

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

## Curriculum Vitae



G.R. Gangadharan is working as an Associate Professor in the National Institute of Technology (NIT), Tiruchirappalli. His research interests are mainly located on the interface between technology and business perspectives. He has received Ph.D. degree in Information and Communication Technology from the University of Trento, Trento, Italy and European University Association. He is a Senior Member of IEEE and ACM.

1. Name **Dr. G. R. GANGADHARAN**
2. Designation: ASSOCIATE PROFESSOR
3. Office Address: Department of Computer Applications, NIT, Tiruchirappalli
4. Telephone (Direct) (Optional):  
Telephone : 0431-2503737  
Mobile (Optional):
5. Email (Primary): ganga@nitt.edu Email (Secondary) : geeyaar@gmail.com
6. Field(s) of Specialization: Internet Technologies (Cloud / Edge Computing), Energy Informatics, Big Data Analytics

### 7. Employment Profile

Job Title	Employer	From	To
Associate Professor	Institute for Development and Research in Banking Technology (IDRBT), Hyderabad	Feb. 2016	May 2018
Assistant Professor	Institute for Development and Research in Banking Technology (IDRBT), Hyderabad	Sept. 2011	Jan. 2016
Researcher	IBM Research, India	Nov. 2010	Aug. 2011
Postdoc Researcher	Politecnico di Milano, Milan, Italy	Mar. 2010	Aug. 2010
Researcher	Novay (Telematica Institute), Enschede, Netherlands	Jun 2008	Feb. 2010
Postdoc Researcher	University of Trento, Trento, Italy	Nov. 2007	May 2008

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

Examination	Board / University	Year	Division/ Grade	Subjects
Ph.D.	University of Trento, Italy	2008		Info. & Communication Technology
M.S.	Scoula Superiore Sant'Anna, Pisa, Italy	2004	First	Information Technology
M.Sc.	M.S. University, Tirunelveli	1999	First	Computer Science
B.Sc.	M.S. University, Tirunelveli	1997	First	Computer Science
HSC	Board of Hr. Sec. Examinations, Tamilnadu	1994	First	Mathematics, Physics, Chemistry and Biology
SSLC	Board of Sec. Education, Tamilnadu	1992	First	Mathematics, Science, and Social Science

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

Position	Faculty/Department/ Centre/Institution	From	To
Placement Coordinator	IDRBT	April 2016	May 2018
R&D Coordinator	IDRBT	Jan. 2014	May 2018
PGDBT Academics Coordinator	IDRBT	April 2017	May 2018
M.Tech. Coordinator	IDRBT	Aug. 2014	April 2017
Coordinator – International Initiatives	IDRBT	Dec. 2014	May 2018
Associate Dean (International Relations)	NIT Trichy	March 2021	Till Date

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

Position	Institution	From	To

### 11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization

### 12. Fellowships

Year of Award	Name of the Fellowship	Awarding Organization	From (Month/Year)	To (Month/Year)

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### 13. Details of Academic Work

#### (i) Curriculum Development

- Masters level courses on Internet Technologies, E-Commerce and Payment Systems, Data Engineering, Big Data Analytics, Cloud Computing

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

- E-Commerce and Payment Systems
- Database Management Systems
- Software Engineering
- Information Systems
- Big Data Analytics
- Cloud computing
- Distributed Systems

(iii) Projects guided at Postgraduate level: 23 M.Tech. Projects Guided

(iv) Other contribution(s)

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

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
ML/AI Hardware/Software framework for Vyomnoids	ISRO	Oct. 2021	Sep. 2024	Ongoing
NLP/Embeddings and Reinforcement Learning	Conde Nast India Pvt. Ltd.	Nov. 2021	Oct. 2024	Ongoing
Digital Health Records Storage and Analysis for Healthcare Provisioning of Global Patients	DST - SPARC	June 2019	Sep. 2022	Ongoing
Next Generation Smart Data Centers	Netherlands Organisation for Scientific Research (NWO), Government of Netherlands	Oct. 2015	Sept. 2019	Completed
Data Security in Cloud Services	IBM International Shared University Research (SUR), United States of America	Apr. 2014	Mar. 2015	Completed
Security Architecture for Banking Cloud Services	IBM India University Relations	Dec. 2012	Nov. 2013	Completed

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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
Gopal Narayan Rai	Modeling and Verification of Web Services using Recursive Composition Algebra	Supervisor	2017
Deepnarayan Tiwari	Authenticated Secure Data Sharing and Storage in Cloud Computing	Supervisor	2018
Chandrashekar Jatoth	QoS aware Service Composition using Computational Intelligence Methods	Supervisor	2018
Dinesh Reddy Vemula	Energy Efficient Data Center Management Strategies	Supervisor	2019
Lavanya Settipalli	A Study on the Significance of Unsupervised Learning and Blockchain in Healthcare Fraud Detection and Prevention	Supervisor	Thesis Submitted on March 2022

