO.3	pp 27-32	2007	
T.V. Karthick, D. Karthikeyan, S.Ramachandran, P. Kalaichelvi, S .Sundaram, R. Jaishree	“Modeling and Simulation of Spiral Plate Heat Exchanger Modeling and Simulation of Spiral Plate Heat Exchanger”	Journal of Thermal Engineering and Applications	1(1)	22-29	2014	
Tamilselvi S, Kalaichelvi P.	“Review of Fluid Flow and Heat Transfer in Impinging Jet System”	Recent Trends in Fluid Mechanics	1(3)	1–14	2015	
M. Dheenamma, P. Kalaichelvi	“Numerical Study of Heat Transfer in Six Channeled Dimpled Plate Heat Exchanger “	Journal of Thermal Engineering and Applications	2(1)	15-25	2015	
Ayyappan B., Kalaichelvi.P. and Murugesan.T	"Suspension of soild particles in turbine agitated contactors”	Bioprocess Engg.	15	205-208	1996	

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Kalaichelvi.P. and Murugesan.T	"Prediction of slip velocity in rotating disc contactors"	Jl. Chem. Tech. & Biotechol.	69(1)	130-136	1997	
Kalaichelvi.P. and Murugesan.T	"Dispersed hold-up in rotating disc contactors"	Bioprocess Engg.	18(2)	105-112	1998	
Kalaichelvi.P. and Murugesan.	"A new correlation for characteristic velocity in rotating disc contactors"	Can. Jl. Chem. Engg.	T76(I)	126-131	1998	
Kalaichelvi.P. and Murugesan.T	, "A correlation for mass transfer coefficients in rotating disc contactors",	Bioprocess Engg.	19	381-384	1998	
Kalaichelvi P	" Analysis of parameters influencing the properties and yield of lube oil extraction products"	Hungarian Journal of Industrial Chemistry	Vol 30, 4	295-298	2002	
Ramachandran.S, Kalaichelvi.P and Sundaram.S	"Heat transfer studies for two phase flow in a spiral plate heat exchanger"	Journal of University of Chemical Technology and Metallurgy, Bulgaria	41, 4	329-332	2006	
Raja.T, Kalaichelvi.P. and Ananthraman.N,	"The development of CFD model for optimum mixing in jet mixed tanks"	Journal of Scientific & Industrial Research	Vol.66	pp. 522-527.	July 2007	
Kalaichelvi. P, Perumalsamy. M, Arunagiri. A,	"Synergistic extraction of acetic acid from its	Journal of University of Chemical	K42, 3	423-426	2007	



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Sofiya.	aqueous solution”	Technology and Metallurgy, Bulgaria				
Swarnalatha. Y, Raja.T and Kalaichelvi. P	“Mixing time estimation and analysis in a jet mixer”	ARPJ Journal of Engineering and Applied Sciences	Vol.2, No.5	35-43	2007	
Raja.T, Kalaichelvi.P , Ananthraman .N	“An experimental and CFD investigation of the effect of nozzle inclination and twisting in a double jet mixed tank ”	International Journal of Applied Engineering Research	Volume 3 No.10	1337-1352	2008	
Ramachandran.S, Kalaichelvi.P and Sundaram.S,	“Heat transfer studies in a spiral plate heat exchanger for water – palm oil two phase system”	Brazilian Journal of Chemical Engineering	Vol. 25, No. 03	pp. 483 - 490	July - Sept, 2008	
Dheenathayalan.K and P.Kalaichelvi , working fluid",	“ Combined experimental and simulation (CFD) analysis on thermal performance of plate heat exchanger using kerosene as working fluid"	Chemical Product and Process Modeling	Vol. 4 : Iss. 1	Article 11	2009	
Perumalsamy .M, Kalaichelvi. P and Radhakrishnan T.K	“CFD Modeling of flow pattern and phase holdup of three phase fluidized bed contactor"	Chemical Product and Process Modeling	Vol. 4 : Iss. 1	Article 36	2009	

