



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

Assistant Professor	National Institute of Technology, Trichy	2018	Till date
Post-Doctoral Fellow	Indian Institute of Technology, Madras	2016	2018
Lecturer	Jerusalem College of Engineering, Chennai	2009	2010

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

Examination	Board / University	Year	Division/ Grade	Subjects
Ph. D	Indian Institute of Technology, Madras	2016	-	Electromagnetic Biomedical Instrumentation
M. E	College of Engineering Guindy, Anna University	2009	First class	Biomedical Engineering
B.E.	Anna University	2007	First class	Electronics & Communication

### 9. Academic/Administrative Responsibilities within the University

S. No.	Name of the Post	From	To
1.	Library Committee member	Sep 2018	Nov 2020
2.	Tata steel MOU Committee member	Dec 2018	June 2022
3.	Siemens – Test & Optimization team member	May 2018	June 2022
4.	Stock verification officer	2017	2018
5.	Dpt. Academic Audit faculty in-charge	2019	2020
6.	Convocation committee member - Registration	2018	-
7.	Convocation committee member - Accommodation	2019	-
8.	Convocation committee member - Accommodation	2020	-
9.	Technical Assistant – certificate verification committee	July 2021	-
10.	Stock verification officer	2020	2021
11.	Stock verification officer	2021	2022

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

Position	Institution	From	To
External Examiner	SRM Institute of Science and Technology, Kattankulathur	21-05-2021	24-05-2021

### 11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization
2021	IEEE RFID - TA Challenge 2021	IEEE RFID TA - 2021
2019	Young Women Engineer Award	The Institution of Engineers India (IEI), Tiruchirappalli Local Centre (TLC)
2019	Best paper award	International Conference on Microwave Integrated circuits, Photonics and Wireless network (IMICPW - 2019)
2017	Best poster	NDE conference 2017
2009	University Second Rank Holder	Anna University
2009	Best paper	Jerusalem College of Engg, Chennai

### 12. Fellowships

Year of Award	Name of the Fellowship	Awarding Organization	From (Month/Year)	To (Month/Year)
2011	Ministry of Human Resources and Development (MHRD)	IITM	2011	2015
2014	Travel fellowship, Government of India	IITM	24 Aug 2014	30 Aug 2014

### 13. Details of Academic Work

#### (i) Curriculum Development

#### **Courses introduced:**

- Medical Diagnostic and Therapeutic Instrumentation
- Condition Monitoring

S. No.	Name of the Lab Courses	Experiments introduced	Status

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1.	Circuits & Digital Lab	Three phase power measurement for static load	completed
2.	Circuits & Digital Lab	Three phase power measurement for dynamic load	completed
3.	Analog signal Processing Lab	Temperature transmitter experiment using water bath and DAQ	completed

(ii) Courses taught at Postgraduate and Undergraduate levels

<b>S. No.</b>	<b>Name of the theory Courses Taught at UG Level</b>	<b>Session</b>	<b>No. of Credits</b>	<b>No. of Students</b>
1.	Circuit Theory	July 2018	4	51
2.	Analog signal Processing	Jan2019	3	51
3.	Microprocessors & Microcontrollers	Jan2019	3	52
4.	Circuit Theory	July 2019	4	52
5.	Analog signal Processing	Jan2020	3	52
6.	Electrical & Electronic Measurements	July 2020	3	52
7.	Circuit Theory	July2020	4	62
8.	Analog signal Processing	Jan2021	3	62
9.	Circuit Theory	July2021	4	59
10.	Electron devices and circuits	July2021	3	22
11.	Comprehensive Viva	July 2021	3	53
12.	Analog signal Processing	Jan2022	3	58
<b>S. No.</b>	<b>Name of the Lab Courses Taught</b>	<b>Session</b>	<b>No. of Credits</b>	<b>No. of Students</b>
1.	Circuits & Digital Lab	July 2018	2	51
2.	Analog signal Processing Lab	Jan2019	2	51
3.	Analog signal Processing Lab	Jan2020	2	52
4.	Circuits & Digital Lab	July2020	2	62
5.	Analog signal Processing lab	Jan2021	2	62
6.	Circuits & Digital Lab	July2021	2	59
7.	Analog signal Processing lab	Jan2022	2	58

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8	Industrial Automation & Process Control Lab	Jan 2022	2	63
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(iii) Projects guided at Postgraduate level