### 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
Aug. 28-31 & Sept. 26-28, 2014	Master Teacher Programme	International	Participant	Indian School of Business, Hyderabad	ISB, Hyderabad
Dec. 03-08, 2012	E-Learning	National	Participant	UGC Academic Staff College	JNTU, Hyderabad
Nov. 23-27, 2020	Artificial Intelligence	National	Participant	ABV - IITM Gwalior	Online (ATAL Academy)
Jan. 11-15, 2021	Block Chain	National	Participant	Indian Institute of Technology Ropar	Online (ATAL Academy)

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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
2 <sup>nd</sup> IDRBT Doctoral Colloquium	National	Dec. 20-21, 2012	Organizing Coordinator	Hyderabad, India
3 <sup>rd</sup> IDRBT Doctoral Colloquium	National	Dec. 16-17, 2013	Organizing Coordinator	Hyderabad, India
4 <sup>th</sup> IDRBT Doctoral Colloquium	National	Dec. 11-12, 2014	Organizing Coordinator	Hyderabad, India
International Conference on Distributed Computing and Networking (ICDCN 2017)	International	Jan. 04-07, 2017	Organizing Chair	Hyderabad, India
Symposium on IT in Practice (ITiP) (COMPSAC 2018)	International	July 23- 27, 2018	Program Chair	Tokyo, Japan
Cloud and Edge Computing for Big Data Analytics (with a focus on Healthcare)	International	Dec. 16-20, 2019	Organizing Coordinator	NIT Trichy
Computing Models and Data Analytics	International	April 12-16, 2021	Organizing Coordinator	NIT Trichy
National Conference on Business Management and Analytics	National	April 30, 2021	Organizing Secretary	NIT Trichy
KARYASHALA: Statistical Modeling & Computational Intelligence	National	Dec. 06-12, 2021	Organizing Coordinator	NIT Trichy
FPGA Based SoC Design Targeted for Implementing AI/ML Algorithms	National	Dec. 27-31, 2021	Organizing Coordinator	NIT Trichy
National Conference on Business Management and Analytics	National	January 28-29, 2022	Organizing Secretary	NIT Trichy
GIAN: Artificial Intelligence for Social Media Content Extraction, Analysis, and Recommendation Systems	International	April 18-22, 2022	Organizing Coordinator	NIT Trichy

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### 18. Invited Talks delivered

Topic	Date	Inviting Organization
Licensing Services: Formal Analysis and Implementation	Nov. 24, 2006	FBK Trento, Italy
The Science of Free/Open Services	Apr. 05, 2007	Carleton Univ., Ottawa, Canada
A Formal Approach Service Licensing	July 2007	Technical Univ. of Vienna, Austria
Service Licensing	Oct. 16 2007	Univ of Milano, Italy
Service Licensing	Nov. 2007	Univ of Essen, Germany
Rights and Obligations Aware Services	April 21, 2009	Univ of Aarhus, Denmark
Service Level Agreements in Cloud Computing	Nov. 25, 2009	Univ of Lugano, Switzerland
Cloud Computing	25 Feb 2013	Dr. GRD College of Science, Coimbatore
Cloud Computing	26 June 2013	MRCET, Hyderabad
Big Data Analytics: Concepts & Case Studies	24 Feb. 2021	PSNA College of Engg. & Tech., Dindigul
Smart Health Monitoring System using IoT	17 March 2021	RGNIYD, Sriperumbudur
Big Data Analytics	16 Dec. 2021	CIT, Coimbatore

### 19. Membership of Learned Societies

Type of Membership (Ordinary Member/ Honorary Member / Life Member )	Organization	Membership No. with date
Senior Member	ACM	90530299
Senior Member	IEEE	8065758

### 20. Academic Foreign Visits

Country	Duration of Visit	Programme
Italy	2003 - 2008	For studying M.S. and Ph.D.
Canada	2007 (Feb. -Apr.)	Visiting Researcher
Austria	2007 (May -July)	Visiting Researcher
Croatia, Germany, Ireland, Denmark, Czech, USA, Switzerland, The Netherlands	2003 -2010	For several research papers presentations

