

NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI

Proforma for Curriculum Vitae of Faculty member



Brief Profile:

Dr. Sivakumaran is currently an Associate professor of Instrumentation & Control Engineering Dept., National Institute of Technology, Tiruchirappalli, India. He obtained PhD from NIT, Tiruchirappalli under National Doctoral Fellowship, AICTE in the year 2004 where he worked on Identification and Control of Nonlinear Processes using Recurrent Neural Networks. He is interested in working on Real time Implementation of problems that arise out of optimization methods in Process Control and Biomedical Instrumentation applications. He has several significant papers in international conferences and journals. He was a recipient of Government of India's Young Scientist award under DST in 2007 for his funded project “Online Control of Multivariable system using Soft Computing”. He was instrumental in submission and coordination of TEQIP-II.

Currently his research and consultancy projects are in balance of theory and practice in the areas of Control System design for Cold Storage in Agriculture (funded by DST-I-PHEE, Govt of India) and Modelling and Control of Process (funded by CDAC, Trivandrum).

He has coordinated several workshops for faculty members, scientist, doctors and research scholars and organising conferences.

He visited National University of Singapore, Singapore during summer 2007-08 and 2011, UCB, USA, 2010 and Auburn University, USA, 2011. He is a member of IE and ISTE. He was the founding member secretary and present Executive member of Automatic Control and Dynamic Optimization Society (ACDOS) and Executive member of Institution of Engineers.

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2. Designation : **Associate Professor**
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6. Field (s) of Specialization: **Process Control, System Identification, Biomedical Instrumentation.**

7. Employment Profile: Experience at NIT-T

Employer	Job Title	From	To
National Institute of Technology, Trichy	Associate Professor, Dept of Instrumentation and Control.	6-11-2011	Till date
	Assistant Professor, Dept of Instrumentation and Control	10-11-2008	05-11-2011
	Lecturer, Dept of Instrumentation and Control	29-03-2006	09-11-2009
NDF, AICTE, National Institute of Technology, Trichy.	Research Scholar - Full Time	29-11-04	29-11-06
National Institute of Technology, Trichy	Project Associate	02-8-04	28-11-04

8. Academic Qualification (from Highest degree to High school):

Degree	Branch/Subjects	Class	Year of Passing	University/Board
Ph.D.	Process Control and Instrumentation		2007	NDF-AICTE, National Institute of Technology, Trichy
M.E	Process Control and Instrumentation	First Class	2002	Annamalai University, Chidambaram
B.E	Electronics and Instrumentation	First Class	1999	Bharathidasan University, Trichy
HSC	Maths, Physics, Chemistry, Biology, English	First Class	1995	R.S.K Hr Sec School, C.B.S.E
SSLC	Maths, Science, English, Social Studies	First Class	1993	R.S.K Hr Sec School, C.B.S.E

9. Academic/Administrative Responsibilities held within the university:

Position	Department/Institution	From – To
Head of the Department, Dept. of Instrumentation and Control	Department	Oct 2013 – May 2013 Oct 2016 – Sep 2013
Additional Coordinator	Institution	Dec 2013 – till date
Associate Dean (Faculty Welfare)	Institution	Oct 2012 – Nov 2015
Coordinator, M.Tech.(PCI) course	Department	June 2014-16
Nodal officer (Procurement)	Institution	Dec 2010 – Dec 2013
Member, Advisory Committee on Faculty Recruitment (ACoFAR)	Institution	2013
Member, Teaching Learning Centre	Institution	2014
Institute Accreditation Committee	Institution	2014
Committee for NMRs Institution	Institution	2014
Convener, NBA Hospitality committee	Institution	From 2014
Member of Time Table Committee	Department	2008 – 13
Member, Public Relation Committee, Convocation	Institution	2010-13
Secretary, Public Relation Committee, Convocation	Institution	2014-16
Member, Reception Committee, Convocation	Institution	2009-12
Member, Department Administrative Council	Department	2012-13
Convener, Chief Guest and Press committee, Institute day	Institution	2013-16
Chairman for logistic committee in orientation programme for first year B.Tech. and B.Arch. 2013-14.	Institution	2013-15
Coordinator, Library committee	Department	2008-12
Member, Preparation of Proposal Teqip-II	Institution	2010
Member, Announcement and Program management committee, Institute day	Institution	2008-13
Member – Non-teaching staff promotion Committee	Institution	2013
Member, Safety and Security Committee, Pragyan	Institution	2013
Director's Nominee, Technical Committee towards Hiring of Ambulance-Advanced Life support (mobile ICU) for NIT-T hospital	Institution	2013
Coordinator, Responsibilities of Staffs	Department	2010-13
Staff Advisor, Trekking and Karate club	Institution	2008-12
Member, Faculty Apportionment committee	Institution	2012
Staff Advisor, SENSORS	Department	2011
Member, Media and Public Relations	Institution	2011
Member, Program committee, Festember	Institution	2010
Member, Events coordination, Pragyan	Institution	2010
Member, Prizes Committee, Annual Sports Day	Institution	2010
Staff Advisor, Festember	Institution	2008 and 2009
Member, Smart campus committee core team	Institution	2007