S. No.	Title of the Thesis	Guide / Co-Guide	Roll Number of Student
1.	Mechatronics durability and reliability, validation of aggregates in BS6 Vehicles July 2019 – Dec 2019	Geetha Chakaravathi (Guide)	202218005
2.	Design And Development Of Low-Cost Charging System And Analysis Of Charging Behaviour In High Voltage System Of Electric Vehicles, Jan 2020 – June 2020	Geetha Chakaravathi (Guide)	202218005
3.	Machine Condition Monitoring Using Wireless RFID Tag Antenna Based Sensors, July 2020 – Dec 2020	Geetha Chakaravathi (Guide)	202219012
4.	Design of wireless RFID tag antenna based sensors for machine condition monitoring Jan 2021 – June 2021	Geetha Chakaravathi (Guide)	202219012
5.	Wireless sensor network for air quality monitoring, July 2021 – Dec 2021	Geetha Chakaravathi (Guide)	202220022
7.	Design of Electronic Horn, July 2021 – Dec 2021	Geetha Chakaravathi (Guide)	210120024
8.	Smart agricultural monitoring system using WiFi and Blynk App (Ongoing), Jan 2022	Geetha Chakaravathi (Guide)	02220022
9.	Development of Electronic Horn, Jan 2022	Geetha Chakaravathi (Guide)	210120024

(iv) Other contribution(s)

S. No.	Name of the Post	From	To
1.	PhD Comprehensive Exam Coordinator	Jan 2019	June 2020
2.	SENSORS - Department symposium Faculty in charge	July 2018	Dec 2019
3.	Actively participated in NBA Work	Jan 2019	Till date
4.	BOS Work (syllabus updation )	May 2018	Till date
4.	ICECON 2019, Department Conference	Dec 2019	-

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	Organizing Committee Member		
5.	PhD admission committee Member	May 2018	Dec 2018
	PhD admission committee Member	Jan 2019	June 2019
6.	Purchase initiator for Circuits & Digital Laboratory	July 2018	Till date
7.	Purchase initiator for Analog signal processing Laboratory	July 2018	Till date
8.	UG - Class Committee Chairperson	Jan 2019	June 2019
9.	UG - Class Committee Chairperson	Jan 2021	June 2021
9.	UG Project Co-ordinator	Jan 2019	June 2019
10.	Faculty Advisor	July 2019	Till date
11.	Department achievement details (consolidation)	Jan 2021	June 2021
12.	MIS Co-ordinator	Jan 2022	June 2022
13.	UG Project Co-ordinator	Jan 2022	May 2022
14.	Data Coordinator	July 2022	-

14. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
RFID based wireless sensors for surface crack monitoring	Science and Engineering Research Board (SERB) under Start up Research Grant (SRG) Dec 2019	26-12-2019	25-06-2022	completed
Design and evaluation of Radio Frequency (RF) sensors for Structural Health Monitoring (SHM) in railway infrastructures	SEED Grant, NITT 2019	2019	-	Ongoing

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15. Number of PhDs guided

Name of the PhD Scholar	Title of PhD Thesis	Role(Supervisor/ Co-Supervisor)	Year of Award		
-	-	-	-		
<b>Current Research Scholar Details</b>					
<i>Sl. No</i>	<i>Roll No</i>	<i>Name of Scholar</i>	<i>Project Topic</i>	<i>Discipline</i>	<i>Batch</i>
1	410420051	SETTI SURESH (UGC Fellow)	Design and Development of Passive wireless RF sensors for condition monitoring of Industrial Machinery	Sensors for Condition Monitoring	2020
2.	410120051	Mohammed Arshad Ali Khan (HTRA)	Wearable Sensors in Health Care	Wearable Sensor	2020
3.	410321001	Mable Alex (QIP)	Hyperthermia treatment of Cancer	Biomedical	2021

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
14-16 Dec 2017	Conference	National	Paper presenter	Indian Society for Non-Destructive Testing	Chennai
14-16 Dec 2017	Conference	National	Paper presenter	Indian Society for Non-Destructive Testing	Chennai
18-19 <sup>th</sup> Feb, 2017	Conference	National	Paper presenter	Gujarat Cancer & Research Institute	Ahmedabad
7 <sup>th</sup> July, 201	Conference	International	Paper presenter	Indian Society for Non-	Mahabalipuram

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5				Destructive Testing	
26-30 <sup>th</sup> Aug 2014	Conference	International	Paper presenter	IEEE EMBS	Chicago, USA
9 <sup>th</sup> May, 2014	Conference	National	Paper presenter	Ansys Convergence conference	Bangalore
4 <sup>th</sup> Sep 2013	Conference	National	Paper presenter	Institute for Plasma Research	Ahmedabad
8 <sup>th</sup> Aug 2009	Conference	International	Paper presenter	Meenakshi Sundararajan College	Chennai

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
Organizing committee member for the International Conference on Instrumentation and Control Engineering (ICECON 2019)	International	19 <sup>th</sup> -21 <sup>st</sup> December 2019	Executive Member	National Institute of Technology, Tiruchirappalli

18. Invited Talks delivered

Topic	Date	Inviting Organization
RFID Techniques and Applications	21 <sup>st</sup> Jan 2022	Dept. of Electronics Engineering, MIT Campus, Anna University
RF Sensors and Instrumentation	20 <sup>th</sup> Oct 2021	Amrita School of Engineering
RFID based wireless sensors for structural health monitoring	27 Aug 2019	IEI

