

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

Curriculum Vitae

Dr. Dhanalakshmi K. is a Professor of the Department of Instrumentation and Control Engineering, National Institute of Technology, Tiruchirappalli (NIT T). Presently she is the Head of the Department. She has held other administrative roles of the institute, as Associate Dean (Academic Programmes) Oct. 2012 – Nov. 2015, Chairperson Hospital Feb. 2017 – May 2018 and Chairperson, Guest House Advisory Committee Jan. 2019 – Nov. 2021. Dhanalakshmi graduated in Electrical and Electronics Engg. from Alagappa Chettiar College of Engineering and Technology, Karaikudi in 1991, completed her M.E. (Power Systems) from Regional Engineering College, Tiruchirappalli in 1994 and obtained Ph.D. from National Institute of Technology, Tiruchirappalli in 2009. Dhanalakshmi has served as a faculty member of EEE at Shanmugha College of Engineering, Thanjavur (now SASTRA University) during June 1995 – May 1999 and was with the ECE dept., Periyar Maniammai College of Technology for Women, Thanjavur (now Periyar Maniammai University) during Aug. 1991 – May 1995.



Dhanalakshmi worked for Ph.D. on vibration control of structures using shape memory alloy. Since then, her areas of interest include soft robotics, assistive devices, design and development of instrumentation systems and control systems, smart materials and structures, energy harvesting and appropriate technology. She has done a sensible amount of research work in the area of shape memory material based systems design for instrumentation and control from which she has above 100 significant research articles published in International Journals and Conferences. She is involved in sponsored research projects as PI, Co-PI and mentor. She is an outstanding and recognized reviewer of reputed journals and, books in the field of electrical engineering.

Dhanalakshmi has set up the Smart Materials and Systems Laboratory at NIT Tiruchirappalli, which contributes to research in terms of research publications, MoUs and, opportunities to internships and continuous education. She has traveled to countries abroad for academic exposure and to present papers in prestigious conferences and, has had the opportunity to interact with technical experts from all over the world. She visited the SSS Lab, Inha University S. Korea during winter 2007, RWTH Aachen Germany during summer 2018 and TU Eindhoven in 2019. She is a Senior Member of IEEE, Fellow of IEI and holds life membership in professional societies like ISTE, SSI, ISSS and ISoI. Dhanalakshmi has received best paper award for 2 of her contributions in IEEE conferences. She is a facilitator in Human Resource Management since August 1999.

1	Name	Dr. K. Dhanalakshmi
2	Designation	Professor
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- 5 Email (Primary) dhanlak@nitt.edu
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- 6 Field(s) of Specialization Smart-materials based transducers,
Structronics, Soft Mechatronics
Assistive Technology and Responsive robots
Structural Health Monitoring,
Energy Harvesting/Scavenging

7. Employment Profile

Job Title	Employer	From	To
Professor Instrumentation and Control Engg. Teaching, Research, Training	National Institute of Technology Tiruchirappalli.	12 Mar. 2018	till date
Associate Professor (4 tier) Instrumentation and Control Engg. Teaching, Research, Training	National Institute of Technology Tiruchirappalli.	1 Dec. 2017	11 Mar. 2018
Associate Professor (3 tier) Instrumentation and Control Engg. Teaching, Research, Training	National Institute of Technology Tiruchirappalli.	1 July 2012	30 Nov.2017
Assistant Professor Instrumentation and Control Engg. Teaching, Research, Training	National Institute of Technology Tiruchirappalli.	25 Sept. 2009	30 June 2012
Lecturer (Selection Scale) Instrumentation and Control Engg. Teaching, Research, Training	National Institute of Technology Tiruchirappalli.	1 July 2009	24 Sept.2009
Lecturer (Senior Scale) Instrumentation and Control Engg. Teaching, Research, Training	National Institute of Technology Tiruchirappalli.	1 July 2004	30 June2009
Lecturer Instrumentation and Control Engg. Teaching, Training	National Institute of Technology Tiruchirappalli.	14 May 1999	30 June 2004
Lecturer, Dept. of EEE Teaching, Training, Administrative	Shanmugha College of Engineering [now SASTRA University] Thanjavur	1 June 1995	13 May 1999
Lecturer, Dept. of ECE Teaching, Training	Periyar Maniammai College of Technology for Women [now Periyar Maniammai University] Thanjavur	16 Aug. 1991	31 May 1995

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

Examination	Board / University	Year	Division/ Grade	Subjects
Ph.D.	National Institute of Technology Tiruchirappalli	2009		Instrumentation and Control Engineering
M.E.	Regional Engineering College Tiruchirappalli Bharathidasan University	1994	First 71.7 %	Power Systems Electrical and Electronics Engg.
B.E.	Alagappa Chettiar College of Engineering and Technology, Karaikudi Madurai Kamaraj University	1991	First class with Distinction 78%	Electrical and Electronics Engg.
H.Sc.	St. Joseph of Cluny Mat. Hr. Sec. School, Neyveli Tamil Nadu State Board	1987	First class (85.75%)	PCMB
S.S.L.C.	St. Joseph of Cluny Mat. Hr. Sec. School, Neyveli Matriculation	1985	First class (81.09%) School fourth rank	-

9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/ Centre/Institution	From	To
Head Instrumentation and Control Engg.	NIT, Tiruchirappalli	15 Nov. 2021	till date
Officer Incharge, Infrastructure Development Officer's Club	NIT, Tiruchirappalli	10 Feb. 2020	Till date
Chairperson, Guest House Advisory Committee	NIT, Tiruchirappalli	21 Jan. 2019	30 Nov. 2021
Coordinator, IEEE Women in Engg. (WiE)	NIT, Tiruchirappalli	22 May 2018	May 2021
Chairperson, Hospital Advisory Committee	Hospital, NIT, Tiruchirappalli	16 Feb. 2017	17 May 2018
Member, Implementation Committee Member, System Requirement Specifications (SRS) Committee	Management Information System (MIS)	Oct. 2012	17 May 2018
Associate Dean, Academic Programmes	NIT, Tiruchirappalli	10 Oct. 2012	23 Nov. 2015
Member, Governing Council, IoT Lab/Innovation Centre	NIT, Tiruchirappalli	16 July	

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		2015	
Faculty Co-ordinator, SPIC MACAY – NIT Tiruchirappalli Chapter	NIT, Tiruchirappalli	March 2013	Dec. 2021
Member, Programme Committee, Community Radio Service	NIT, Tiruchirappalli	Nov. 2016	Till date
Member, Quarters Committee	NIT, Tiruchirappalli	Nov. 2016	May/Aug. 2018
Member, Special Task Force	Centre of Excellence, Smart Systems and MEMS (S ² - MEMS)	March 2012	March 2015
Faculty Advisor, Tamil Mandram	NIT, Tiruchirappalli	2006	2016
Member Secretary, Degree Certificate Design Committee	Office of the Dean (Academic)	2014	2015
Member Secretary, Uniform Curriculum Framing Committee AND Board of Studies, I year BTech	Office of the Dean (Academic)	2012 2013	2013 2014
Member, Programme Committee, NBA Committee Visit	NIT, Tiruchirappalli	2014, 2015	2019
Faculty in charge, Modelling and Simulation Lab.	Instrumentation and Control Engg. Dept.	2007	Till date
Faculty in charge, Dept. Computer Center	Instrumentation and Control Engg. Dept.	2002	2005
Member, DPEC, M.Tech. (PCI)	Chemical Engg.	2007	2009
Physical Stock Verification Officer	ECE Dept. Arch. Dept.	2003 2001	2006 2002
Co-ordinator, Children's Club of NITT Chairperson, Children's Club Committee	NIT, Tiruchirappalli	Dec. 2005	Till date
Chairperson, Day care Committee of NIT T		Nov. 2018	Till date

10. Academic/Administrative Responsibilities outside the University

Position	Institution	From	To
Anna University Nominee, BoS, EIE Dept.	Kumaraguru College of Technology, Coimbatore	2019	till date
Expert, Recruitment of Professor, Electrical Engg. Dept.	K Ramakrishnan College of Engineering, Tiruchirappalli	29 May 2018	
Member, Question Paper Setting and Passing Board	Anna University, Chennai	2001 to 2008,	

