

Faculty Profile of Dr. R. Rakkiyappan



Dr. R. Rakkiyappan
Assistant Professor
Department of Mathematics

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Research Area

- Differential Equations, Artificial Intelligence
- Time Delay Systems, Stability Theory
- Cryptography, Discontinuous Control Design

Education & Career

Education

Ph. D.

Subject : Mathematics

Institution : Gandhigram Rural Institute-Deemed University

Affiliated University : Gandhigram Rural Institute-Deemed University

Year of Award : 2011

M. Sc.,

Subject: Mathematics

Institution : PSG College of Arts and Science

Affiliated University : Bharathiar University

Year of Award : 2004

B. Sc.,

Subject: Mathematics

Institution: Sri Ramakrishna Mission Vidyalaya College of Arts and Science

Affiliated University: Bharathiar University

Year of Award: 2002

Career**At Bharathiar University (Reverse Order)**

Assistant Professor : 28-02-2011 to Till now

Past Experience

1..Gandhigram Rural Institute-Deemed University, Project Fellow UGC-SAP (DRS) Programme, 07-03-2005 to 31-03-2009.

2.Gandhigram Rural Institute-Deemed University, CSIR SRF, 01-04-2009 to 04-02-2011.

Awards**Academic awards**

S.No. Awarding agency Country Purpose of award Date of Award

1. Web of Science Group, Highly Cited Researcher , 2019
2. Journal of the Franklin Institute, Elsevier, Outstanding Reviewer, November 2017
3. Applied mathematics And Computation, Elsevier, Outstanding Reviewer, August 2016
4. The Academy of Sciences, Chennai, India, SaraswathySrinivasan Prize/Young Scientist Award (YSA)-2015, 2015
5. Council for Scientific and Industrial Research, New Delhi, India, CSIR-SRF, 2009-2011
6. University Grants Commission (UGC), under Special Assistance Programme (SAP) DRS-I, India, Project Fellow, 2005-2009

Membership

Visits

SI No.	Countries Vistes	Duration of Visit	Month and Year	Purpose of Visit
1.	P.R. China	2 Months	May&June,2019	Visiting Professor
2.	P.R. China	12 days	December, 2018	Visiting Professor
3.	UAE	5 days	October, 2018	Visiting Professor
4.	SouthKorea	1 Year	2017-2018	Research Professor
5.	P.R. China	5 days	December,2017	Visiting Professor

Collaborators

Others

Projects

Funded Projects (National Level)

- [Ongoing](#)
- [Completed](#)

Ongoing Projects List with necessary Information

S.No , Funding agency, PI/CoPI, Title, Duration, Amount sanctioned, Ph.D. produced, From - To

1. NBHM, PI Stability, Robust HControl and Robust H filter Design for Time-delay Systems, 9,89,500, 1, 2012- 2015.
2. DST-SERB, PI Delay differential models in immunology and infectious diseases in an individual,13, 68,000/- , 1, 2014- 2017.
3. CSIR, Studies on qualitative properties of fractional-order and complex-valued neural networks with time delays, 13, 20,000/-, 1, 2015 -2018.

Consultancy Projects

- [Ongoing](#)
- [Completed](#)

Ongoing Consultancy Project Informations

Completed Consultancy Project Informations

Research Guidance

- [Post Doc.](#)
- [Ph.D.](#)
- [M.Phil.](#)
- [M.Sc.](#)

Ongoing

Title

Name

Completed

Title

Name

Ongoing

Sl. No Name of the candidate Title of the Thesis Year

1. V. Sharmila
2. P. Gokul
3. K. Janani
4. S. Shanmugasundaram

Completed

Sl. No Name of the candidate Title of the Thesis Year

1. G. Velmurugan, Dynamical Analysis of Fractional-Order Complex-Valued Neural Networks with Time-Delays, May 2017
2. N. Sakthivel, Synchronization Analysis for Complex-Dynamical Networks with TimeVarying Delays, June 2016
3. A. Chandrasekar, Dynamic Characteristics of Neural Networks with Time-VaryingDelays, July 2017
4. R. SasiRekha, Synchronization and State Estimation Design for Discrete-Time Nonlinear Systems with Time Delays: A LMI Approach, December 2017
5. K. Sivaranjani, Synchronization of Complex Dynamical Networks with Different Type of Controllers, February 2018
6. S. Dharani, Sampled-Data Control Design for Dynamical Analysis of Certain Partial Differential Systems, March 2018
7. K. Maheswari, HState estimation and Hfilter design of discrete-time