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21. Publications

(A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year	Impact Factor of the Journal (Optional)
Lavanya Settipalli, G R Gangadharan, Ugo Fiore	Predictive and adaptive Drift Analysis on Decomposed Healthcare Claims using ART based Topological Clustering	Information Processing & Management (Elsevier)	59 (3)	102887	2022	
Avik Dutta, Chandrashekar Jatoth, G. R. Gangadharan, Ugo Fiore	QoS-aware big service composition using distributed co-evolutionary algorithm	Concurrency & Computation: Practice and Experience (Wiley)	33 (19)		2021	
Lavanya Settipalli, G. R. Gangadharan	Healthcare fraud detection using primitive sub peer group analysis	Concurrency & Computation: Practice and Experience (Wiley)	33 (23)		2021	
Johnpaul C. I., Munaga V. N. K. Prasad, S. Nickolas, G. R. Gangadharan	Representational primitives using trend based global features for time series classification	Expert Systems with Applications (Elsevier)	167	114376	2021	
Deepnarayan Tiwari, G.R. Gangadharan	SecAuth-SaaS: a hierarchical certificateless aggregate signature for secure collaborative SaaS authentication in cloud computing	Journal of Ambient Intelligence & Humanized Computing (Springer)	12 (12)	10539-10563	2021	
Johnpaul C. I., Munaga V. N. K.	Fuzzy representational	Knowledge Based Systems	222	106991	2021	

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Prasad, S. Nickolas, G. R. Gangadharan	structures for trend based analysis of time series clustering and classification	(Elsevier)				
Gopal N. Rai, G. R. Gangadharan, Rajkumar Buyya	Web Service Interaction Modeling and Verification Using Recursive Composition Algebra	IEEE Transactions on Services Computing	14(1)	300-314	2021	
Gopal N. Rai, G. R. Gangadharan	Model Checking Based Web Service Verification: A Systematic Literature Review	IEEE Transactions on Services Computing	14(3)	747-764	2021	
Bhattu Bhaskar, Chandrashekar Jatoth, G. R. Gangadharan, Ugo Fiore	A MapReduce-based modified Grey Wolf optimizer for QoS-aware big service composition	Concurrency & Computation: Practice and Experience (Wiley)	32(8)		2020	
Johnpaul C. I., Munaga V. N. K. Prasad, S. Nickolas, G. R. Gangadharan	Trendlets: A novel probabilistic representational structures for clustering the time series data	Expert Systems with Applications (Elsevier)	145		2020	
Deepnarayan Tiwari, Gayatri K. Chaturvedi, G. R. Gangadharan	ACDAS: Authenticated controlled data access and sharing scheme for cloud storage	International Journal of Communication Systems (Wiley)	32(15) e4072		2019	
Chandrashekar Jatoth, G. R. Gangadharan, Rajkumar Buyya	Optimal Fitness Aware Cloud Service Composition using an Adaptive Genotypes Evolution based Genetic Algorithm	Future Generation Computer Systems (Elsevier)	94	185-198	2019	



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Chandrashekar Jatoth, G. R. Gangadharan, Ugo Fiore	Optimal fitness aware cloud service composition using modified invasive weed optimization	Swarm and Evolutionary Computation (Elsevier)	44	pp. 1073-1091	2019	
Siva Kumar Gavvala, Chandrashekar Jatoth, G. R. Gangadharan, Rajkumar Buyya	QoS-aware cloud service composition using eagle strategy	Future Generation Computer Systems (Elsevier)	90	pp. 273-290	2019	
Johnpaul C. I., Munaga V. N. K. Prasad, S. Nickolas, G. R. Gangadharan	General representational automata using deep neural networks	Data and Knowledge Engineering (Elsevier)	122	pp. 159-180	2019	
Chandrashekar Jatoth, G. R. Gangadharan, Ugo Fiore, Rajkumar Buyya	SELCLOUD: a hybrid multi-criteria decision-making model for selection of cloud services	Soft Computing (Springer)	23(13)	pp. 4701-4715	2019	
V. Dinesh Reddy, G. R. Gangadharan, Subrahmanya Rao	Energy-aware virtual machine allocation and selection in cloud data centers	Soft Computing (Springer)	23(6)	pp. 1917-1932	2019	
Chandrashekar Jatoth, G.R. Gangadharan, Ugo Fiore, Rajkumar Buyya	QoS-aware Big Service composition using MapReduce based Evolutionary Algorithm with Guided Mutation	Future Generation Computer Systems (Elsevier)	86	1008-1018	2018	
Deepnarayan Tiwari, G. R. Gangadharan	SecCloudSharing: Secure data sharing in public cloud using ciphertext policy attribute based proxy re-encryption with revocation	Int. Journal of Communication Systems (Wiley)	31 (5)		2018	
Vemula Dinesh, Brian Setz,	Metrics for Sustainable Data	IEEE Transactions on	2 (3)	290-303	2017	