19. Membership of Learned Societies



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Type of Membership (Ordinary Member/ Honorary Member / Life Member )	Organization	Membership No. with date
Member	IEEE Engineering in Medicine and Biology Society	92975230
Member	IEEE Antennas and Propagation Society	92975230
Member	IEEE Instrumentation and Measurement society	92975230
Member	Institution of Engineers (India)	M-1720796

20. Academic Foreign Visits:

Travel fellowship, Government of India , Awarded by Indian Institute of Technology Madras (IITM), 2014 (USA – 10 days) - Engineering in Medicine & Biology Society, IEEE conference

21. Publications

(A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year	Impact Factor of the Journal (Optional)
Setti Suresh, <b>Geetha Chakaravarthi</b>	RFID technology and its diverse applications: A brief exposition with a proposed Machine Learning approach	Measurement	195	31 May 2022, 111197	2022	5.5
Ashwin Kumar Narasimhan, <b>Geetha Chakaravarthi</b> , M. S.	Study of absorption of radio frequency field by gold nanoparticles	Electromagnetic Biology and Medicine	39	-	2020	2.882

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Ramachandra Rao & Kavitha Arunachalam	and nanoclusters in biological medium					
<b>Geetha Chakaravarthi,</b> Krishna Prasath, Jebby Philip, Jayaganthan R., Velmurugan R., Kavitha Arunachalam	Reusable Passive Wireless RFID tag for Strain Measurement on Metal	IEEE sensors	18	5143-5150	2018	4.61
<b>Geetha Chakaravarthi,</b> Kavitha Arunachalam	Influence of dissolved gases in coupling water bolus on superficial hyperthermia and evaluation of water conditioning system with inline degassing	Biomed Physics & Engineering Express	2	1-11	2016	1.391
<b>Geetha Chakaravarthi,</b> Kavitha Arunachalam	Design and characterization of miniaturized cavity backed patch antenna for microwave hyperthermia	International Journal of Hyperthermia	31	737-748	2015	3.98

(B) Conferences/Workshops/Symposia Proceedings

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Author(s)	Title of Abstract/ Paper	Title of the Proceedings	Page numbers	Conference Theme	Venue	Year
<b>Geetha C, Kavitha Arunachalam</b>	Design of a Patch Antenna Applicator for Hyperthermia Treatment of Superficial Tissue Disease at 434 MHz National Symposium on High Power RF & Microwave	Institute for Plasma Research	-	Microwave Integrated circuits	Ahmedabad	2013
<b>Geetha Chakaravarthi, Kavitha Arunachalam</b>	A Compact Microwave Patch Applicator for Hyperthermia Treatment of Cancer	IEEE	5320-5322	Engineering in Medicine & Biology Society	Chicago, USA	2014
<b>Geetha Chakaravarthi, Kavitha Arunachalam</b>	Specific Absorption Rate Measurement of External Heating Antennas Using Infrared Thermography	QIRT Asia	1	Quantitative Infrared Thermography	Mahabalipuram, Chennai	2015
<b>Geetha Chakaravarthi Krishna Prasath; R. Jayaganthan; R. Velmurugan; Kavitha Arunachalam</b>	A passive UHF RFID tag for wireless fracture toughness measurement on metals	2019 TEQIP III Sponsored International Conference on Microwave Integrated Circuits, Photonics and Wireless Networks (IMICPW)	500-502	Microwave Integrated circuits	Tiruchirappalli, India	2019
<b>G. Chakaravarthi, A. K. Narasimhan, M. S. Ramachandra Rao and K. Arunachalam</b>	Influence of Gold Nanoparticles (GNPs) on Radiofrequency Tissue Heating	019 URSI Asia-Pacific Radio Science Conference (AP-RASC), 2019	1-3	Radio Science	New Delhi, India	2019
<b>Rinu Preethi B, Deepak Rana, Jeyashree M, Geetha Chakaravarthi</b>	Evaluation of chipless RFID sensor for wireless metal crack detection and characterization	NDE 2019, (ISNT)	-	Non-destructive techniques	Bangalore, India	2019
<b>Deepak Rana, Geetha Chakaravarthi</b>	Experimental assessment of an RFID based wireless sensor for surface crack detection and characterization on metal	NDE 2019, (ISNT)	-	Non-destructive techniques	Bangalore, India	2019

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(C) Books & Monographs:NIL

(D) Patents

- 1) K.Arunachalam and **G.Chakaravarthi**, "**Improved microwave hyperthermia device**", patent pending, application no: 1328/CHE/2014; Provisional, date: 13.03.2014; Complete filing date: 13.03.2015, Indian Patent, 2015.
- 2) **Geetha Chakaravarthi**, Krishna Prasath, Jayaganthan R., Velmurugan R., Kavitha Arunachalam, "**Reusable Passive Wireless RFID sensor for Structural Health Monitoring**", patent pending, application no: 201841001020; Complete filing date: 09.01.2018, Indian Patent, 2018