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- Electrical Engg. (EEE, EIE, ICE)	PSG College of Tech., Coimbatore	2020 till date	
Expert, Academic Audit	PSG College of Tech., Coimbatore	Nov. 2014 - Nov. 2019	
Member & Expert, Inspection Committee	Anna University, Chennai	March 2014, 2019, Mar. 2020	
Reviewer, Journal Technical Programme Committee, IEEE Conference	IEEE Journals and Conferences- IEEE Access 2019 IEEE Conference on Decision and Control (CDC) ELSEVIER Journals- Sensors and Actuators A: Physical Journal of The Franklin Institute Mechanical Systems and Signal Processing Measurement Journal of Sound and Vibration Applied Ocean Research Materials and Design Engineering Science and Technology, an international journal SAGE Journals- Journal of Intelligent Material Systems and Structures IOP- Smart Materials and Structures Engineering Research Express	2010	Till date
Thesis Examiner- Ph.D., M.E., Examiner- M.E., B.E. DC member	Anna University Chennai CUSAT Cochin Bharathidasan University Trichy Madras University Chennai KSR, Thiruchengode SASTRA, Thanjavur	2016 2000	Till date 2008
Question paper setting	NTPC, Recruitment of Graduate Engineers (EEE) NTC, Recruitment Andhra University Entrance Exam – APPGECET M.Tech. (Instrumentation Engg.) CUSAT CAT 2019 for M.Sc. (Instrumentation)	1997 2017 Mar. 2018 Feb. 2019	
Expert, Board of Studies Mechatronics	KS Rangasamy College of Tech., Autonomous	2017	2019

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Organizer, Smart India Hackathon, Software Edition: 2-3 Mar. 2019 Hardware Edition: 8-12 Jul. 2019	MHRD	2019	
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11. Awards, Associateships etc.

Year of Award	Name of the Award/Associateship	Awarding Organization
2007	Visit and Training at an International University Prof. S B Choi, SSS Lab., Inha University, Incheon, S Korea 20 Nov. – 19 Dec. 2007	TEQIP
2012	Best Poster Paper	IEEE 6 th International Conference on Sensing Technology ICST 2012 IEEE Instrumentation and Measurement Society (IEEE IMS)
2015	International Travel Grant to participate in SPIE Smart Structures/NDE, San Diego, USA	Science and Engineering Research Board (SERB), DST, GoI
2015	First research scholar Josephine Selvarani Ruth D. invited to participate in the Festival of Innovations (FOIN-2015) at President's Estate, Rashtrapati Bhavan, New Delhi, 10 March 2015 for contributing to one of the best innovations of NIT Tiruchirappalli.	
2017	Appreciation in recognition by NIT Tiruchirappalli for the contribution to the growth of the institute through Research Publications in 2017	
2017	BHARAT VIKAS AWARD, Institute of Self Reliance Bhubaneswar	
2018	Certificate of Appreciation in recognition for the contribution to the growth of NIT Tiruchirappalli through Patent (Filed) in 2018	
2020	Best Paper Award, 15th IEEE International Conference on Industrial and Information Systems, 26th to 28th November 2020, Indian Institute of Technology Ropar	

12. Fellowships

13. Details of Academic Work

(i) Curriculum Development

Sl.No.	Curriculum development
1.	Member, Senate-sub-committee on Academic Reforms, 22nd May 2015 – 5th March 2017
2.	Technical Committee Member, Conclave on Academic Reforms (CAR), 28 & 29 April 2015 Organised the pre-senate workshop for Flexible Curriculum Design and Academic Flexibility, 27 April 2015

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3.	Member Secretary, Uniform Curriculum framing Committee 2013 Guidelines were framed and recommended for the Uniform Curriculum for all the programmes run by the institute, further the revised curriculum with syllabus was collected, verified and updated in the website.
4.	Member Secretary, Board of Studies, First year B.Tech. for AY 2013-14 Co-ordinated to invite experts, convene the BoS and finalise the syllabus w.r.t. the guidelines for the uniform curriculum, verified and updated in the website.
5.	Introduction of elective course on Smart Materials and Systems Developed the syllabus for B. Tech. (ICE) courses on electric circuits, electronics and control systems – theory and lab.

(ii) Courses taught at Postgraduate and Undergraduate levels

Undergraduate levels	Automatic Control Systems, Modern Control Systems, Digital Control Systems, Instrumentation Systems, Smart Materials and Systems, Digital Electronics/Techniques, Power Plant Instrumentation and Control, Electric Circuits, Linear Integrated Circuits, Power Electronics, Electrical Machines, Field Theory, Transmission and Distribution.
Postgraduate Level	Modern Control Theory Sensors and Transducers Analysis and Design of Smart Materials and Structures Industrial Drives and Control Systems Theory

(iii) Projects guided at Postgraduate level

M.Sc. (Applied Electronics)

Sl.No	Title of the project	Name of the student	Year
1.	Characterization of Shape memory alloys	Bhagyaraj Singh	2006-2007

M.Tech. (PCI)

Sl. No.	Title of the project	Name of the student	Year
1.	Modeling and control of Electro-rheological fluid actuated structures	C. Ramesh	2001-2002
2.	Design of Generalized Predictive Control using State Space Approach	D. Ezhilarasi	2002-2003
3.	Design and Control of Power System Stabilizer	D. Arivanandi	May 2004
4.	Vibration control of flexible cantilever beam using shape memory alloy as actuator	S. Anitha	Dec. 2004
5.	Experimental study of Shape Memory Alloy as an actuator	C. Chandravathanam	Dec. 2005
6	Serial data transmission using RS-232 (BHEL, Trichy)	G. Kalpana	May 2006

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7	Vibration control of SMA actuated beam using modern control algorithms	C. Chandravathanam	May 2007
8	Study of vibration control of a smart beam using SMA actuators	K. Rameshkumar	Dec. 2008
9	Vibration control of a smart beam using SMA actuator	K. Rameshkumar	May 2009
10	Design and Development of high voltage power supply for ER damper	V. V. Surendra Atchyam	Dec. 2010
11	Design of SMA actuated structural control system	Rajesh Basawaraja	Dec. 2010
12	Design and control of SMA actuated structure	Rajesh Basawaraja	May 2011
13	Design and Development of power supply for ER damper	V. V. Surendra Atchyam	May 2011
14	Design and Development of SMA actuated vibration control system	P. Suresh Kumar	Dec. 2011
15	Design and development of electronic control system for SMA actuated structure	P. Suresh Kumar	May 2012
16	Design and fabrication of weight measurement instrument by using SMA wire	Maruthi Prasad	Dec. 2012
17	Experimental evaluation of weight measurement instrument by using SMA wire	Maruthi Prasad	May 2013
18	Design of virtual welding power source (BHEL, Trichy)	Supriya Bhadra	Dec. 2013
19	Design of SMA based weight measurement system	Supriya Bhadra	May 2014
20	Application of self-sensing methods to SMA actuated systems	Rajkumar K K	Dec. 2014
21	Design and control of modified compliant differential SMA actuator	Rajkumar K K	May 2015
22	Modelling and simulation of fuel Injector for Common Rail Diesel Engine (Internship- Bosch, Coimbatore)	Rushikesh Ramrao Jadhav	Dec. 2016
23	Modelling and simulation of the fuel Injector for Common Rail Fuel Injection System with real time data (Internship- Bosch, Coimbatore)	Rushikesh Ramrao Jadhav	May 2017
24	Performance Evaluation of Shape Memory Alloy Linear Actuator with Control	D. Anoop Kumar 202216012	Dec. 2017
25	Self-sensed control of SMA linear Actuator	D. Anoop Kumar 202216012	May 2018
26	Implementation of waste water treatment plant	Jitendra Kumar Netam	Dec. 2018

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	(Internship- Tata Steel, Jamshedpur)	202217019	
27	Investigation of electrical characteristics of shape memory alloy spring	Pankaj Patidar 202217014	Dec. 2018
28	Implementation of wastewater treatment plant (Internship- Tata Steel, Jamshedpur)	Jitendra Kumar Netam 202217019	May 2019
29	Electro mechanical characteristics and modeling of shape memory spring	Pankaj Patidar 202217014	May 2019
30	Modelling and Testing of DC-DC Converter using MATLAB/Simulink (Tata Motors, Jamshedpur)	Ranjeet Kumar 202218011	Dec. 2019
31	A Design Solution for Modelling and Testing of BS VI Engine Management System ECU using DSPACE (Tata Motors, Jamshedpur)	Ranjeet Kumar 202218011	May 2020
32	AI for structural vibration control	Bikash 202219004	Dec. 2020
33	Flexion and Extension of upper limb using shape memory alloy	Abhishek Kumar 21010001	Dec. 2021
34	Design of exoskeleton for flexion and extension of finger joints using shape memory alloy	Abhishek Kumar 21010001	May 2022
35	Co-ordinated control of unmanned Aerial vehicles	SVVS Koundinya 21010023	Dec. 2021
36	Development of Co-simulation environment for Simulation and control of Unmanned Aerial Vehicles	SVVS Koundinya 21010023	May 2022