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Shanawaskhan. C, Kalaichelvi. P, Perumalsamy.M and Arunagiri. A.	“Computational fluid dynamic analysis of two phase jet mixer”	Journal of University of Chemical Technology and Metallurgy, Bulgaria	44, 3	262- 266,	2009	
Manjula.P, Kalaichelvi.P, Shanawaskhan. C, Dheenathayalan. K.	“Effect of radial angle on mixing time for a double jet mixer”	Asia-Pacific Journal of Chemical Engineering	5(3)	544- 551	2010	
Manjula. P., Kalaichelvi. P. and Dheenathayalan.K	“Development of mixing time correlation for a double jet mixer”	Journal of Chemical Technology and Biotechnolog y	v85, n1	p 115- 120	2010	
Kuppusamy Vaithilingam Selvakumar, Chiya Ahmed Basha,Harinarayan Janardhana Prabhu, Ponnusamy Kalaichelvi, Sudha Nelliyan,	“The potential of free cells of Pseudomonas aeruginosa on textile dye degradation”	Bioresource Technology	Vol.10 1,n8	p2678- 2684	Apr 2010	
Harika. S, Kalaichelvi. P., Majid M.A. and Dheenathayalan K	“Effectiveness charts for counter flow corrugated, plate heat exchanger,”	Simulation Modeling Practice and Theory	19(2)	777- 784	2011	
Harika. S, Kalaichelvi. P, Majid M.A. Dheenathayalan K,	“Effectiveness charts for thermal analysis of nine channel corrugated plate heat	International Journal of Chemical Engineering	3(1)	27-35	2010 -13	

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	exchanger,“					
A.Arunagiri, P. Kalaichelvi, Subbarao Cherukuri, Anuja Vijayan,	“Studies on Removal of Reactive Blue Dye Using Cloud Point Extraction”	International Journal of Chemical and Environmental Engineering			2012	
Shankar P, Himanshu Vyas Vyas, Kalaichelvi Ponnusamy, Muthamizhi Karuppannan	”Experimental Analysis of mixing characteristics of carboxymethyl cellulose solution (0.5%) in a double jet mixer”	International Journal of Chemical and Environmental Engineering	3(4)		2012	
Muthamizhi, K., P. Kalaichelvi, A. Arunagiri and A. Rudhra	Measurement and model validation of specific heat of xanthan gum using Joules Calorimeter method.	International Journal of Research in Engineering and Technology	2 (9)	232-238	2013	
Muthamizhi, K., P. Kalaichelvi, T. Shubhangi Powar and R. Jaishree.	Investigation and modelling of surface tension of power-law fluids	Rsc Advances	4	9771-9776	2014	
Muthamizhi, K., P. Kalaichelvi and T. Shubhangi Powar (HTR-8493)	Heat transfer augmentation and friction factor analysis in plate heat exchanger with carboxymethyl cellulose solution as working fluid.	Heat Transfer Research (Accepted).				
Muthamizhi, K. and P. Kalaichelvi (HMT-13-0331)	Development of Nusselt number correlation using dimensional	Heat and Mass Transfer	51:	815–823	2015	

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	analysis for plate heat exchanger with a carboxymethyl cellulose solution.					
Naveen Kumar Gupta, Sheeba K.N., Kalaichelvi,P,	“ The effect of temperature and hemicellulose-lignin, cellulose-lignin and cellulose-hemicellulose on char yield from the slow pyrolysis of rice husk”	Energy Sources, Part A: Recovery, Utilization, and Environmental Effects (Accepted).				
A.Arunagiri, Indulekha John, P.Kalaichelvi, R.Anantharaj,	"Removal of Crystal Violet Dye from Aqueous Solution Using Triton X-114 Surfactant via Cloud Point Extraction"	International Journal of Engineering Science and Technology	17(3)	137–144	2014	
Augusta Pachathu, Kalaichelvi Ponnusamy, Sheeba Narayanan Kizhakkuveetil, Arunagiri Appusamy	“Microwave Assisted Preparation of Bagasse and Rice Straw for the Removal of Emulsified Oil from Wastewater”	Bioremediation Journal (Accepted)				
Pachathu Augusta and Ponnusamy Kalaichelvi	“Investigation on microwave and ultrasound-assisted cornhusk for the removal of emulsified engine oil from water, Desalination and Water Treatment”			1-12	2015	