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Subrahmanya Rao, G R Gangadharan, Marco Aiello	Centers	Sustainable Computing				
G.R. Gangadharan	Open Source Solutions for Cloud Computing	IEEE Computer	50 (1)	66-70	2017	
Chandrashekar Jatoth, G.R. Gangadharan, Rajkumar Buyya	Computational Intelligence based QoS-aware Web Service Composition: A Systematic Literature Review	IEEE Transactions on Services Computing	10 (3)	475-492	2017	
Chandrashekar Jatoth, G.R. Gangadharan, Ugo Fiore	Evaluating the efficiency of cloud services using modified data envelopment analysis and modified super-efficiency data envelopment analysis	Soft Computing (Springer)	21 (23)	7221-7234	2017	
M. Verma, G.R. Gangadharan, N.C. Narendra, R.Vadlamani, L.Ramachandran, V. Inamdhar, R. N. Calheiros, Rajkumar Buyya	Dynamic Resource Demand Prediction and Allocation in Multi-tenant Service Clouds	Concurrency and Computation: Practice and Experience (Wiley)	28 (17)	4429-4442	2016	
Deepnarayan Tiwari, G.R. Gangadharan, Maode Ma	Secure Delegation of Services through Proxy Signature with Revocation	International Journal of Trust Management in Computing and Communications (Inderscience)	3 (4)	291-318	2016	
G.R. Gangadharan, Lorna Uden, Paul Oude Luttighuis	Sourcing Requirements and Designs for Software as a Service	International Journal of Systems and Service Oriented Engineering (IGI Global)	6 (1)	1- 16	2016	
Shitalkumar Halale, G.R.	Enhancing Co-creation Process	IEEE IT Professional	17 (2)	40-45	2015	

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Gangadharan, Lorna Uden	Using Social Media					
L. Sangavarapu, S. Mishra, A. Williams, G.R. Gangadharan	Indian Banking Community Cloud	IEEE IT Professional	16 (6)	25-32	2014	
G.R. Gangadharan, Stefano De Paoli, Vincenzo D'Andrea, Michael Weiss	Managing License Compliance in Free and Open Source Software Development	Information Systems Frontiers (Springer)	14 (2)	143-154	2012	
Hong-Linh Truong, Marco Comerio, Flavio De Paoli, G.R. Gangadharan, Schahram Dustdar	Data Contracts for Cloud-based Data Marketplaces	International Journal of Computational Science and Engineering, (Inderscience)	7 (4)	280-295	2012	
G.R. Gangadharan, Vincenzo D'Andrea	Service Licensing: Conceptualization, Formalization, and Expression	Journal of Service Oriented Computing and Applications (Springer)	5 (1)	37-59	2011	
Stefano De Paoli, G.R. Gangadharan, Aphra Kerr, Vincenzo D'Andrea	Toward Trust as Result: A Transdisciplinary Research Agenda for the "Future Internet"	Journal tripleC - Cognition, Communication, Co-operation	9 (2)	702-714	2011	
G.R. Gangadharan, Vincenzo D'Andrea	Managing Copyrights and Moral Rights of Service-Based Software	IEEE Software	28 (2)	48-55	2011	
G.R. Gangadharan	From Legal Code to Digital Code: Making Software Services Rights-aware	International Journal of Private Law (Inderscience)	4 (2)	299-314	2011	
G.R. Gangadharan, Vincenzo D'Andrea, Michael Weiss	Free/Open Services (F/O-Services)	IEEE IT Professional	12 (6)	24-30	2010	
G.R. Gangadharan,	BHive: A Reference	Journal of Service Science	2 (1)	81-110	2010	

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Paul Oude Luttighuis	Framework for Business-driven Service Design and Management	Research (Springer)				
G.R. Gangadharan, Erwin Fielt	Analyzing Requirements and Approaches for Sourcing Software Based Services	International Journal of Applied Logistics (IGI)	1 (2)	1-16	2010	
Michael Weiss, G.R. Gangadharan	Modeling the Mashup Ecosystem: Structure and Growth	Journal of the R & D Management (Wiley)	40 (1)	40-49	2010	
G.R. Gangadharan, Vincenzo D'Andrea	Service Orientation: Licensing Perspectives	Journal of International Commercial Law and Technology	4 (1)	1-11	2010	
G.R. Gangadharan	Understanding Service Level Agreements for Cloud Computing	Cutter IT Journal	22 (6&7)		2009	
G.R. Gangadharan	Licensing of Open APIs	Technology Innovation Management Review	April		2009	
G.R. Gangadharan, M. Weiss, V. D'Andrea, R. Iannella	Service Licensing Composition and Compatibility Analysis	International Journal of Cooperative Information Systems (World Scientific)	17 (3)	301-317	2008	
G.R. Gangadharan, Michael Weiss	An Introduction to Rights Expression Languages	Technology Innovation Management Review	Dec.		2007	
G.R. Gangadharan	Software Licensing	Technology Innovation Management Review	July		2007	
A. Ivanyukovich, G.R. Gangadharan, V. D'Andrea, M. Marchese	Towards A Service-Oriented Development Methodology	Journal of Integrated Design & Process Science, (IOS Press)	9 (3)	53-62	2005	