(iv) Other contribution(s)

1	May – Oct 2017	Collaborative work with IISc Bangalore led to joint publication in SCOPUS from ACODS conference	Dr. Radhakant Padhi, Aerospace Engg., IISc Bangalore
2	2020 till date	Collaborative work with IIT Indore led to joint publication in SCOPUS from a conference -	Prof. I A Palani, Mechanical Engg., IIT Indore
3	Nov. 2007 till date	Undergone Training in Foreign University under TEQIP – I One month 19-11-2007 to 18-12-2007 Joint publication of research articles in journals Interactions in the Conferences – SPIE 2015, USA ACTUATOR 2018, Germany	Prof. Seung Bok Choi Smart Structures and Systems Laboratory, Department of Mechanical Engineering, Inha University, Inchon South Korea

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4	2014-15	Established MoU Conducted tests with the invention on SMA based sensaptic car accelerator pedal in the Common Rail Diesel Engine test bed.	Continental Automotive Components (India) Pvt. Ltd., Bangalore
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14. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
Exploration of variable impedance self-sensing behaviour of magnetic shape memory alloy actuator for assistive devices	DST/WOS-B	November 2021	November 2024	Ongoing
Design and development of low cost multifunctional lower limb Exoskeleton system for motion assistance to paraplegics	SERB-POWER 20.09.2021			Ongoing
Design of Electro-Rheological Damper based suspension control system	Aeronautics R & D Board (ARDB) - Systems/Systems Engg. Panel	2009	2011	Completed
Experimental investigation of SMA actuated flexible structure under piecewise output feedback control	ISRO - RESPOND	2008	2009	Completed

15. PATENTS PENDING

1. SMART BI-LATERAL PEDAL MODULE appln. No. 201741022616 dated 28.06.2017
Josephine Selvarani Ruth and **Dhanalakshmi K.**

Responses to First Examination Report under evaluation

2. SHAPE COMPLIANT ROBOTIC GRIPPER AND METHOD THEREOF appln. No. 202041030885 dated July 20, 2020

Anand Asokan, Balasubramanian Ram, **Dhanalakshmi K.** and Nalini D.

Under evaluation

3. SHAPE GUIDED ROTARY ACTUATOR FOR GRIPPERS AND METHOD THEREOF appln. no. 202141023226 dated 25 May 2021

Banu Sundareswari M., **Dhanalakshmi K.** and Then Mozhi G.

Received First Examination Report

4. COMPLIANT SWING ACTUATOR AND METHOD THEREOF appln. no. 202241003006 dated January 19, 2022

Banu Sundareswari M., **Dhanalakshmi K.** and Then Mozhi G.

Under evaluation

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16. Number of PhDs guided

Sl. No.	Name of the PhD Scholar	Title of PhD Thesis	Role	Status
1.	Senthilkumar Palaniswamy	Position Control of Shape Memory Alloy Wire Actuators using Modulated Adaptive Controllers	Co Supervisor	Awarded 2013
2.	D. Josephine Selvarani Ruth	Realization of shape memory alloy wire as shared sensor and actuator for feedback and haptic control applications	Sole Supervisor	Awarded 13 July 2015
3.	M. Banu Sundareswari	Design and implementation of swing actuators using shape memory alloy for control of dynamic systems	Sole Supervisor	Awarded 1 Dec. 2021
4.	D. Nalini	Synergistically activated shape memory alloy wire actuators for active compliant mechanisms	Sole Supervisor	Awarded 7 Jan. 2021
5.	G. Then Mozhi	Investigations on sensacting shape memory alloy for the design of measurement systems and controlled soft actuators	Sole Supervisor	Synopsis Submitted 27 June 2022
6.	B. Bhagoji Sul	Study on Self-sensing Variable Stiffness actuation of shape memory coil by Artificial Intelligence methods	Sole Supervisor	Synopsis Submitted 30 June 2022
7.	Appikonda M. Durgakumar	Modelling and Control of DC - DC Converter with Voltage Multiplier Cells for Photovoltaic System Application	Sole Supervisor	Awarded 15 June 2021
8.	Geetha M.	Design and evaluation of thin film SMA micro switch for antenna reconfiguration	Sole Supervisor	Ongoing
9.	Vetriselvi V.	Design, modelling and control of micro mirror manipulator and bidirectional actuator using thin film bimorph shape memory alloy	Sole Supervisor	Ongoing
10.	Devashena T.	Design, development and control of Robotic Arm joint movement using shape memory alloy spring	Sole Supervisor	Ongoing
11.	Vineet Kumar Yadav	Navigation and Control of Autonomous Ground Vehicle	Supervisor	Ongoing
12.	Pooja Singh	Self-powered sensors using smart materials	Sole Supervisor	Ongoing
13.	Uma Maheswari V M	Modeling, simulation and intensification of control system for self-tuning Breathing Regulation System	Principal Supervisor	Ongoing

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17. 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
16 th - 17 th May 2022	IEEE Symposium on Sensors Interfaces Meet	International	Participant	IEEE Sensors Council	ASML, Veldhoven, Netherlands
11 th – 16 th Aug. 2020	Advanced Control Systems	National Level Workshop	Participant	TLC-NITW	Online
23 rd – 25 th Apr. 2019	Advanced Techniques in Deep Learning	In house workshop for NIT Trichy	Participant	CEP & QIP IIT B	IITB, Mumbai
23 rd – 25 th Feb. 2019	Introduction to Machine Learning and Deep Learning with applications to engineering systems	In house workshop for NIT Trichy	Participant	CEP & QIP IIT B	NIT Trichy
25 th – 27 th Jun. 2018	New Actuators (ACTUATOR 2018)	16th Biennial International Conference	Presenter	Messe, Bremen	Bremen, Germany
4 th – 9 th Dec. 2017	<i>Capacity Building of Women Managers in Higher Education</i>	National Level Workshop	Participant	NIT Trichy	NIT Trichy
5 th – 7 th Jul. 2017	<i>ISSS Conference on Smart Materials, Structures & Systems (ISSS 2017)</i>	8 th International Conference	Presenter	ISSS	IISc, Bangalore
16 th to 18 th Dec. 2016	<i>INDICON 2016</i>	13 th International Conference	Presenter	IEEE	IISc, Bangalore
13 th May 2016	<i>Intellectual Property Rights awareness (IPRA 2016)</i>	Workshop	Participant	NIT Trichy	NIT Trichy
28 th and 29 th April 2015	<i>Conclave on Academic Reforms (CAR)</i>	National Conclave	Participant	NIT Trichy	NIT Trichy
8 th to 12 th March 2015	<i>SPIE Smart Structures/NDE 2015</i>	22 nd International Conference	Presenter	SPIE	San Diego, USA
13 th to	<i>Advances in Control and</i>	3 rd	Session	IFAC	IIT