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A.Arunagiri, K.Priya, D.Saravanan, P.Kalaichelvi, R.Anantharaj,	‘Evaluation of Interaction Energies and Thermodynamic Properties in Binary mixture of Reactive Orange 107 Dye + Triton X-114 Surfactant at 303.15, 313.15 & 323.15K: Ab initio method & Experiment,’	International Journal of Research in Engineering & Technology	2(8)	442-454	2013	
K.Priya, D.Saravanan, P.Kalaichelvi, A.Arunagiri, R.Anantharaj,	‘Extraction of Reactive Orange 107 dyes from Aqueous Stream Using Triton X-114 Surfactant: Quantum Chemical Calculations & Experiment’	Journal of Industrial and Engineering Chemistry	20	2409-2420	2014	
Arunagiri, Prabisha Purushothaman P.Kalaichelvi, R.Anantharaj	‘Separation of Methylene Blue Dye from Aqueous Solution Using Triton X-114 Surfactant’,	Journal of Thermodynamics. (Accepted)				

(B) Conferences/Workshops/Symposia Proceedings

Author(s)	Title of Abstract/ Paper	Title of the Proceedings	Page numbers	Conference Theme	Venue	Year
International						
Ramachandran.	“Two phase	Proceedings			Kuala	2006

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S, Kalaichelvi.P and Sundaram.S,	experimental correlations for compact heat exchangers”	of 11 <sup>th</sup> APCCChE Congress			Lumpur, Malaysia	
Ramachandran. S, Kalaichelvi.P and Sundaram.S	“Experimental heat transfer correlations for water – octane two phase system in a spiral plate heat exchanger”	Chemeca’06			University of Auckland, New Zealand	
Raja. T, Kalaichelvi. P and Ananthraman .N, at CIT, Coimbatore	“A simulation study on optimum orientation of the nozzles in a double jet mixed tank with hemispherical bottom,”	International Conference on Modeling and Simulation CITICOMS 2007"			CIT, Coimbatore	27-29th August, 2007
Sendilkumar. K., Kalaichelvi. P, Perumalsamy. M., Arunagiri. A. and Raja. T.,	“Computational Fluid Dynamic analysis of mixing characteristics inside a jet mixer for newtonian and non newtonian fluids”				The World Congress on Engineerin g and Computer Science (WCECS 2007).	2007
Kalaichelvi. P., Dheenathayala n. K., Majid MA and Harika. S.,	“Plate heat exchangers for energy conservation,”	Presented at International Conference on Energy Engineering			Pondicherr y Engineerin g College,	7th to 9th Jan 2009.

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		- ICEE2009				
Kalaichelvi. P, Raja. T, C.Shanawaskhan and Ananthraman .N	“Mixing characteristics of a double jet mixer with hemispherical bottom using toluene as working fluid,”	Thirty Seventh national & Fourth International conference on Fluid Mechanics and Fluid Power			Department of Mechanical Engineering, Indian Institute of Technology, Madras	December 16-18, 2010.
Kirankumar R, Kalaichelvi. P and Dheenathayalan. K	,” Energy and exergy analysis of plate heat exchanger,”	presented at the International conference on advances in renewable energy			Maulana Azad National Institute of Technology, Bhopal	June 24-26, 2010.
Akhil Mohan .B, Muthamizhi .K. Dheenathayalan. K, Majid MA and Kalaichelvi. P.	“Modeling and simulation of corrugated plate heat exchanger”	Presented at the International Conference on Recent Advances in Chemical Engineering and Technology			Cochin	March 10-12th 2011.
Muthamizhi. K, Akhil Mohan .B, Kalaichelvi .P and Dheenathayalan. K	” Need to analyze the performance of plate heat exchanger using non-newtonian fluids,”	Presented at the International Conference on Recent Advances in Chemical Engineering and Technology			held at Cochin	during March 10-12th 2011

