

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

## Curriculum Vitae



R. Leela Velusamy obtained her B.E. degree in Electronics and Communication Engineering in 1986 from Regional Engineering College, Tiruchirappalli and Postgraduate degree in Computer Science and Engineering in 1988 from Regional Engineering College (REC), Tiruchirappalli. She was awarded Ph.D. degree by the National Institute of Technology Tiruchirappalli in 2010. Since 1986, she has been in the teaching profession and currently she is a Professor in the Department of Computer Science and Engineering, National Institute of Technology, Tiruchirappalli, Tamil Nadu, India. She has 32 years of teaching experience and 14 years of research experience. Her research interests include QoS routing, Cryptographic techniques, network security, wireless sensor networks, and IoT.

She has to her credit of publishing 35 research papers including 13 in International and National Journals, and 22 in International and National Conferences. One Ph.D. degree has been awarded under her guidance. Four M.S. (by Research) degrees have been awarded under her guidance. She is currently guiding five Doctoral Research Scholars. She has visited NTU Singapore, Liverpool University London, Quebec City Canada, UAE, Malaysia, CMU at Pittsburgh, and Harvard University at Boston. She is currently heading the department of Computer Science and Engineering.

- |                                   |   |
|-----------------------------------|---|
| 1. Name                           | R. LEELA VELUSAMY                               |
| 2. Designation:                   | PROFESSOR                                       |
| 3. Office Address:                | DEPARTMENT OF COMPUTER<br>SCIENCE & ENGINEERING |
| 4. Telephone (Direct) (Optional): |   |
| Telephone :                       | Extn (Optional): 3209                           |
| Mobile (Optional):                |   |
| 5. Email (Primary):               | leela@nitt.edu                                  |
| 6. Field(s) of Specialization:    | Cryptography, Network Security,                 |

# National Institute of Technology, Tiruchirappalli:

## Performa for CV of Faculty/ Staff Members

---

Compilers, Automata and Formal  
Languages

### 7. Employment Profile

Job Title	Employer	From	To
Professor	NIT Trichy	March 11, 2018	Till date
Associate Professor	NIT Trichy	January 1, 2006	March 10, 2018
Lecturer (SG)	NIT Trichy	October 28, 2000	December 31, 2005
Lecturer (SS)	NIT Trichy	June 24, 1995	October 27, 2000
Lecturer	NIT Trichy	September 23, 1992	June 23, 1995

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

Examination	Board / University	Year	Division/ Grade	Subjects
Ph.D.	NIT Trichy	2010	NA	Study on QoS Routing Techniques
M.E.	REC Trichy	1989	I class	CSE
B.E.	REC Trichy	1986	I class	ECE

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

Position	Faculty/Department/Centre/Insti- tution	From	To
Head	CSE	October 20, 2015	Till date
Warden	Opal A & D	December 1, 2010	July 12, 2012
Chairman	Internal complaints committee	November 21, 2012	February 28, 2014
Convener	DAC/MBA	March 7, 2012	February 28, 2013
Faculty Advisor	Pragyan	September 20, 2006	September 19, 2007
Faculty Advisor	Spider R & D club	May 1, 2015	June 6, 2016
Faculty Advisor	CSE Association	September 1, 2013	October 31, 2014
PAC chairman	CSE department	February 11, 2008	Till date

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

Position	Institution	From	To
DC member	Anna University Chennai	2013	Till date
DC member	VIT Vellore	2015	Till date
BoS member	Karunya University, Coimbatore	2017	Till date

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

---

BoS member	Sona College Salem	2017	Till date
------------	--------------------	------	-----------

11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization
2014	Distinguished Alumni Award	NIT Trichy on Golden Jubilee celebration

12. Fellowships: Nil

13. Details of Academic Work

- (i) Curriculum Development
- (ii) Courses taught at Postgraduate and Undergraduate levels
- (iii) Projects guided at Postgraduate level
- (iv) Guiding Ph.D. scholars & M.S, (by Research) scholars

14. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
Technological Incubation and Development of Entrepreneurs (TIDE)	Dept. of Electronics and Information Technology, DEITY	01.03.2012	31.03.2017	Completed
Business and Management Capacity Development of Rural Women Entrepreneurs of India and Srilanka	The Asia Foundation	01.07.2014	31.07.2015	Completed

15. Number of PhDs guided: 01

Name of the PhD Scholar	Title of PhD Thesis	Role(Supervisor/ Co-Supervisor)	Year of Award
U Venkanna	Study on Cooperative Routing Algorithms in Mobile Ad Hoc Networks Using Trust Management	Supervisor	2015