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15 th March 2014	<i>Optimization of Dynamic Systems ACODS 2014</i>	International Conference	Co-chair		Kanpur
21 – 25 Jan. 2013	<i>Variable Structure and Sliding Mode Control – Concept, Theory and Applications</i>	International Workshop	Participant		IITB, Mumbai
28 th to 30 th August 2013	<i>Multi-Conference on Systems and Control</i>	7 th IEEE International Conference	Presenter	IEEE	International Convention Centre Hyderabad
9 th and 10 th May 2013	<i>Perspectives on Curriculum</i>	Workshop	Participant	NIT, Trichy	NIT, Trichy
11 th and 12 th Feb. 2013	<i>Team Building and Effective Group Dynamics</i>	Out Bound Experiential Learning	Attendee	Adventure Zone, Madhurantakam	Adventure Zone, Madhurantakam
5 th to 8 th Dec. 2012	<i>Mechanics of Functional Materials and Structures ACMFMS 2012</i>	3 rd Asian Conference	Session Co-chair	IIT Delhi	IIT, Delhi
4 th to 7 th January 2012	<i>Smart Materials, Structures and Systems</i>	6 th International Conference	Participant	ISSS	IISc, Bangalore
16 th to 18 th Nov. 2011	<i>Understanding Design</i>	National Workshop	Participant	Industry Programmes and Projects	National Institute of Design, Ahmedabad
1 st April 2011	<i>Challenges of Futuristic Systems</i>	National Symposium	Participant	ISSS	IISc, Bangalore
26 th to 30 th July 2010	<i>MEMS and its CAD tools</i>	National Workshop	Participant	NIT, Trichy	NIT, Trichy
18 th to 23 th January 2010	<i>Mechatronics: Integrated Technologies for Intelligent Machines</i>	National Workshop	Participant	CCE, IITM	IITM, Chennai
17 th December 2009	<i>Polynomial Global Optimization and Constraint Propagation Techniques</i>	Workshop	Participant	Prof. P. S. V. Nataraj, Systems and Control Engg, IITB	NIT, Trichy
28 July – 1 Aug. 2008	<i>Advanced Optimal Control and Estimation</i>	National Workshop	Participant	CCE, IISc	IISc, Bangalore
14 – 19 July 2008	<i>Application of Lasers in Sensing & Measurements</i>	National Workshop	Participant	CCE, IITM	IITM, Chennai
12 th to 14 th	<i>Power Electronics NWPE 2008</i>			The National Mission on	NIT, Trichy

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November 2008		National Workshop	Participant	Power Electronics Technology (NaMPET)	
24th & 25th Sept. 2008	Advanced Analog IC/VLSI Design	National Workshop	Participant		NIT, Trichy
8th and 9th Aug. 2008	Right to Information ACT 2005 and Role of Information Officer	National Workshop	Participant	National Archives of India, RTI Cell, GoI, New Delhi	NIT, Trichy
31 st March and 1 st April 2008	CMOS-MEMS device Technology and the future	Lecture series	Participant	Prof. Hidekuni Takao, TUT, Japan.	NIT, Trichy
19 Nov. – 18 Dec. 2007	Smart Structures and Systems Laboratory	International Academic/Research training	Trainee	TEQIP	Inha University Incheon, South Korea
13 – 17 March 2007	Recent Trends in Processor Architecture	National STC	Participant	QIP – Dept. of CSE	NIT, Trichy
1 st and 2 nd February 2007	Finite Element Methods for Engineers	National Workshop	Participant	TEQIP Community Service	NIT, Trichy
4th January 2007	Nano-, Neuro-, Bio-, Info- Technologies, MEMS, NEMS and Neurosurgery	Pre - conference tutorial – International Conference	Participant	Dr. Vijay K Varadan. TIMA	NIT, Trichy
11 – 16 December 2006	MEMS and Smart Structures	National Workshop	Participant	ISSS	IISc, Bangalore
19 th and 20 th December 2006	Control of Unstable Systems	National Workshop	Participant	Chemical Engg. Dept.	NIT, Trichy
25 th November 2006	Instrumental Methods of Thermal Analysis and Data Interpretation	Training programme	Participant	TEQIP Community Service	NIT, Trichy
5 – 9 July 2004	Recent Trends in Power Electronics	National QIP	Participant	AICTE CCE	IISc, Bangalore
22 December 2004	Recent Advances in Smart Materials, Structures and	International Workshop	Participant	ISSS	IISc, Bangalore

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	Systems				
23 – 27 Dec. 2003	LabVIEW Basics I and II	National Training Course	Trainee	National Instruments Bangalore	NI, Bangalore
8 – 29 November 2002	System Modelling and Simulation	National STTP	Participant	AICTE - ISTE	Pondicherry Engineering College, Pondicherry
13 – 24 May 2002	Advanced Topics in Linear Systems Theory	National QIP STC	Participant	Electrical Engg. Dept.	IITB, Mumbai
August 1999	Facilitator Certification Course in HRD	National Certification	Participant, Facilitator	CLHRD, Mangalore	Shanmugha College of Engg., Thanjavur
4 – 15 May 1998	Industrial Internship Programme - Engineering/Machine Tool Centre		Intern	Shanmugha College of Engg., Thanjavur	Lucas-TVS, Chennai
20 Sept. 1998	Building a more humane and enlightened society	Principals' Conference	Participant	Project CARE	Shanmugha College of Engg., Thanjavur
17 – 22 June 1996	Power Electronics in Energy Systems	National STTP	Participant	AICTE	REC, Trichy
12 – 25 May 1995	Fault Tolerant Control Systems	National Summer School	Participant	ISTE	CEG, Anna University, Chennai

18. Workshops/ Symposia/ Conferences/ Colloquia/Seminars Organized (as Chairman/ Organizing Secretary/ Convener / Co-Convener)

Title of Activity	Level of Event (International/ National/ Local)	Date (s)	Role	Venue
Conference ICECON 2019	International	Dec. 2019	Technical Chair	NIT Trichy
Conclave on Academic Reforms (CAR)	National Conclave (TEQIP funded)	28 th and 29 th April 2015	Technical Committee Member	BARN NIT, Trichy
Smart Materials and Systems	National Faculty Development programme (FDP) (Self-financed)	11 to 15 June 2012	Coordinator	ICE Dept. NIT, Trichy
Conference on	4 th National	7 th and 8 th	Organizing	Admin Bldg.

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Instrumentation and Control, ICECON '09	Conference (Self-financed)	December 2009	Secretary	NIT, Trichy
Wireless Sensor Networks	National workshop (Self-financed)	6 th December 2009	Organizer	ICE Dept. NIT, Trichy
5 th TIMA 2007	International Conference	4 th to 6 th Jan. 2007	Organizing Committee Member	Admin Bldg. NIT, Trichy
Conference on Instrumentation and Control, ICECON '07, '05, '03	3 rd , 2 nd , 1 st National Conference (Self-financed)	Dec. 2007, 2005, 2003	Organizing Committee Member	ICE Dept. NIT, Trichy
Design and Development of Laboratory experiments for UG Electronics and Instrumentation, and Instrumentation and Control Engineering branches	Continuing Education Programme (CEP) (Self-financed)	11 th to 15 th June 2001	Coordinator	ICE Dept. NIT, Trichy
Dhyuthi SPIC MACAY - NIT Tiruchirappalli Chapter	Periodical	Released on 14 April 2020 July 2020	Faculty Advisor	Online
SPIC MACAY - NIT Tiruchirappalli Chapter	Mohiniyattam Dance Recital by Smt. Gopika Varma	August 5, 2019	Faculty Advisor/ Volunteer	BARN
IEEE SB - WiE	Poster Presentation	March 8, 2019	Co-ordinator	Orion lounge
SPIC MACAY - NIT Tiruchirappalli Chapter	VIRASAT 2019 Hindustani Sitar by Pandit Shubhendra Rao Bharathanatyam by Lakshmi Parthasarathy Athreya Workshop on Kerala Mural Painting by K R Babu	13, 14, 15-17 Feb. 2019	Faculty Advisor	BARN, A13
SPIC MACAY - NIT Tiruchirappalli Chapter	Tholpavakoothu (shadow puppetry) K. K. Ramachandra Pulavar and group	2 Aug. 2018	Faculty Advisor	BARN
Diabetic Camp	Institutional level 48 beneficiaries	2 nd March 2017	Convener	Hospital NIT, Trichy
International Women's Day	Institutional level	8 th March	Organiser	EEE

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	250 attendees	2017		Auditorium NIT, Trichy
Bone Life	Institutional level 70 beneficiaries	19 th March 2017	Convener	Hospital NIT, Trichy
Vigilance Awareness Program	Institutional level 30 children and 10 adults	3 rd Nov. 2017	Convener	Children's Club NIT, Trichy
Blood Donation Camp for Raja Mirasudhar Govt. Hospital, Thanjavur (jointly with NCC)	Institutional level 73 students and staff	4 th Nov. 2017	Convener	Hospital NIT, Trichy
Eye Camp (jointly with NCC)	Institutional level 48 beneficiaries	9 – 11 Feb. 2018	Convener	Hospital NIT, Trichy
Relaunch of SPIC MACAY - NIT Tiruchirappalli Chapter	Kathak Lecture demonstration by Smt. Monisa Nayak	6 Feb. 2018	Faculty Advisor	SPIC MACAY
Cambridge Young Learners English Test		18 Feb. 2018	Coordinator	Children's Club
SPIC MACAY - NIT Tiruchirappalli Chapter		2 Sept. 2016	Faculty Advisor	BARN
SPIC MACAY - NIT Tiruchirappalli Chapter		2 Aug. 2016	Faculty Advisor	BARN
Summer camp Children's Club		18 Feb. 2005, 2006, 2007	Coordinator	BARN
All India Radio Tiruchirappalli Children's day program		2014, 2016, 2018	Coordinator	Children's Club