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Subbarao Cherukuri, Kalaichelvi. P and Arunagiri. A	” Studies on Removal of Dye Using Cloud Point extraction”,	Presented at the International Conference on Recent Advances in Chemical Engineering and Technology			held at Cochin	during March 10-12th 2011.
Shankar P, Himanshu Vyas Vyas, Kalaichelvi Ponnusamy, Muthamizhi Karuppannan	,”Experimental Analysis of mixing characteristics of carboxymethyl cellulose solution (0.5%) in a double jet mixer,”	Presented at ICEEC Malaysia			ICEEC Malaysia	during 21- 23, December 2011.
Harika Sammeta, Kalaichelvi Ponnusamy, M.A.Majid, Dheenathayalan K	“Effect of number of channels on performance charts for parallel flow corrugated plate heat exchanger,”	presented at 10th ISHMT			IIT, Chennai.	during December 27-30, 2011
Manjula. P, Kalaichevi. P, Annadurai. G and Dheenathayalan. K	“Optimum configuration of a Double Jet Mixer Using DOE”	presented at International Conference on Chemical, Bio-Chemical and Environmental Science			Singapore	during 14 – 15 December 2012.



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Dheeraj Kumar, P. Kalaichelvi, K.Muthamizhi and T.K.Radhakrishnan,	“Heat transfer enhancement in additives in plate heat exchangers,”	Energy system modeling and optimization conference (ESMOC)			NIT, Durgapur	Dec 9-11 (2013). *
Augesta P. and P.Kalaichelvi,.	“ Study on Removal of Emulsified Oil from Coolant Wastewater Using Corn Husk”	4th International Conference on Emerging Trends in Engineering & Technology (IETET-2013)				
Subhangi Tukaram Powar, K. Muthamizhi, P. Kalaichelvi, A. Arunagiri,	“Comparative Study of Heat Transfer and Flow Friction in Plate Heat Exchangers with Carboxymethyl Cellulose and Sodium Alginate, 4th International Conference on Chemical and Biological Processes”				Dubai (UAE)	22-24 November 2015
NATIONAL						
Kalaichelvi.P Sundaram.S., Kalpana. N and	“Technical paper on Batch bioleaching”	National seminar on “Value			Cochin.	June 16 & 17, 2004

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Ashok.N		addition to Beach Sand Minerals”				
Kalaichelvi. P, Sundaram. S, Radhakrishnan T.K and Sofiya.K	“Modeling and experimental verification of mixed solvent extraction of acetic acid”	CHEMCON			Indian Institute Technology, New Delhi	2005
Athimathi. S, Radhakrishnan T.K. and <b>Kalaichelvi. P</b>	“ Model development and control of a reactive distillation process”	CHEMCON			Indian Institute Technology, New Delhi.	2005
Nirmalavarthin i.P, Ganesh Moorthy.I, Senthilkumar.S and Kalaichelvi.P	Experimental and correlation verification of phenolic pollutant removal from a food industry effluent using mixed solvent extraction,”	SAFE’06			Cochin University of Science and Technology, Cochin	3rd and 4th March 2006.
Kalaichelvi.P, Arunagiri.A, Radhakrishnan. T.K. and Mohanraj.S	“Optimization of process parameters for production of propylene glycol mono methyl ether (PGMME)”	CHEMCON			Ankles war.	2006
Raja. T, Kalaichelvi.P Ananthraman .N and Sundaram .S,	“Experimental studies on a liquid jet mixed tank,”	Reactions 2005, An International Technical			St. Peter's Engineering College	7th & 8th October 2005.

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		Symposium organized by the Department of Chemical Engineering,				
Murugesan.T.K alaichelvi.P and Arunagiri. A.	“Prediction of gas phase holdup in a co-current gas-liquid upflow through packed beds,”	CHEMCON			Kolkata.	2007
Kalaichelvi.P.P erumalsamy.M. , Arunagiri. A., Raja. T., Sentilkumar. K and Shanawaskhan. C	“Modeling and simulation of jet mixers for non-newtonian fluid using computational fluid dynamic”	CHEMCON			Kolkata.	2007
Indhumathi. S.R., Kalaichelvi. P. and Radhakrishnan. T.K.	“Control system design for ideal reactive distillation column,”	CHEMCON			Kolkata	2007
Kalaichelvi. P., Majid Ma, Dheenadhayalan. K., Arunagiri. A. and PerumalsamyM	“Computational Fluid Dynamic analysis of heat and fluid flow inside a plate heat exchanger”	National Conference on Emerging Trends in Chemical <b>Engineering</b>			<b>NIT, Surat</b>	<b>6th to 7th May 2008.</b>
Manjula. P. Kalaichelvi. P and Dheenathayala	“Modeling and simulation of double jet mixer,”	National Conference on “Impact of chemical	Confere nce manusc ript no:		St.Joseph’s Collge of Engineerin g	11th March 2009