switched neural networks with time delays, August 2017

8. V. PreethiLatha, Dynamic analysis of various fractional-order infectious diseases with time delay, November 2019

Ongoing

Sl. No Name of the candidate Title of the Dissertation Year

1. A. Ajithkumar

Completed

Sl. No Name of the candidate Title of the Dissertation Year

1.A. Chandrasekar, Effects of Leakage Time-Varying Delays in Markovian Jumping Neural Networks with Impulse Control, October 2012.

2.S. Revathy, Sampled-Data State Estimator for Delayed Neural Networks with TimeVarying Delays, October 2012

3.T. Radhika, Leakage Delay Derivative Dependent with Switched Exponential StateEstimation of Neural Networks Based on Passivity Theory, October 2012

4.K. Umalakshmi, Delay-Derivative Dependent Synchronization Criteria for RecurrentNeural Networks with Time-Varying Delays and Sampled-Data Control
October 2012

5.G. Revathi, Passivity Analysis of Markovian Jumping Neural Networks with LeakageTime-Varying Delay, October 2012

6.K. Sivaranjani, Stability Analysis of Memristor-Based Complex-Valued RecurrentNeural Networks with Time-Delay, September 2013

7. B. Kaviarasan, Stochastic Sampled-Data Control for Consensus of Leader-FollowingDistributed Multi-Agent Systems, September 2013

8. D. Nishanthi, Finite-time Stability and Stabilization of a Class of Nonlinear NeutralTime-Delay Systems, September 2013

9. S. Dharani, Stochastic Sampled-Data HControl for a Class of Parabolic Systemswith Time-Varying Delay, September 2013

10. G. Petchiammal, Non-Fragile Robust Synchronization for Uncertain Chaotic Neutral Type Markovian Jumping Neural Networks with Randomly Occurring Uncertainties and Mode-Dependent Time-Varying Delays, September 2013
11. V. Preethi Latha, Exponential Synchronization of Markovian Jumping Chaotic Neural Networks with Sampled Data and Saturating Actuators, September 2014
12. S. Brindha, Robust H Synchronization of Discrete-Time Chaotic Luree Systems with Time-Delays, September 2014
13. K. Subramanian, Stabilization and Synchronization Analysis for Markovian Jumping Discrete-Time Neural Networks with Mode-Dependent Probabilistic Time-Varying Delays via Impulsive Control, September 2014
14. T. Tharani, Synchronization of Discrete-Time Switched Neural Networks with Time Delays and Sojourn Probabilities, September 2014
15. S. Premalatha, Stability and Synchronization Analysis of Inertial Memristive Neural Networks with Time Delays, November 2015
16. R. Sivaranjani, Global $O(t^-)$ Stability and Global S-Asymptotical Periodicity for Fractional-Order Complex-Valued Neural Networks with Time-Varying Delays
November 2015
17. R. Kamalakkannan, Analysis of Pth Moment Exponential Stability of Impulsive Stochastic Functional Differential Equations with Levy Noise, November 2015
18. E. Udhaya Kumari, Synchronization and Periodicity of Coupled Inertial Memristive Neural Networks with Supremums, November 2015
19. C. Kannan, Finite-Time H Synchronization for Semi Markov Jump Delayed Neural Networks, January 2016
20. K. Udhayakumar, Stability and Hopf Bifurcation Analysis of Fractional-Order Complex Valued Neural Networks with Time Delays, November 2016
21. N. Brindha, Synchronization Of Fractional-Order Coupled Reaction-Diffusion Neural Networks With Time-Varying Delay Via Pinning Controller, November 2016
22. S. Logavathy, Exponential Synchronization of Inertial Memristive Neural Networks with Time-Varying Delays via Interval Matrix Method, November 2016
23. D. Gayathiri, Exponential Synchronization of Inertial Memristor-Based Neural Networks with Time-Delays using Average Impulsive Interval Approach, November 2016.
24. V. Sharmila, Event-triggered Integral Sliding Mode Control of T-S Fuzzy