10. Academic/Administrative Responsibilities held outside the university:

Position	Institution	From	To
Member	Model Curriculum Development for Instrumentation and Control Engineering for NITs.	2016	
Member	Selection Committee for recruiting Technical Superintendent and Junior Technical Superintendent at IIT Madras, Chennai	2014	2015
Member, Board of Studies	Dept of EEE, Thiagarajar Engineering College, Madurai.	2014	2016
Member, Board of Studies	Dept of EIE, Bannari Amman Institute of technology, Sathyamangalam	2015	2017
Member	Faculty Selection Committee, School of Electrical and Electronics Engg., VIT, University	2016	
Member, Board of Studies	Dept of EIE, Karunya University, Coimbatore	2013	2015
Member, Board of Studies	Dept of EIE, Adiyamaan College of Engineering, Hosur.	2011	2013
Member, Board of Studies	Dept of Electronics and Instrumentation Engineering, Annamalai University, Chidambaram.	2010	2013
Member, Board of Studies	Dept of EIE, Dr.Mahalingam College of Engg and Technology, Pollachi.	2010	2012
External Expert for Academic Audit	Dept of EIE, Karunya University, Coimbatore.	2010	2011

11. Awards, Associateships etc. NA

Year of Award	Name of the Award	Awarding Organization

12. Fellowships:

Year of Award	Name of the Fellowship	Awarding Organization	From	To
2004 - 06	National Doctoral Fellow (NDF). Rs.12000/month as Stipend.	All India Council for Technical Education, (AICTE) New Delhi.	Nov 2004	March 2006

13. Details of Academic Work:

(i) Curriculum Development

1. Chairman, Board of Studies meeting for B.Tech. (ICE) Program held on April 28, 2014, May 24, 2014, April 6, 2015 and April 1, 2016.
2. Chairman, Board of Studies meeting for M.Tech. (PCI) Program held on July 20, 2014 and April 6, 2015
3. Instrumental in evolving Programme Educational Objectives (PEOs), Programme Outcomes (POs), Vision and Mission statements of our Department.
4. Submission of NBA SAR Part B for B.Tech. (ICE) and M.Tech. (PCI) program on Sep 15, 2015.
5. Formulated and consolidated the Credit based Curriculum for B.Tech. (ICE) students admitted in 2013 and 2014. The hard copy of the syllabus was circulated to all the students of the concern batch.
6. Formulated and consolidated Flexible Curriculum for B.Tech. (ICE) students admitted in 2015 and 2016.
7. Formulated and consolidated the Credit based Curriculum for M.Tech. (PCI) students admitted in 2014 and 2015. The hard copy of the syllabus was circulated to all the students of the concern batch.
8. Formulated and consolidated the Flexible Curriculum for M.Tech. (PCI) students admitted in 2016.
9. Organised several industrial visits to TNPL, Karur, SPB, Erode, India Cements, Namakkal, NLC, Neyveli, BHEL, Trichy, Mahendra, Chennai.
10. Class Committee Chairperson for UG and PG course.
11. Served as Faculty advisor and PAC chairperson for various batches of students.
12. Served as time table committee member prepared the work load allotment and time table for the department for four years.