19. Invited Talks delivered

Topic	Date	Inviting Organization
Overview of classical and modern control systems FDP on Control Systems 15 – 21 May 2018	16 May 2018	Dept. of EEE Anna University College of Engineering, Tiruchirappalli
Shared sensing and actuation using shape memory alloy FDP on Sensor Interface to IoT, 5th to 11th March 2018	6 March 2018	Department of Mechatronics, Thiagarajar College of Engineering, Madurai
FESTMARCH 2017 Student Symposium	10 March 2017	MAR Engineering College, Tiruchirappalli
Stability concepts in Control Systems	24 Aug. 2016	K Ramakrishnan College of Engineering, Tiruchirappalli

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Issues associated with design of Shape Memory Alloy based smart structures - FDP on Smart materials and systems	6 Jan. 2015	NIT, Tiruchirappalli
Smart materials and engineering applications - Inauguration of EEE Association	17 July 2014	Oxford Engineering College, Tiruchirappalli
System Stability and Control	3 April 2014	K Ramakrishnan College of Engineering, Tiruchirappalli
Smart materials for Engineering Applications: An overview - National Conference on Advances in Electrical Engineering	15 March 2013	MAM College of Engineering, Tiruchirappalli
Applications of DC motors and drives	12 Oct. 2012	VIT Chennai
Shape Memory Alloys for Civil Engineering Applications	20 Sep. 2012	MAM College of Engineering, Tiruchirappalli
An overview on Process Control	15 Feb. 2001	MAM College of Engineering, Tiruchirappalli

20. Membership of Learned Societies

Type of Membership <small>Ordinary Member/ Honorary Member / Life Member</small>	Organization	Membership No. with date
Life Member	Indian Society for Technical Education (ISTE)	LM 19430 1994
Fellow	The Institution of Engineers, India (IEI)	F-1265128 19 March 2020
Life Member	Institute for Smart Structures and Systems (ISSS)	LM 146 22.12. 2004
Life Member	Instrument Society of India (ISoI)	LM No. 1771 24.12.2009
Life Member	Systems Society of India (SSI)	LM No. 31626 4.10.2011
Senior Member	Institute of Electrical and Electronics Engineers (IEEE)	92707123 23 June 2018 (2013)
Member	Society of Photo-Optical Instrumentation Engineers (SPIE)	3655676 (2014)
Member	International Society of Automation (ISA)	Mar. 2021

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21. Academic Foreign Visits

Country	Duration of Visit	Programme
The Netherlands	16 - 17 May 2022	IEEE Symposium on Sensors Interfaces Meet SIM 2022
Germany	24 - 29 June 2018	16th Biennial International Conference on New Actuators & 10th Exhibition on Smart Actuators and Drive Systems ACTUATOR 2018, Bremen
United States of America	8 - 12 March 2015	22nd International Symposium on Smart Structures and Materials & Nondestructive Evaluation and Health Monitoring SPIE - 15, San Diego, California
South Korea	19 Nov. to 18 Dec. 2007	Faculty training under TEQIP I: Smart Structures and Systems Laboratory, Department of Mechanical Engineering at Inha University, Incheon

22. Publications

(A) Refereed Research Journals:

S. No.	Author(s)	Title of Paper	Journal	Volume (No.)	Impact Factor of the Journal (Optional)
1.	Then Mozhi G., Dhanalakshmi Kaliaperumal, Banu Sundareswari M., S B Choi	Duo features of Shape Memory Wire for Resonant Force Sensing	<i>Smart Materials and Structures</i>	July 2022. 31 (9) July 2022	SCI 4.131 Q1
2.	Josephine Selvarani Ruth D., Sohn, Dhanalakshmi Kaliaperumal, S B Choi	Control Aspects of Shape Memory Alloys in Robotics Applications: A Review over the Last Decade	<i>Sensors</i>	22(13), 4860 June 2022	SCIE 3.576 Q1
3.	Then Mozhi G., Dhanalakshmi Kaliaperumal, Banu Sundareswari M.	Design aspects of shape memory wire based resonant force measurement system	<i>Measurement</i>	198, June 2022. 111313	SCIE 5.131 Q1
4.	M Banu Sundareswari, G Then Mozhi, Dhanalakshmi Kaliaperumal	Angular control of differential shape-memory alloy spring actuator for under-actuated dynamic system.	<i>Journal of Vibration and Control</i>	Sep. 2021, 0 (0) 1 - 15	SCIE

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5.	Mohan Appikonda, <i>Dhanalakshmi Kaliaperumal</i>	Small-signal model and control approach for a dual input boost converter with VMC, International.	<i>Journal of Electronics</i>	Sep. 2021, 1 - 24	SCIE
6.	T. Devashena, <i>Dhanalakshmi Kaliaperumal</i>	Simultaneous measurements for the interlink of electro-thermo-mechano-electro characteristics in shape memory springs.	<i>ISA Transactions</i>	June 2021	SCIE
7.	Josephine Selvarani Ruth D., <i>K Dhanalakshmi, S B Choi</i>	A Sensaptic ADAS Device using Shape Memory Alloy Wires.	<i>Design and Control, Materials</i>	23 June 2021, 14 (13) 3494	SCIE
8.	Then Mozhi G., Banu Sundareswari M., <i>Dhanalakshmi Kaliaperumal</i>	Fine resolution smart force sensor based on lever arm mechanism using shape memory alloy spring.	<i>International Journal of Circuit Theory and Applications</i>	June 2021 49 (12) 4330 - 4342	SCI
9.	Nalini D., <i>Dhanalakshmi Kaliaperumal</i>	Active stiffness control of a synergistically operated variable stiffness compliant actuator	<i>Journal of the Brazilian Society of Mechanical Sciences and Engineering</i>	1 February 2021 43(2) 105 (2021)	SCIE
10.	T Devashena, <i>K Dhanalakshmi</i>	Simultaneous Measurements in Shape Memory Alloy Springs to Enable Structural Health Monitoring by Self-Sensing Actuation.	<i>Arabian Journal for Science and Engineering</i>	Jan. 2021 46, 6015-6025	SCIE
11.	M Banu Sundareswari, G Then Mozhi, <i>Dhanalakshmi Kaliaperumal</i>	Angular control of differential shape-memory alloy spring actuator for underactuated dynamic system.	<i>Journal of Vibration and Control</i>	21 Sep. 2021, 1 - 15	SCIE
12.	Mohan Appikonda, <i>Dhanalakshmi Kaliaperumal</i>	Small-signal model and control approach for a dual input boost converter with VMC.	<i>International Journal of Electronics</i>	5 Sep. 2021 109 (6) 1 - 24.	SCIE
13.	Geetha M., <i>Dhanalakshmi K. V Vetrivelvi</i>	A shape memory alloy bimorph-actuated switch for antenna reconfiguration	<i>Journal of Materials Science: Materials in Electronics</i>	29 Jan 2022 33 4426-4437	SCIE
14.	B B Sul, <i>Dhanalakshmi K.</i>	Machine learning based self-sensing of the stiffness of shape memory alloy coil actuator	<i>Soft Computing</i>	9 Mar. 2022 26 3743-3755	SCIE
15.	Mohan Appikonda and <i>Dhanalakshmi K.</i>	Signal flow graph model and control of dual input boost converter with	<i>International Journal of Electronics and Communications</i>	Aug./Oct. 2020	SCIE 2.853