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(B) Conferences/Workshops/Symposia Proceedings (Since 2015)

Author(s)	Title of Abstract/ Paper	Title of the Proceedings	Page numbers	Conference Theme	Venue	Year
C. I. Johnpaul, M. V. N. K. Prasad, S. Nickolas, G. R. Gangadharan, M. Aiello	An Optimal Wavelet Detailed-Coefficient Determination Using Time-Series Clustering	International Conference on Artificial Intelligence and Data Engineering (AIDE 2019)	857–872	Artificial Intelligence and Data Engineering	Udupi, India	2019
G. S. Bopche, G. N. Rai, B. M. Mehtre, G. R. Gangadharan	Modeling and Analyzing Multistage Attacks Using Recursive Composition Algebra	International Conference on Information Systems Security (ICISS 2018)	67-87	Information Systems Security	Bangalore, India	2018
C.Verma, Dinesh Vemula, Gangadharan G.R. and Atul Negi	Energy Efficient VM Placement in Cloud Data Centers Using Modified IWD Algorithm	International Conference on Signal Image Technology and Internet-Based Systems (SITIS 2017)	13-20	Signal Image Technology / Internet Based Systems	Jaipur, India	2017
Lalit Sangavarapu, Gangadharan G.R., and Raghu Reddy	COMPAC - A Pricing Model for COMMunity Cloud	IEEE International Conference on Advances in Computing, Communications and Informatics	2033-2039	Computing and Informatics	Manipal, India	2017
Vemula Dinesh and Gangadharan G.R.	Towards an “Internet of Things” Framework for Financial Services Sector	IEEE International Conference on Recent Advances in Information Technology	177-181	Advances in Information Technology	Dhanbad, India	2016
Deepnarayan Tiwari and Gangadharan G.R.	Secure Sharing of Data in Cloud Computing	International Symposium on Security in Computing and Communications	24-35	Security in Computing	Kochi, India	2015

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Deepnarayan Tiwari and Gangadharan G.R.	A Novel Secure Cloud Storage Architecture Combining Proof of Retrievability and Revocation	International Conference on Advances in Computing, Communications and Informatics	438-445	Computing and Informatics	Kochi, India	2015
Deepnarayan Tiwari and Gangadharan G.R. and Maode Ma	Provable secure protected designated proxy signature with revocation	International Conference on Advances in Computing, Communications and Informatics	2033-2041	Computing and Informatics	Kochi, India	2015
Gopal N. Rai and Gangadharan G.R.	Set Partition and Trace based Verification of Web Service Composition	International Conference on Ambient Systems, Networks and Technologies	278-285	Systems, Networks and Technologies	London, UK	2015
Gopal N. Rai, Gangadharan G.R. and Vineet Padmanabhan	Algebraic Modeling and Verification of Web Service Composition	International Conference on Ambient Systems, Networks and Technologies	675-679	Systems, Networks and Technologies	London, UK	2015
Chandrashekar Jatoth and Gangadharan G.R.	Fitness Metrics for QoS-aware Web Service Composition using Metaheuristics	International Conference on Intelligent Decision Technologies	267-277	Intelligent Decision Technologies	Sorrento, Italy	2015
Chandrashekar Jatoth and Gangadharan G.R.	QoS-aware Web Service Composition Using Quantum Inspired Particle Swarm Optimization	International Conference on Intelligent Decision Technologies	255-265	Intelligent Decision Technologies	Sorrento, Italy	2015
Gopal N. Rai and Gangadharan G.R.	Architectural Characterization of Web Service Interaction Verification  <b>BEST PAPER AWARD</b>	International Conference on Advanced Computing, Networking, and Informatics	447-456	Computing, Networking, and Informatics	Bhubaneswar, India	2015

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(C) Books & Monographs

Author(s)	Title of Book/Monograph	Name of Publishers	Year of Publication	ISSN/ISBN Number