16. Number of M.S. (By Research) guided: 04

Name of the PhD Scholar	Title of MS Thesis	Role(Supervisor/ Co-Supervisor)	Year of Award
-------------------------	--------------------	---------------------------------	---------------

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

Ipsita Mohanty	Acquisition and Analysis of Live Data to Extract Application Level Digital Evidence	Supervisor	2013
Sachin Kumar	Latent Fingerprint Recognition Using Learning Approach	Supervisor	2016
Pravin Ranjan	Angle Based Routing in Mobile Ad hoc Network	Supervisor	2015
Mohit Agarwal	Spam Detection in Social Networking Sites Using Unsupervised Learning and Dimensionality Reduction	Supervisor	2016

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
17.10.2017	Conference	International	Paper presenter	CentraleSupélec, Laboratoire des Signaux et Systèmes (L2S UMR CNRS 8506), Université de Paris-Saclay, Paris and Liverpool John Moores University, Liverpool city, <a href="#">United Kingdom</a>	United Kingdom
05.2008	Conference	International	Paper presenter and Chaired a Session		Qubec City in Canada

18. 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
Analysis of Network Protocols and Design of Network Processor	National	12/2/2007 to 17/2/2007	Co-coordinator	NIT Trichy
A two weeks FDP on	National	5/05/2014	Co-	NIT Trichy

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

“Entrepreneurship Development and Management”		to 17/05/2014	coordinator	
A six days EDP on “Business and Management Capacity Development of Rural Women Entrepreneurs of India and Sri Lanka”	International	15/11/2014 to 20/11/2014	Co-coordinator	NIT Trichy

19. Invited Talks delivered

Topic	Date	Inviting Organization
Cryptographic Algorithms	13 <sup>th</sup> June 2007	Periyar Maniammai University Vallam, Tanjavur, India
Finite state Automata and Regular expressions	3 <sup>rd</sup> Nov. 2009	Mookambigai College of Engineering, Kalamavur, Pudukkottai Dt, Tamil Nadu, India
Fault Tolerance	15 <sup>th</sup> February 2011	The Institution of Engineers (India), Tiruchirappalli Local Centre, BHEL main office road, Tamil Nadu, India
Network Security	23 <sup>rd</sup> February 2011	Oxford Engineering College, Trichy, Tamil Nadu
Mathematics of Cryptography	9 <sup>th</sup> June 2011	A C College of Engineering and Technology, Karaikudi, Tamil Nadu, India

20. Membership of Learned Societies

Type of Membership (Ordinary Member/ Honorary Member / Life Member )	Organization	Membership No. with date
Life Member	Indian Society For Technical Education (ISTE)	
Life Member	Computer Society of India (CSI)	

21. Academic Foreign Visits

Country	Duration of Visit	Programme
United Kingdom	17.10.2017 to 18.10.2017	International Conference on Internet of Things and Machine Learning (IML 2017)

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

UAE	2010	
United States of America	2008	
Canada	2008	present a paper and Chaired a session in the International Conference
Malaysia	2007	
Singapore	7.11.2007 to 5.12.2007	Visited Centre for Communication and Network Technology (CeMNet), School of Computer Engineering (SCE), Nanyang Technological University (NTU), Singapore to acquire knowledge in the research areas of Wireless Communication and Digital Rights Management

22. Publications

(A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year	Impact Factor of the Journal (Optional)
<b>SCI/SCIE</b>						
KoppalaGuravaiah, R. LeelaVelusamy	Energy Efficient Clustering Algorithm Using RFD Based Multi-hop Communication in Wireless Sensor Networks	Wireless Personal Communications, <i>Springer</i>	95(4)	3557-3584	2017	0.951 (2016)
U.Venkanna and R. LeelaVelusamy	Cooperative Routing In Mobile Ad Hoc Networks Using Fuzzy Logic	<i>International Journal of Ad Hoc and Ubiquitous Computing (IAHUC), Inderscience</i>	25(3)	147-162	2017	0.489 (2015)
U Venkanna, R LeelaVelusamy	TEA-CBRP: Distributed cluster head election in MANET by using AHP	<i>Peer to Peer networking and applications, Springer</i>	9(1)	159-170	2016	1.262 (2016)
U Venkanna, Jeh Krishna Agarwal, and R LeelaVelusamy	A Cooperative Routing for MANET Based on Distributed Trust and Energy Management.	Wireless Personal Communications, Springer	81(3)	961-979	2015	0.951 (2016)
R. Leela, N. ThanuLekshmi	Multi-constraint QoS Unicast Routing Using	<i>Applied Soft Computing, Elsevier</i>	11(3)	1753-1761	2011	3.541 (2016)