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		voltage multiplier cell		125, 153345 1-13	
16.	BanuSundareswari M., Then Mozhi G. and <i>Dhanalakshmi K.</i>	Design of Genetic Algorithm based PID controller for a joule heated shape memory spring driven ball and beam system	<i>International Journal of Mechatronics and Automation</i>	Dec. 2020 7 (6) 107 - 116	Scopus SJR 0.137
17.	D. Josephine Selvarani Ruth, <i>Dhanalakshmi K.</i>	Role of Shape Memory Alloy Wires as a Sensaptic HMI Device	<i>IEEE Sensors Journal</i>	15 June 2020 20 (12) 6422 - 6431	SCIE 3.076
18.	BanuSundareswari M., Then Mozhi G. and <i>Dhanalakshmi K.</i>	Intelligent tuning of PID controller to balance the shape memory wire actuated bidirectional ball and beam system	<i>Fizicheskaya Mezomekhanika</i> <i>Physical Mesomechanics</i>	Dec. 2019 22 (6) 107 - 116	SCIE 1.551
19.	Geetha M. and <i>Dhanalakshmi K.</i>	Structural design and realization of electromechanical logic elements using shape memory alloy actuator	<i>Fizicheskaya Mezomekhanika</i> <i>Physical Mesomechanics</i>	Oct. 2019 22 (5) 92 - 101	SCIE 1.551
20.	Mohan Appikonda and <i>Dhanalakshmi K.</i>	Modeling and Control of a high voltage gain dual input boost DC - DC converter with voltage multiplier	<i>IET Circuits, Devices and Systems</i>	Nov. 2019 13 (8) 1267 -1276	SCIE 1.277
21.	Bhagoji Bapurao Sul and <i>Dhanalakshmi K.</i>	Modified sigmoid based model and experimental analysis of SMA spring as variable stiffness actuator	<i>Smart Structures and Systems</i>	Sept. 2019 24 (3) 361 - 377	SCIE 3.622
22.	Nalini D., D. Josephine Selvarani Ruth and <i>Dhanalakshmi K.</i>	Investigation of the synergistic compliant actuation of parallel-type variable stiffness shape memory alloy actuator	<i>Journal of Intelligent Material Systems and Structures</i>	July 2019 30 (12) 1772 - 1788	SCIE 2.582
23.	Nalini D., <i>Dhanalakshmi K.</i>	Synergistically configured shape memory alloy for variable stiffness translational actuation	<i>Journal of Intelligent Material Systems and Structures</i>	Apr. 2019 30 (6) 844 - 854	SCIE 2.582
24.	Prateek Vishal, <i>Dhanalakshmi K.</i> , Radhakant Padhi	Active Vibration Suppression of Nonlinear Cantilever Beam using Shape Memory Alloy Actuators	<i>IFAC Proceedings Volumes (IFAC-PapersOnline)</i>	Feb. 2018 51 (1) 130 - 135.	Scopus 0.334 SJR: 0.263
25.	D. Josephine	Shape memory alloy wire	<i>IEEE Sensors Journal</i>	Feb. 2017	SCIE

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	Selvarani Ruth, <i>Dhanalakshmi K.</i>	for force sensing		17 (4) 967 – 975.	2.512
26.	D. Josephine Selvarani Ruth, <i>Dhanalakshmi K.</i>	SMA wire for self-sensing servo actuation	<i>Mechanical Systems and Signal Processing</i>	Jan. 2017 83 36 – 52.	SCI 4.116
27.	<i>Dhanalakshmi K.</i> M. Umapathy and D. Ezhilarasi	SMA actuated structural control with discrete time sliding mode using multirate output feedback	<i>Journal of Vibration and Control</i>	Mar. 2016 22 (5) 1338 – 1357.	SCIE 2.101
28.	D. Josephine Selvarani Ruth, <i>Dhanalakshmi K.</i>	Shape memory alloy with bi-functionality in master system to control a slave	<i>Sensors and Actuators A: Physical</i>	Feb. 2016 238 351 – 360.	SCI 2.499
29.	S. Sunjai Nakshatharan, <i>Dhanalakshmi K.</i> and D. Josephine Selvarani Ruth	Effect of stress on bandwidth of antagonistic shape memory alloy actuators	<i>Journal of Intelligent Material Systems and Structures</i>	Jan. 2016 27 (2) 153 – 165.	SCIE 2.255
30.	S. Sunjai Nakshatharan, D. Josephine Selvarani Ruth, <i>Dhanalakshmi K.</i>	Dynamic stabilization and rapid motion control system driven by antagonistic shape memory alloy actuators	<i>Journal of Vibration and Control</i>	Dec. 2015 21 (16) 3189 – 3204.	SCIE 2.101
31.	S. Sunjai Nakshatharan, D. Josephine Selvarani Ruth, <i>Dhanalakshmi K.</i>	Fuzzy based sliding surface for shape memory alloy wire actuated classical super-articulated control system	<i>Applied Soft Computing</i>	Jul. 2015 32 580 – 589.	SCIE 3.541
32.	D. Josephine Selvarani Ruth, <i>Dhanalakshmi K.</i> and S. Sunjai Nakshatharan	Bidirectional angular control of an integrated sensor/actuator shape memory alloy based system	<i>Measurement</i>	Jun. 2015 69 210 – 221.	SCIE 2.359
33.	D. Josephine Selvarani Ruth, <i>Dhanalakshmi K.</i> and S. Sunjai Nakshatharan	Interrogation of undersensing for an underactuated dynamical system	<i>IEEE Sensors Journal</i>	Jun. 2015 15 (4) 2203 – 2211.	SCIE 2.512
34.	<i>Dhanalakshmi K.</i> M. Umapathy and D. Ezhilarasi	Sliding mode control of SMA actuated structures for vibration control	<i>International Journal of Modelling, Identification and Control</i>	Apr. 2015 23 (2) 121 – 130.	ESCI Scopus 0.732 SJR: 0.304
35.	S. Sunjai	Servo control of an under	<i>Smart Structures and Systems</i>	Oct. 2014	SCIE

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	Nakshatharan, <i>Dhanalakshmi K.</i> and D. Josephine Selvarani Ruth	actuated system using antagonistic shape memory alloy		14 (4) 643 – 658.	1.382
36.	S. Krishna Chaitanya, <i>Dhanalakshmi K.</i>	Design and investigation of a shape memory alloy actuated gripper	<i>Smart Structures and Systems</i>	Oct. 2014 14 (4) 541 – 558.	SCIE 1.382
37.	D. Josephine Selvarani Ruth, S. Sunjai Nakshatharan and <i>Dhanalakshmi K.</i>	Differential resistance feedback control of a self- sensing shape memory alloy actuated system	<i>ISA Transactions</i>	Mar. 2014 53 (2) 289 – 297.	SCIE 3.394
38.	S. Krishna Chaitanya and <i>Dhanalakshmi K.</i>	Design and control of shape memory alloy actuated grippers	<i>IFAC Proceedings Volumes (IFAC-PapersOnline)</i>	Mar. 2014 47 (1) 400 –407	Scopus 0.334 SJR: 0.263
39.	S. Krishna Chaitanya and <i>Dhanalakshmi K.</i>	Control of shape memory alloy actuated gripper using pulse width modulation	<i>IFAC Proceedings Volumes (IFAC-PapersOnline)</i>	Mar. 2014 47 (1) 408 –413	Scopus 0.334 SJR: 0.263
40.	D. Josephine Selvarani Ruth, S. Sunjai Nakshatharan and <i>Dhanalakshmi K.</i>	Beam balancing ball driven by shape memory alloy: Prospective self-sensing actuator for stabilised control	<i>IFAC Proceedings Volumes (IFAC-PapersOnline) (ACODS 2014)</i>	Mar. 2014 47 (1) 577 –584	Scopus 0.334 SJR: 0.263
41.	S. Sunjai Nakshatharan, D. Josephine Selvarani Ruth, <i>Dhanalakshmi K.</i>	Design and experimental evaluation of higher order sliding mode control for vibration suppression of shape memory alloy actuated structure	<i>IFAC Proceedings Volumes (IFAC-PapersOnline) (ACODS 2014)</i>	Mar. 2014 47 (1) 1061 – 1066	Scopus 0.334 SJR: 0.263
42.	P Senthilkumar, M Umapathy, <i>Dhanalakshmi K.</i>	Modulated adaptive fuzzy controller for position control of SMA wire actuator	<i>Journal of Intelligent and Fuzzy Systems</i>	Jul. 2014 27(1) 9 – 18	SCIE 1.261
43.	D. Josephine Selvarani Ruth, S. Sunjai Nakshatharan and <i>Dhanalakshmi K.</i>	<i>Auto-adaptive control of a one-joint arm direct driven by antagonistic shape memory alloy actuated wires</i>	<i>International Journal on Smart Sensing and Intelligent Systems ISSN: 1178-5608</i>	Jun. 2013 6 (3) 833 – 849	Scopus 0.682 SJR: 0.285
44.	<i>Dhanalakshmi K.</i> M. Umapathy,	Design and implementation of fast	<i>Smart Structures and Systems</i>	Oct. 2011 8 (4)	SCIE