Design and Development of Experiments in Laboratory:

1. Process Control Laboratory, Virtual Instrumentation Laboratory, Interfacing Lab., Industrial Automation Lab. and Biomedical Instrumentation.
2. The Process Control Laboratory was developed with experiments on Quadruple tank System, Two tank Heating System, Neutralization Process Control, Spherical and Conical Tank System, Multiprocess control station, Smart control trainer and numerical experiments on control system with MATLAB and Simulink.
3. Industrial Automation lab. towards installation of Distributed Control System and interfacing the DCS with pilot test rigs under **DST-FIST**.
4. Virtual Instrumentation Laboratory and Interfacing Lab.
5. Design of Electronic circuits with GUI, PID controller, Pulse width modulation logic, Control of stepper motor, System responses, Wireless Sensor Network, Interfacing data acquisition system with Matlab and LabView.

(ii) **Courses taught at Post graduate and undergraduate level**

S.No	Code and Subject	Prog and Semester
1.	ICIR 15 Introduction to Instrumentation and Control Engineering (Nov 16)	B.Tech and I
2.	IC 663 Signal Conditioning and Processing (Nov 14 and 15)	M.Tech and I
3.	IC 306 Product Design and Development (T) (Nov 13-15)	B.Tech and VI
4.	IC 407 Product Design and Development (P) (Nov 14-16)	B.Tech and VII
5.	IC 405 Biomedical Instrumentation (Nov 12)	B.Tech and VII
6.	IC 458 NN, Fuzzy and Control (May 12)	B.Tech and VIII
7.	CL654 Industrial Commn. System (May 12)	M.Tech and II
8.	IC 405 Biomedical Instrumentation (Nov 11)	B.Tech and VII
9.	IC 458 NN, Fuzzy and Control (May 10)	B.Tech and VIII
10.	CL654 Industrial Commn. System (May 10)	M.Tech and II
11.	IC 307 Programming Tools and Tech (Nov 11)	B.Tech and V
12.	IC 457 Digital Control Systems (Nov 09)	B.Tech and VII
13.	IC 304 Process Control (May 2009)	B.Tech and VI
14.	CL654 Industrial Commn. System (May 09)	M.Tech and II
15.	IC 303 Microprocessor and Microcontroller (08)	B.Tech and V
16.	IC 405 Biomedical Instrumentation (08)	B.Tech and VII
17.	CL666 Logic and DCS (08)	M.Tech and II
18.	CL654 Industrial Commn. System (08)	M.Tech and II
19.	Optimization part in EE 801 Research Methodology course. (2010-13 and 16)	Ph.D.

Coordinator for Industrial Lectures for B.Tech.VI Semester (Jan 2015 and 2016) and Extramural Lecture series for M.Tech. (PCI) (Jan 2015).

(iii) **Other contribution (s)**

Industry Institute Interaction

Established strong liaison with industries like **CDAC-Trivandrum**, **IICPT-Thanjavur**, **SCTIMST-Trivandrum**, **BHEL-Trichy**, **OFT-Trichy**, **DRDL**, Hyderabad, SPB Erode etc.,

iv) **Projects guided at Post graduate level:**

S.No.	Name of the Student	Project Title
1	Vaibhav kumar Agarwal, 2016	Slip and identification and controlling for railway Locomotive.
2	Indhu B, 2015 (NAL, Bangalore)	Gimbale camera control for on-point target tracking. Real time implementation of Gimbaled camera control for on-point target tracking.
3	Adithya chandrasekar, 2016	Study and implementation of different control schemes for lateral control of car.
4	S.Prabhu priya, 2014	Design and implementation of controller for hybrid system.
5	Hemanta kumar brahma, 2014	Control of magnetic levitation system. Intelligent control of secondary super heater.
6	Navin John Mathew,2012-13 ISRO,Trivandrum	Modeling and Stabilization Control of A Slosh Inverted Pendulum System. Swinging up and Stabilization Control of A Rotary Inverted Pendulum System.
7	S.P.Subashini,2012-13	Design of Multi Parametric Model Predictive Controller for Heat Exchanger system. Implementation of MP-MPC with Smith Predictor in Heat Exchanger System.
8	S.Prabhu Priya,2012-13	Unified Method of Designing Controller for Power Electronics Converters. Design and Implementation of Controller for Hybrid System.
9	V.Jithin,2011-12 (BHEL,Trichy)	Design and Implementation of Fractional Order Controller. Identification and Control of Preheater for a Supercritical Boiler Test Bed.
10	A.Rajeev,2011-12 (SCTIMST,Trivandrum)	Modeling and Simulation of A Pulse Duplicator - Phase -I.
11	Jaspreet Kaur Sadana,2011-12	Design and Implementation of Controllers for Nonlinear Process Design of Fractional Order Controller using Particle Swarm Optimization for Heat Exchanger.
12	Rajeev A, 2011	Modelling and simulation of a pulse duplicator
13	N.Satti babu,2009-10	Control of Multivariable process using Recurrent Neuro-Fuzzy Networks.
14	P.Sathish Kumar,2009-10	Control System Design for Type-1 Diabetic Patients.
15	Kiran Kumar,2009-10	Control of Nonlinear Process using RTDA Design and implementation of fractional order controller for heat exchanger
16	Satti Babu Nagotu, 2009	Modelling and control of multivariable process using LABview. Control of multivariable process using recurrent neuro fuzzy networks.