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

and S. Selvakumar	Genetic Algorithm (MURUGA)					
<b>SCOPUS</b>						
V. Anita, R LeelaVelusamy	Iris Recognition Systems with Reduced Storage and High Accuracy Using Majority Voting and Haar Transform	<i>Advances in Computer Science, Engineering &amp; Applications</i>	167	813- 822	2012	
Mohanty I, R LeelaVelusamy	Recovery of Live Evidence from Internet Applications	<i>Advances in Computer Science, Engineering &amp; Applications</i>	167	823- 834	2012	
R. Leela and S. Selvakumar	Dynamic Mutli Constraint Multi Path QoS Routing Algorithm (DMCMPRA)	<i>International Journal of Computers and Applications, ACTA Press</i>	32(3)		2010	
R. Leela and S. Selvakumar	Genetic Algorithm approach to Dynamic Mutli Constraint Multi Path QoS Routing Algorithm for IP Networks	<i>International Journal of Communication Networks and Distributed Systems, Inderscience Enterprises Ltd</i>	5(4)	392- 411	2010	
<b>OTHERS</b>						
KoppalaGuravaia h, R. LeelaVelusamy	Performance Analysis of RFDMRP: River Formation Dynamics based Multi-Hop Routing Protocol in WSNs	International Journal of Information Processing, IK International Publishing House Pvt. Ltd	9(4)	22-33	2015	
V. Anita, R LeelaVelusamy	Authentication of Digital Documents Using Secret Key Biometric Watermarking	<i>International Journal of Communication Network Security</i>	1(4)	5-11	2012	
Mohanty I., R LeelaVelusamy	Information Retrieval from Internet Applications for Digital Forensic	<i>International Journal of Security, Privacy and Trust Management</i>	1(3/4)	15-30	2012	
R. Leela and S. Selvakumar	QoS Routing Using Genetic Algorithm (QoSGA)	International Journal of Computer and Electrical Engineering (IJCEE)	1(3)	297- 302	2009	
LeelaVelusamy, MuthiahAnnamal ai	A call graph Profiler for GNU Octave	ARXIV papers Cornell University			2008	
LeelaVelusamy, MuthiahAnnamal	Octave-GTK: A GTK binding for GNU	Journals of Software Maintenance and Evolution:	1(11)		2006	

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

---

ai, and Hemant Kumar	Octave	Research and Practice, John Wiley & Sons, Ltd				
----------------------	--------	---	--	--	--	--

(B) Conferences/Workshops/Symposia Proceedings

Authors	Title of Abstract/ Paper	Title of the Proceedings	Page Numbers	Conference Theme	Venue	year
<b>SCOPUS</b>						
KoppalaGuravaiah, R.G. Thivyavignesh, and R. LeelaVelusamy	Vehicle Monitoring using Internet of Things	ACM		<i>International Conference on Internet of Things and Machine Learning (IML 2017)</i>	Liverpool, UK	17-18, Oct. 2017
S. Kumar and R. LeelaVelusamy	Kernel approach for similarity measure in latent fingerprint recognition	Springer	368-373	<i>International Conference on Emerging Trends in Electrical Electronics &amp; Sustainable Energy Systems (ICETEESES)</i>	INDIA	11 - 12 Mar 2016
M. Agrawal and R. LeelaVelusamy	R-SALSA: A Spam Filtering Technique for Social Networking Sites	IEEE		<i>3<sup>rd</sup> IEEE International Students' Conference on Electrical, Electronics and Computer Science (SCEECS-2016)</i>	INDIA	05-06Mar., 2016
M. Agrawal and R. LeelaVelusamy	Unsupervised Spam Detection in Hyves Using SALSA	Springer	517-526	<i>4<sup>th</sup> International Conference on Frontier in Intelligent Computing: Theory and Applications (FICTA-2015)</i>	INDIA	16-18Nov., 2015