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	D. Ezhilarasi and B. Bandyopadhyay	output sampling feedback control for shape memory alloy actuated structures		367 – 384.	1.382
45.	<i>Dhanalakshmi K. M. Umopathy, D Ezhilarasi and M Marimuthu</i>	Experimental evaluation of periodic output feedback control for SMA actuated structures	<i>International Journal of Advanced Mechatronic Systems</i> ISSN: 1756-8412	Nov. 2010 2 (5/6) 330 – 341.	Scopus 0.494 SJR: 0.135
46.	<i>Dhanalakshmi K. Aditya Avinash, M. Umopathy and M Marimuthu</i>	Experimental study on vibration control of shape memory alloy actuated flexible beam	<i>International Journal on Smart Sensing and Intelligent Systems</i> ISSN: 1178-5608	Jun. 2010 3 (2) 156 – 174.	Scopus 0.682 SJR: 0.285
47.	<i>Dhanalakshmi K. and M. Umopathy</i>	Active vibration control of SMA actuated structures using fast output sampling based sliding mode control	<i>Instrumentation Science and Technology</i>	Mar. 2008 36 (2) 180 – 193.	SCI 0.874
48.	<i>Dhanalakshmi K. M. Umopathy, D. Ezhilarasi and C. Chandravathanam</i>	Control of shape memory alloy actuated beam using periodic output feedback control	<i>Mediterranean Journal of Measurement and Control</i> ISSN: 1743-9310	Jan. 2008 4 (1) 8 – 14.	Scopus 0.151 SJR: 0.124

(B) Conferences/Workshops/Symposia Proceedings

	Author(s)	Title of Abstract/ Paper	Title of the Proceedings	Page no.s	Venue	Year
49.	Abhishek Kumar, Then Mozhi G., Dhanalakshmi K.	Simulation of Shape memory wire based exoskeleton for flexion and Extension of upper limb.	Proceedings of 7th International conference for convergence in Technology (I2CT)		Pune	April 2022
50.	G. Then Mozhi, M. Banu Sundareswari and Dhanalakshmi K.	The Bidirectional Position control of the Prismatic joint for Motorized single link Robotic arm using Adaptive Super-Twisting Sliding Mode Control, 36 th Indian Engineering Congress,	36 th Indian Engineering Congress, Dec. 2021		New Delhi	Dec. 2021
51.	M. Banu Sundareswari,	The Adaptive dual layer sliding mode	36 th Indian Engineering		New Delhi	Dec. 2021

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	G. Then Mozhi, and Dhanalakshmi K.	control for Ball on plate system driven by shape memory alloy wire, 36 th Indian Engineering Congress,	Congress, Dec. 2021			
52.	Mohan Appikonda, Dhanalakshmi K. and P S V Krishna,	Signal Flow Graph Modeling and Feed-forward Plus Feedback Control Approach for a High Voltage Gain Dual Input Boost DC-DC Converter	<i>IEEE International conference on Power Electronics, Smart Grid and Renewable Energy (PESGRE 2020)</i>		<i>Le Meridien Kochi</i>	2-4 Jan. 2020
53.	M Geetha, Dhanalakshmi K. S Jayachandran, I.A. Palani and Sathish Kumar	Analysis of actuation characteristics of CuAlNiMn/Polyimide thin film shape memory alloy	Second International Mechanical Engineering Congress (IMEC 2019)		NIT Trichy	29 Nov. – 1 Dec. 2019
54.	Thenmozhi G., Banu Sundareswari M. and Dhanalakshmi K.	Shape Memory Alloy Actuated Cantilever Structure for Sensing in Intelligent Engineering	Fourth International Conference on ICT for Sustainable Development (ICT4SD 2019)		Goa	5 - 6 July 2019
55.	Devashena T. and Dhanalakshmi K..	Electro-Thermo-Mechano-Magneto characteristics of shape memory spring actuator/sensor in assistive devices				
56.	Nalini D., Apoorva Nandakumar, Amrutha Sampath, Dhanalakshmi K.	Fuzzy based active stiffness control of a synergistically compliant variable stiffness shape memory actuator	<i>IEEE 5th International Conference on Convergence of Technology (I2CT 2019)</i>		<i>Pune</i>	29 - 31 Mar. 2019
57.	Appikonda M Durgakumar, Dhanalakshmi K.	Control Approach for a High Voltage Gain Dual Input Boost DC-DC Converter	<i>IEEE 5th International Conference on Convergence of Technology (I2CT 2019)</i>		<i>Pune</i>	29 - 31 Mar. 2019
58.	Devashena T. and Dhanalakshmi K.	Electro-mechanical characteristics of shape memory spring for simultaneous	<i>IEEE 5th International Conference on Convergence of</i>		<i>Pune</i>	29 - 31 Mar. 2019

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		sensing and actuation	<i>Technology (I2CT 2019)</i>			
59.	Appikonda M Durgakumar, Dhanalakshmi K.	Small-signal modelling and control of a high voltage gain dual input boost DC-DC converter	<i>8th IEEE India International Conference on Power Electronics IICPE 2018</i>		<i>MNIT Jaipur</i>	13 - 15 Dec. 2018
60.	Bhagoji Bapurao Sul, Dhanalakshmi K.	Self-sensing characteristics and analysis of the stiffness of the SMA spring actuator	<i>8th IEEE India International Conference on Power Electronics IICPE 2018</i>		<i>MNIT Jaipur</i>	13 - 15 Dec. 2018
61.	Vetriselvi V., Geetha M. and Dhanalakshmi K.	Design and development of electro mechanical bistable functions using shape memory alloy	<i>8th IEEE India International Conference on Power Electronics IICPE 2018</i>		<i>MNIT Jaipur</i>	13 - 15 Dec. 2018
62.	Bhagoji Bapurao Sul, Chinari Subhechha Subudhi Dhanalakshmi K.	Neural Network based Displacement Modeling of Shape Memory Alloy Spring Actuator	<i>17th IEEE Conference on Sensors SENSORS 2018</i>		<i>Aerocity, New Delhi</i>	28 - 31 Oct. 2018
63.	Devashena T. and Dhanalakshmi K.	Electromagnetic Characteristics of Shape Memory Spring	1st International Conference and 8th National Conference on Processing and Characterization of Materials (ICPCM/ NCPCM 2018)		<i>NIT Rourkela</i>	6 - 8 Dec. 2018
64.	Nalini D., Dhanalakshmi K.	Bidirectional Smart Linear Actuator with Synergistic Bias	<i>16th International Conference on New Actuators (ACTUATOR 2018)</i>	510 - 513	<i>Bremen, Germany</i>	25-27 Jun. 2018
65.	Geetha Muthuveeran, Vetriselvi Velusamy, Dhanalakshmi K.	Electro-mechanical Logic Gates Using Shape Memory Alloy Actuator		518 - 521		
66.	Bhagoji Bapurao Sul, Dhanalakshmi K.	Sigmoid-based Force Modeling and Shape Recovery Characteristics of	<i>14th International IEEE India Conference (INDICON 2017)</i>	-	<i>IIT Roorkee</i>	15-17 Dec. 2017

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		SMA Spring Actuator				
67.	Josephine Selvarani Ruth D., Dhanalakshmi K.	Can shape memory alloy's nonlinearity be obscured?	<i>8th International Conference on Smart Materials, Structures & Systems (ISSS 2017)</i>	68	<i>IISc Bangalore</i>	5-7 Jul. 2017
68.	Nalini D., Dhanalakshmi K.	Characteristics of an SMA based variable stiffness linear actuator	<i>8th International Conference on Smart Materials, Structures & Systems (ISSS 2017)</i>	79	<i>IISc Bangalore</i>	5-7 Jul. 2017
69.	Nalini D., Josephine Selvarani Ruth D., Dhanalakshmi K.	An investigation on the stiffness variation in a synergistically configured SMA actuator	<i>13th International IEEE India Conference (INDICON 2016)</i>	918 – 923	<i>IISc Bangalore</i>	16-18 Dec. 2016
70.	Nalini D., Josephine Selvarani Ruth D., Dhanalakshmi K.	Design of a variable stiffness actuator using shape memory alloy wire	<i>IEEE 7th Power India International Conference (PIICON 2016)</i>	1 – 5	<i>Bikaner</i>	25-27 Nov. 2016
71.	Akhil Challa, Pediredla Vijay Kumar, Josephine Selvarani Ruth D, Dhanalakshmi K. , Voona Kushal	Design and characterization of a piston type linear SMA actuator	<i>IEEE 1st International Conference on Power Electronics, Intelligent Control and Energy Systems (ICPEICES 2016)</i>	1 – 6	<i>DTU Delhi</i>	4-6 July 2016
72.	S. Krishna Chaitanya and Dhanalakshmi K.	Design and investigation of a linear smart actuator	<i>22nd SPIE International Symposium on Smart Structures and Materials & Nondestructive Evaluation and Health Monitoring</i>	8 – 12	<i>San Diego, California, USA</i>	8-12 Mar. 2015
73.	D. Josephine Selvarani Ruth, Dhanalakshmi K. and S. Sunjai Nakshatharan	Intelligent driving assistance system using shape memory alloy as variable impedance actuator		–		
74.	S. Krishna Chaitanya and	Design of a precise tracking shape	<i>9th International</i>	–	<i>Jaipur</i>	25-27