17	Abhay Singh Gour,2008	Modeling and Control of Multivariable Process using Labview.
18	SVB Suresh Vasabhaktula,2008	Implementation of DSP Techniques for analysis of sensor data.
19	D.Kesavan,2007	Control of Neutralization Process.
20	Srikanthi Paida,2007	Obstruction Flow Measurement and Control using Infineon Microcontroller.

14. Details of Major R&D Projects:

Funding Agency	Title of the Project	Amount Lakhs	Status
DST-I-PHEE	Design and Development of solar Photovoltaic Powered Cold Storage System	Rs. 57	Ongoing
M.H.R.D (R&D)	Embedded Based Pressure Measurement system	Rs. 8	Completed
DST (Young Scientist Scheme)	Online Control of Multivariable system using Soft Computing	Rs.9.78	Completed Awarded “ Very Good Work ”
CDAC, Trivandrum	Modeling and Control of Processes with Large Process Lag and Random Disturbances.	Rs.10	Completed

Member in Submission of TEQIP-II proposal and sanction was accorded for Rs.19.5 crores under NPIU, World Bank, MHRD from 2012-2017.

15. Number of PhDs and MS guided

Name of the PhD Scholar	Title of PhD Thesis	Role (Supervisor/Co-Supervisor)	Year of Award
T.Vinoprabha	Design and Implementation of Fractional Order Controllers SISO Systems.	Supervisor	2013
C.Ahilan	Investigation on Energy Conservation Efforts in Industrial System - Interdisciplinary research with Production Engg.	Co-Supervisor	2012
V.Kirubhakaran	Studies on Explicit Model Predictive Control Applied to Chemical and Biochemical Processes - Interdisciplinary research with Chemical Engg.	Co-Supervisor	2015
E.Sathish	Characterization of Temporal Lobe Epileptic Seizures and Psychogenic Non Epileptic Spells using Electroencephalography and Optimized Machine Learning methods. Under Co-Guideship by Dr. K. Radhakrishnan, Neurologist, Former Director, SCTIMST-Trivandrum	Supervisor	2016

M.S. (By Research) guided/co-guided:

Name of the PhD Scholar	Title of PhD Thesis	Role (Supervisor/Co-Supervisor)	Year of Award
Chinmay Sahu	Studies on Explicit Model Predictive Control Applied to building heating, Ventilation and Air Conditioning Systems - Interdisciplinary research with Chemical Engg.	Co-Supervisor	2015
Asish Gupta	Simultaneous Recording of EEG-fMRI to detect Epileptic foci.	Supervisor	2013
Rajni Jain	Design of Self Tuning Fuzzy Controllers for Nonlinear Systems - Interdisciplinary research with Chemical Engg.	Co-Supervisor	2009