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

---

KoppalaGuravaiah and R. LeelaVelusamy	RFDMRP: River Formation Dynamics based Multi-Hop Routing Protocol for Data Collection in Wireless Sensor Networks	<i>Elsevier</i> <i>Procedia-Computer Science</i>	31-36	<i>Eleventh International Multi Conference on Information Processing</i>	INDIA	21-23Aug., 2015
Sachin Kumar and R. LeelaVelusamy	Latent Fingerprint Preprocessing: Orientation Field Correction using Region Wise Dictionary	IEEE	1238-1243	4 <sup>th</sup> International Conference on Advances in Computing, Communications and Informatics (ICACCI-2015)	INDIA	10-13Aug., 2015
Amedapu Srinivas and R. LeelaVelusamy	Identification of Influential Nodes from Social Networks based on Enhanced Degree Centrality Measure	IEEE	1179-1184	5 <sup>th</sup> International Conference, 2015 IEEE International Advance Computing Conference (IEEE IACC 2015)	INDIA	12-13June, 2015
Pravin Ranjan and R. Leela Velusamy	Optimized Local Route Repair and Congestion Control in Mobile Ad hoc Network	IEEE		6 <sup>th</sup> IEEE, International Conference on Computer and Communication Technology, ICCCT-15	INDIA	27 Feb., 2015
PravinRanjan and R. LeelaVelusamy	Route Discovery in Mobile Ad Hoc Network Using an Optimum Angle Selection based Approach	MNIT Allahabad  IEEE	119-204	5 <sup>th</sup> International Conference on Computer and Communication Technology (ICCCT-2014)	INDIA	26-28 Sep., 2014
U Venkanna, R LeelaVelusamy	Reward based cooperative routing in mobile ad hoc networks using markov decision process	IEEE		International conference on Recent Advances in Engineering and Computational	INDIA	6-8 March, 2014

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

---

				Sciences (RAECS-2014)		
Mohanty I. and R. LeelaVelusamy	Extraction of HTTP Messages for Retrieval of Live Evidence	IEEE		<i>3<sup>rd</sup> International Conference on Recent Trends in Information Technology (ICRTIT 2013)</i>	INDIA	25-27 July 2013
U. Venkanna and R. LeelaVelusamy	Black Hole Attack and Their Counter Measure Based on Trust Management in MANET: A Survey	IET		<i>Third International Conference on Advances in Recent Technologies in Communication &amp; Computing - ARTCom 2011</i>	INDIA	14-15 Sept., 2011
R. Leela and S. Selvakumar	Dynamic Multi Constraint Multi Path QoS Routing Algorithm (DMCMPRA)			<i>International Conference on Communications Convergence and Broadband Networking ICCBN 2008</i>	INDIA	26-28 May 2008
R. Leela and S. Selvakumar	Genetic Algorithm approach to Dynamic Multi Constraint Multi Path QoS Routing Algorithm for IP networks (GA-DMCMPRA)			<i>First International Communication Systems and Networks and Workshops, 2009. COMSNETS IEEE, 2009</i>	INDIA	10 <sup>th</sup> Jan. 2009
<b>OTHERS</b>						
KoppalaGuravaiah, R. LeelaVelusamy	Design Issues and Techniques on Data Collection in WSNs: A Survey	DESIDOC, INDIA	201-209	<i>Bilingual International Conference on Information Technology: Yesterday, Today, and</i>	INDIA	19-21 Feb., 2015

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

---

				<i>Tomorrow</i>		
U Venkanna, R LeelaVelusamy	Mitigating the attacks on Recommendation trust model for Mobile Ad Hoc Networks	Elsevier	243-249	<i>International conference on Emerging Research in Computing, Information, Communication and Applications</i>	INDIA	02-03 Aug., 2013
Mohanty I, R LeelaVelusamy	Recovery of Live Evidence from Internet Applications		823-834	<i>The 3<sup>rd</sup> International Conference on Communications, Security Information Assurance (CSIA 2012), New Delhi, India Springer, May 2012.</i>	INDIA	2012
V.Anitha, R.LeelaVelusamy	Iris recognition systems with reduced storage and high accuracy using Majority Voting and HAAR Transform	Delhi		The third International Conference on Communications Security & Information Assurance CSIA-2012, New Delhi, India	INDIA	May 25 – 27 2012
V. Anita, R. LeelaVelusamy	Authentication of Digital Documents Using Secret Key Biometric Watermarking	Trivandrum	243-249	<i>The International Conference on Electrical Engineering and Computer Science (ICEECS-2012) May 12<sup>th</sup>, 2012</i>	INDIA	May 12 <sup>th</sup> 2012
R. Leela and S. Selvakumar	Multi Constraint Routing for MANETs using Genetic Algorithm (MRMGA)			<i>International Conference on Communications Convergence</i>	INDIA	17-18 July, 2008

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

---

				<i>and Broadband Networking ICCBN 2008</i>		
<b>NATIONAL CONFERENCE</b>						
LeelaVelusamy, Manas Garg, and SumitBishnoi	Grammar Based Machine Translation for Indian Languages			<i>National Conference on Innovations in Information &amp; Communicatio n Technology, NCIIT 2007</i>	INDIA	21- 22Sept., 2007
R. Leela, Shiva Kumar, D. A. Vidhate	Modified Multiple Slot System (MMSS) – A protocol for wireless Network Security			<i>National Conference on Nascent Technologies in Engineering NCNTE-2008</i>	INDIA	29 <sup>th</sup> Feb. – 1 <sup>st</sup> Mar. 2008