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n. K.		Engineering and Biotechnology on Process Industries in the New Millennium	JET-BC-023.			
Harika. S., Kalaichelvi. P, Majid MA and Dheenathayalan. K.	“Modeling and simulation of counter flow plate heat exchanger,”	National Conference on “Impact of chemical Engineering and Biotechnology on Process Industries in the New Millennium	conference manuscript no: JET-BC-022		St.Joseph’s Collge of Engineering	11th March 2009
D. K. Shanmugapriya , P.KalaichelviT. Murugesan,A. Arunagiri	“Removal of phenol using cloud point extraction,”	CHEMCON			Vishakhapatnam.	2009
Kalaichelvi.P, A.K. Ray, Zhang Yan and Kus Hidajat	“Roll of preparative chromatographic column in chiral drug separation,”	Twenty Fifth National Convention of Chemical Engineers			Cochin	October 9-10, 2009.
Shankar. P, Himanshu Vyas, Kalaichelvi .P and Dheenathayalan .K	“A computational fluid dynamic analysis of mixing characteristics in a jet mixing for power law fluid “	CHEMCON			Anamalainagar, Chidambaram.	2010

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Akhil Mohan.B, Kalaichelvi. P and Dheenathayalan .K	“Modeling and Simulation of Plate Heat Exchanger using Power Law Fluid as Cold fluid” A computational fluid dynamic analysis of mixing characteristics in a jet mixing for power law fluid “	CHEMCON			Anamalainagar, Chidambaran.	2010
Kiran.P, Subbarao Cherukuri, Kalaichelvi. P and Arunagiri.A	”Estimation of Design and Thermodynamic Parameters for the Cloud Point Extraction of Phenol using Tween 80”	CHEMCON			Anamalainagar, Chidambaran.	2010
Duraimurugan M.D. alias Saravan, Kalaichelvi. P and Arunagiri. A	” Cloud Point Extraction of Phenol using TX-100 as Non-Ionic Surfactant”	CHEMCON			Anamalainagar, Chidambaran.	2010
Selvakumar, K.V. C.Ahmed Basha, H.J.Prabhu and Kalaichelvi.P	”Integration of Electrochemical, Microbial and Photocatalytic Processes for the degradation of textile dye Procion Blue”	CHEMCON			Anamalainagar, Chidambaran.	2010

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Kirankumar R, Kalaichelvi. P and Dheenathayalan. K	” Energy and exergy analysis of plate heat exchanger,”	The International conference on advances in renewable energy			Maulana Azad National Institute of Technology, Bhopal	June 24-26, 2010.
Dheeraj Kumar, P. Kalaichelvi, K.Muthamizhi and T.K.Radhakrishnan	“Heat transfer enhancement in additives in plate heat exchanger”	Energy system modeling and optimization conference (ESMOC)			NIT, Durgapur	Dec 9-11 (2013).

**(C) Books & Monographs**

Author(s)	Title of Book/Monograph	Name of Publishers	Year of Publication	ISSN/ISBN Number
P.Kalaichelvi A.Arunagiri K.N.Sheeba	Computer Aided Design in Chemical Engineering	main phase of Pedagogy Research Project, National Mission Project on Education through ICT, coordinated by IIT, Kharagpur	2016	
P.Augusta, P,Kalaichelvi, K.N.Sheeba and Dr.A.Arunagiri	Microwave and ultrasound assisted surfactant treated adsorbent for the efficient removal of emulsified oil from the wastewater	Apple Academic press.	2016	