**16. Participation in Workshops/Symposia/Conferences/Colloquia/Seminars/School etc.,
(Mentioning the role)**

S.No.	Areas of Training (Days)	Sponsoring Agency	Period
1.	Conclave on Academic reforms CAR 2015	TEQIP-II	28-04-2015 to 29-04-2015
2.	Sustainable Institute Industry Partnership	SEED, IIT Madras	August 25-26,2014
3.	Teaching Learning in Higher Technical Education	CCE,IIT Madras	May 28-29 2014
4.	Workshop on Fire Safety	Safety Center, IIT Gandhinagar	March 2-3, 2013
5.	Decision Making for Effective Leadership	ASCI, Hyderabad	March 4-8,2013
6.	Indian Engineering Congress	Institution of Engineers	December 20-22,2013
7.	Supercritical Technology for Power Sector	ESCI,Hyderabad	February 3-4,2012
8.	National Programme on Technology Enhanced Learning	NPTEL, IIT Madras	November 4-6,2011
9.	Biomedical Signal and Image Processing	Medical Electronics,AU,Chennai	September 23-24,2010
10.	Applied Nonlinear and Intelligent Control	CCE,IISc,Bangalore	May 11-15,2009
11.	Advanced Topics in Wavelet Transforms: Theory and Applications	AICTE, IIT Madras	July 6-11,2009
12.	RTT in Medical Imaging and Image Processing	SMST,IIT Kharagpur	November 3-7,2008
13.	Embedded System Design Using Micro-Controllers.	ISOI,IISc,Bangalore	May 26- June 4,2008
14.	Instructional Design and Delivery	NITTR,Chennai	July 7-12,2008
15.	Process Identification and Control	MHRD-AICTE	June 16-28,2008
16.	Embedded Systems and Technology	CEP,IIT Kharagpur	June 25-30,2007
17.	MEMS and SMART Structures	ISSS,Bangalore	Dec 11-16 2006

18.	Process Control in Chemical Industries	AICTE and ISTE	Nov 15-26,2004
19.	Sensor Instrumentation	DST, IITK and CGCRI	Nov 3-15,2003

17. Workshops/Symposia/Conferences/Colloquia/Seminars organized (as Chairman/Organizing Secretary/Convenor/Co-Convenor)

Workshop Coordinated:

S.No.	Name of the Course	Funding Agency	Date
1.	Process Instrumentation and Control	TEQIP-II	July 4-9, 2016
2.	Advanced Control Engineering ACE-2015	Self-supporting category	October 9-10,2015
3.	Emerging Avenues in Advanced Control	National Instruments	Oct 17,2015
4.	Industrial Automation	Self-supporting category	August 17-19, 2015
5.	Product Designing and Entrepreneurial Workshop	TEQIP-II	March 15,2015
6.	Recent Trends in Biomedical Engineering	TEQIP-II	Feb 22-23,2014
7.	Cancer Perspectives - Then and Now	TEQIP-II	December 28,2013
8.	Biomedical Equipment-Testing and Calibration- BETC 2013	Technical Quality Improvement Program (TEQIP-II)	Nov 16,2013
9.	Telemedicine	Technical Quality Improvement Program (TEQIP-II)	July 12-14,2013

10.	Advanced Process Control	TEQIP-II	June 24-26,2013
11.	Fascinating and Challenging Applications of Estimation	Self-Supporting-ACDOS	November 10-11,2011
	Recent Trends in Biomedical Systems	AICTE-MHRD	28 June - 3 July 2010
12.	Computer Control of Processes	AICTE-MHRD	Jan 2 - 6 2010
13.	Intelligent Systems	AICTE-MHRD	July 13-17, 2009
14.	Challenges in Control Engineering	UKERI	Jan 8-10, 2009
15.	Telemedicine	TEQIP-I	September 27,2008
16.	Fault Diagnosis and Applications	TEQIP-I	April 22,2008
17.	Multivariable Control Systems	TEQIP-I	February 29,2008
18.	Control Engineering - Trends and Practices	Self-Supporting	Nov 23 & 24, 2007

Conferences Organized

S.No.	Name of the Conference	Funding Agency	Date	Position Held
1.	Advances in Control Optimization of Dynamical Systems (ACODS) 2016	IFAC and ACODS Society	February 1-5, 2016	Coordinator
2.	International Conference on TIMA 2007	NIT-T and MIT,AU	Jan 2007	Joint Treasurer
3.	National Conference on ICECON 2007 and 2009	NIT-T	Dec2007 and 2009	Organising committee Member

18. Invited Talks delivered

Topic	Date	Inviting Organization
PC based Instrumentation	12-02-2008	Ordinance Factories Institute of Learning, Ambarnath.
Advanced Control Systems	20-24-02-2013	DRDL, Hyderabad.

Delivered **Four** guest lectures in industries/research organization like **DRDL**, Hyderabad, **OFIL**, Ambarnath, **OFT**, Trichy etc., for young **Scientist and technicians**. Delivered more than **Eighteen** guest lectures in leading academic/educational institutions for faculties in various engineering college and students.