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	Dhanalakshmi K.	memory alloy wire actuated gripper	<i>Conference on Intelligent Unmanned Systems (ICIUS 2013)</i>			Sept. 2013
75.	M. Banu Sundareswari, Dhanalakshmi K. S. Sunjai Nakshatharan and D. Josephine Selvarani Ruth	Optimal design of PID controller for SMA actuated ball on a beam system	<i>9th International Conference on Intelligent Unmanned Systems (ICIUS 2013)</i>	-	Jaipur	25-27 Sept. 2013
76.	S. Krishna Chaitanya and Dhanalakshmi K.	Demonstration of self-sensing shape memory alloy actuated gripper	<i>7th IEEE Multi-Conference on Systems and Control (MSC 2013) - International Symposium on Intelligent Control (ISIC)</i>	218 – 222	IIT Hyderabad	28-30 Aug. 2013
77.	S. Krishna Chaitanya and Dhanalakshmi K.	Control of shape memory alloy actuated gripper using sliding mode control	<i>7th IEEE Multi-Conference on Systems and Control (MSC 2013) - International Conference on Control Applications (CCA)</i>	1247 – 1252	IIT Hyderabad	28-30 Aug. 2013
78.	D. Josephine Selvarani Ruth, S. Sunjai Nakshatharan and Dhanalakshmi K.	Auto-sensing antagonistic shape memory alloy wire actuated manipulator	<i>7th IEEE Multi-Conference on Systems and Control (MSC 2013) - International Conference on Control Applications (CCA)</i>	1253 – 1258	IIT Hyderabad	28-30 Aug. 2013
79.	S. Krishna Chaitanya and Dhanalakshmi K.	Position control of shape memory alloy actuated gripper	<i>6th IEEE International Conference on Sensing</i>	359 – 364	Kolkata	18-21 Dec. 2012

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			<i>Technology (ICST 2012)</i>			
80.	S. Sunjai Nakshatharan, D. Josephine Selvarani Ruth and Dhanalakshmi K.	<i>Design based active vibration control of a flexible structure using shape memory alloy wire actuators</i>	<i>6th IEEE International Conference on Sensing Technology (ICST 2012)</i>	476 – 480	<i>Kolkata</i>	18- 21 Dec. 2012
81.	D. Josephine Selvarani Ruth, S. Sunjai Nakshatharan and Dhanalakshmi K.	<i>Angular trajectory tracking using antagonistic shape memory alloy actuators</i>	<i>6th IEEE International Conference on Sensing Technology (ICST 2012)</i>	757 – 762	<i>Kolkata</i>	18- 21 Dec. 2012
82.	S. Krishna Chaitanya and Dhanalakshmi K.	Design, development and investigation of novel smart grippers driven by NiTi fibers	<i>3rd Asian Conference on Mechanics of Functional Materials and Structures (ACMFMS12)</i>	75 – 78	<i>IIT Delhi</i>	5-8 Dec. 2012
83.	S. Sunjai Nakshatharan, Dhanalakshmi K. and D. Josephine Selvarani Ruth	A new ball and beam system using shape memory alloy actuators	<i>3rd Asian Conference on Mechanics of Functional Materials and Structures (ACMFMS12)</i>	83 – 86	<i>IIT Delhi</i>	5-8 Dec. 2012
84.	D. Josephine Selvarani Ruth, Dhanalakshmi K. and S. Sunjai Nakshatharan	Force measurement using self-sensing shape memory alloy	<i>3rd Asian Conference on Mechanics of Functional Materials and Structures (ACMFMS12)</i>	55 – 58	<i>IIT Delhi</i>	5-8 Dec. 2012
85.	Dhanalakshmi K. M. Umapathy and D. Ezhilarasi	Variable structure control of shape memory alloy actuated flexible smart structure	<i>14th International Symposium on Smart Structures and Materials & Non-destructive Evaluation and Health Monitoring (SPIE – 07)</i>	18 – 23	<i>San Diego, California, USA</i>	18- 22 Mar. 2007

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86.	C. Chandravathanam, Dhanalakshmi K. and M. Umapathy	Design and characterization of shape memory alloy wire for actuation in smart structure applications	<i>5th International Conference on Trends in Industrial Measurement and Automation (TIMA 2007)</i>	202 – 207	NIT Tiruchirappalli	4-6 Jan. 2007
87.	A. Girija, M. Umapathy, B. Bandyopadhyay, G. Uma and Dhanalakshmi K.	Discrete time sliding mode control for piezoelectric actuated structures	<i>8th IEEE International Conference on Industrial Technology (ICIT 2006)</i>	1466 – 1471	IIT Mumbai	15-17 Dec. 2006
88.	Dhanalakshmi K. C. Chandravathanam M. Umapathy and B. Vasuki	Vibration control of shape memory alloy actuated structure using fast output sampling feedback control	<i>2nd International Congress on Computational Mechanics and Simulation (ICCMS 06)</i>	460 – 466	IIT Guwahati	8-10 Dec. 2006
89.	Dhanalakshmi K. C. Chandravathanam M. Umapathy and D. Ezhilarasi	Design of state feedback control for vibration suppression of shape memory alloy actuated flexible beam	<i>9th International Workshop on Smart Materials and Structures (CANSMART 2006)</i>	129 – 138	Toronto, Ontario, Canada	12-13 Oct. 2006
90.	D.Ezhilarasi, G.Uma and Dhanalakshmi K.	Design of Generalized Predictive Control for Smart Structure using State Space Approach	National Conference on Process Identification, Control and Diagnostics,	134– 141.	Annamalai University, Chidambaram	Aug. 2003
91.	C. Ramesh, M. Umapathy, Dhanalakshmi K. and T. C. Manjunath	Design of variable structure control for seismically excited vibration using electro-rheological fluids	<i>3rd International Conference on Smart Materials, Structures and Systems (ISSS – SPIE 2002)</i>	234 – 241	IISc Bangalore	12-14 Dec. 2002
92.	C. Ramesh, M. Umapathy and Dhanalakshmi K.	Control of seismically excited vibration using Electrorheological Fluids	National Conference on Modern Trends in Electrical and Instrumentation Systems	68– 74	GCT Coimbatore	Mar. 2002

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93.	M Geetha, <i>Dhanalakshmi K.</i> , S Jayachandran, I. A. Palani and Sathish Kumar V.	Analysis of actuation characteristics of CuAlNiMn/Polyimide thin film shape memory alloy	<i>materialstoday: PROCEEDINGS</i>	22 May 2020	Scopus SJR 0.299
94.	Thenmozhi G., Banu Sundareswari M., <i>Dhanalakshmi K.</i>	Shape Memory Alloy Actuated Cantilever Structure for Sensing in Intelligent Engineering	<i>Lecture Notes in Networks and Systems (LNNS)</i> ISSN- 23673370, 23673389	Feb. 2020 93 407 - 415	Scopus 0.60
95.	Devashena T. and <i>Dhanalakshmi K.</i>	Electro-Thermo-Mechano-Magneto characteristics of shape memory spring actuator/sensor in assistive devices	<i>Advances in Intelligent Systems and Computing</i>	Mar. 2020 1077 379 -386	Scopus 0.57
96.	Devashena T. and <i>Dhanalakshmi K.</i>	Electromagnetic Characteristics of Shape Memory Spring	<i>Materials Science Forum</i> ISSN: 1662-9752	Jan 2020 978 421 - 427	Scopus 0.35