19. Membership of Learned Societies

Type of Membership	Organization	Membership No with date
Executive committee member, and Committee Member for Electronics and Telecommunication Engg. Division, Tiruchirappalli Local Centre From 2010 to till date.	Institution of Engineers	No.M-140948-9
Life Member	ISTE, New Delhi	LM81793
Executive committee member, served as Joint secretary and founder member	Automatic Control and Dynamic Optimization Society, IISc, Bangalore.	
Life Member	Administrative Staff College of India, Hyderabad.	Prg./12-13/1/8/50352

20. Academic Foreign Visits

Country Visited	Period of visit		Purpose of visit
	From	To	
Malaysia	3 April 2006	5 April 2006	International Conference on Modeling and Simulation (MS06) Received Travel Grant from CSIR , New Delhi
Singapore	12 December 2007	12 January 2008	Internship Training under TEQIP
U.S.A	20 October 2010	22 October 2010	International Conference on World Congress on Engineering and Computer science (WCECS 2010), UCB,USA. Received Travel Grant and registration fees from DST , New Delhi under Young Scientist Scheme
	14 March 2011	16 March 2011	IEEE International Conference on Industrial Technology, AUBURN University, USA.

21. Publications

A. International Journals

1. E.Sathish, **N.Sivakumaran**, S.Sankaranarayanan, Grey wolf optimization based parameter selection for support vector machines, *International Journal for Computation and Mathematics in Electrical and Electronic Engineering (SCI-Expanded Indexed)* - Vol. 35, no. 5, pp.1513-1523, 2016.
2. E.Sathish, **N.Sivakumaran**, Sishaj P Simon, S.Raghavan, Genetic algorithm based feature selection for classification of focal and non-focal intracranial Electroencephalographic signals, *Journal of scientific and industrial research (SCI Indexed)* - Accepted for publication.
3. E.Sathish, **N.Sivakumaran**, K.Radhakrishnan, S.Raghavan, T.K.Radhakrishnan, Importance of classification algorithms in epileptic seizure detection, *Journal of bioengineering & biomedical (Pubmed Indexed)* – vol. 6, no. 3, pp. 1-2, 2016.
4. Chinmay Sahu, V.Kirubhakaran, T.K.Radhakrishnan, **N.Sivakumaran**, “Closed loop building data based estimation and Energy Efficient Model Predictive Control of Heating Ventilation and Air Conditioning System”, *Ecotoxicology and Environmental Safety*, 121 236-243, 2015.
5. Chinmay Sahu, V.Kirubhakaran, T.K.Radhakrishnan, **N.Sivakumaran**, “Explicit Model Predictive Control of Split-type Air Conditioning System”, *Transactions of the Institute of Measurement and Control*, 32 (3), pp.1-9, 2015. (IF **0.736**)
6. V.Kirubhakaran, T.K.Radhakrishnan, **N.Sivakumaran**, “A Metaheuristic Patient Estimation Based Patient Specific Fuzzy Aggregated Artificial Pancreas Design”, *Industrial & Engineering Chemistry Research I&EC Res (ACS)*, 53(39), 15052–15070, 2014. (IF **2.235**).
7. V.Kirubhakaran, T.K.Radhakrishnan, **N.Sivakumaran**, “Distributed Multiparametric Model Predictive Control Design for a Quadruple tank process”, *Measurement*, 47, 841-854, Elsevier, 2014. (IF **1.526**)
8. V.Kirubhakaran, T.K.Radhakrishnan, **N.Sivakumaran**, “Multiparametric Model Predictive Control based regulation of Blood Glucose in type 1 Diabetics under unmeasured meal Disturbances: A Simulation Study”, *Int. J. Biomedical Engineering and Technology*, Inderscience, 14(2), 2014.
9. C.Ahilan, S.Kumanan, **N.Sivakumaran**, J.Edwin Raja Dhasd, “Modeling and prediction of machining quality in CNC turning process using intelligent hybrid decision making tools”, *Journal on Applied Soft computing, Elsevier*, 13, 1543-1551, 2013. (IF **2.679**)
10. T.Vinopraba, **N.Sivakumaran**, S.Narayanan, T.K.Radhakrishnan, “Design of internal model control based fractional order PID controller”, *Journal of Control Theory and Applications*, 10 (3), 297-302, 2012.
11. Rajni Jain, T.Vinopraba, T.K.Radhakrishnan, **N.Sivakumaran**, “Design of Fuzzy-PI Controllers for MIMO Process”, *Control and Intelligent Systems*, 40 (4), 1-9, 2012.
12. Rajni Jain, **N. Sivakumaran**, T.K.Radhakrishnan, “Design of self tuning fuzzy controllers for nonlinear systems”, *Expert Systems with Applications, Elsevier* 38, 4466–4476, 2011. (IF **1.965**)
13. P.Satheeshkumar, T.Vinopraba, **N.Sivakumaran**, S.Raghavan, “Design and implementation of Model Predictive controller for Type I diabetics”, *Int. J. Biomedical Engineering and Technology*, Inderscience, 6(4), pp. 422-430, 2011.
14. S.Nithya, **N.Sivakumaran**, T.Balasubramanian, N.Anantharaman, “Intelligent controller Design for Nonlinear Processes using Genetic Algorithm”, *IUP Journal of Mechanical Engineering*, IV(1), 7-24, 2011.

15. C.Ahilan, S.Kumanan, **N.Sivakumaran**, “Optimization of CNC turning of AISI 304 Austenitic stainless steel using Grey based fuzzy logic with multiple performance characteristics”, *Journal of Machining and Forming Technologies*, 3(3-4), 1–19, 2011.
16. C.Ahilan, S.Kumanan, **N.Sivakumaran**, “Online performance assessment of Heat Exchanger using Artificial Neural Network”, *Int. Journal of Energy and Environment*, 2(5), 829-844, 2011
17. **T.Vinopraba**, N.Sivakumaran, T.K.Radhakrishnan, S.Raghavan, “Modelling and Control of blood glucose regulation in Type I Diabetic Mellitus”, *Measurement and Control*, AMSE, 83 (1), 17-32, 2010. (IF **0.76**)
18. C.Ahilan, S.Kumanan, and **N.Sivakumaran** “Design and implementation of an intelligent controller for a split air conditioner with energy saving”, *Journal of Advances in Modeling*, AMSE, 65(1), 21-40, 2010.
19. C.Ahilan, S.Kumanan, **N.Sivakumaran**, “Application of Grey based Taguchi method in multi response of optimization of turning process”, *Advances in Production Engineering and Management*, 5(3), 171-180, 2010.
20. S.C.Lee, Q.G. Wang, W.X. Zheng, **N. Sivakumaran**, “Stabilization and Control of Unstable Processes with Large Dead Time”, *Transactions of the Institute of Measurement and Control*, 32 (3), pp.286-306, 2010. (IF **0.736**)
21. C.Ahilan, S.Kumanan, **N.Sivakumaran**, “Optimizing Power Consumption for CNC turning process using grey based fuzzy logic”, *Int. J. Machining and Machinability of Materials*, 5 (4), 2009.
22. S.Narayanan, N.Sivakumaran, **T.Vinopraba**, N.Selvaganesan, “IMC Based $PI^{\lambda}D^{\delta}$ Controller Design for Gas Turbine Plant”, *Modeling and Simulation*, AMSE 10 (1), pp. 63-72, 2009.
23. S.Nithya, **N.Sivakumaran**, T.Balasubramanian, N.Anantharaman, “Design of Controller for Nonlinear process using Soft Computing”, *Instrumentation Science and Technology*, Taylor and Francis ,36(2), pp. 437-450, 2008. (IF **0.8**)
24. **N.Sivakumaran** and T.K.Radhakrishnan, “Modeling and Control of Multivariable Processes using Recurrent Neural Networks”, *International Journal of Modeling and Simulation*, ACTA Press 28(1), pp. 20-26, 2008.
25. S.Nithya, **N.Sivakumaran**, T.Balasubramanian, N.Anantharaman, “Intelligent control of interacting nonlinear process in real time”, *International Journal of Applied Engineering Research*, 3(4), 491-503, 2008.
26. S.Nithya, Abhay Singh Gour , **N.Sivakumaran**, and N.Anantharaman, “Measurement and control of Process using soft computing”, *Instrumentation Science and Technology*, Taylor and Francis ,36(2), pp. 194-208, 2008. (IF **0.8**)
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