StochasticSystems, November 2017

25.C. Sekar, Event-triggered State Estimation of Generalized Neural Networks With Timevarying Delay and Quantization, November 2017

26.L. R. Nihila, Stability of Integral Memristive Neural Networks With Time-varying Delay via Flexible Terminal Method, November 2017

27. N. Bavithra, Sampled-Data Control Design for Interval Type-2 Fuzzy Chaotic Systems via Looped LyapunovFunctionals, November 2017

28. N. Saraswathi, Time-Dependent Lyapunov Functional Approach for Leader-FollowingConsensus of Multi-Agent Systems via Sampled-Data Control, November 2017

29. V. Kowsika, Consensus of Multi-Agent systems with Hidden Markov-Model Based Sampled-Data control via Looped Lyapunov Functional Approach, November 2018

Ongoing

Sample Data.

Completed

Sample Data.

Research Publication

- [International](#)
- [National](#)
- [Patents](#)
- [Conferences](#)
- [Books / Chapters](#)
- [Database](#)

202. [Fractional-order delay differential equations for the dynamics of hepatitis C virus infection with IFN- \$\alpha\$ treatment.](#)

FA Rihan, AA Arafa, R Rakkiyappan, C Rajivganthi, Y Xu
Alexandria Engineering Journal 60 (5), 4761-4774.

201. [Anti-proliferative phytoconstituents from *Striga angustifolia* \(D. Don\) Cj Saldanha—An in vitro and in silico approach.](#)
K Raja, S Selvakumar, R Rakkiyappan, KP Veerakumari, K Vasanth,
Phytomedicine Plus 1 (3), 2021, 100062
200. [Multiple \$\psi\$ -type stability of fractional-order quaternion-valued neural networks.](#)
K Udhayakumar, R Rakkiyappan, X Li, J Cao,
Applied Mathematics and Computation 401, 2021, 126092.
199. [Stabilization of stochastic delayed systems: Event-triggered impulsive control.](#)
D Peng, X Li, R Rakkiyappan, Y Ding,
Applied Mathematics and Computation 401, 2021, 126054
198. [Finite-time and fixed-time synchronization control of discontinuous fuzzy Cohen-Grossberg neural networks with uncertain external perturbations and mixed time delays.](#)
F Kong, R. Rakkiyappan,
Fuzzy Sets and Systems 411, 2021, 105-135
197. [Quasi-bipartite synchronisation of multiple inertial signed delayed neural networks under distributed event-triggered impulsive control strategy.](#)
K Udhayakumar, FA Rihan, X Li, R Rakkiyappan,
IET Control Theory & Applications, 2021, 1-14.
196. [Memory sampled data control for switched-type neural networks and its application in image secure communications.](#)
Y Cao, K Udhayakumar, KP Veerakumari, R Rakkiyappan
Mathematics and Computers in Simulation, 2021.
195. [Impulsive sampled-data controller design for synchronization of delayed T-S fuzzy Hindmarsh-Rose neuron model.](#)
P Nirvin, FA Rihan, R Rakkiyappan, C Pradeep.
Mathematics and Computers in Simulation, 2021.
194. [Event-triggered integral sliding mode control of Takagi-Sugeno fuzzy stochastic systems.](#)
V Sharmila, R Rakkiyappan, Y Hoon Joo.
International Journal of Adaptive Control and Signal Processing, 2021.

193. [Hidden Markov-Model-Based Control Design for Multilateral Teleoperation System With Asymmetric Time-Varying Delays.](#)
R Rakkiyappan, R Baranitha, Z Zeng.
IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2020, 1-12
192. [Morphological traits of drought tolerant horse gram germplasm: classification through machine learning.](#)
TC Amal, AT Thottathil, KP Veerakumari, R Rakkiyappan, K Vasanth
Journal of the Science of Food and Agriculture 100 (13), 2020, 4959-4967.
191. [Almost periodic dynamics of memristive inertial neural networks with mixed delays.](#)
R Rajan, V Gandhi, P Soundharajan, YH Joo,
Information Sciences 536, 2020,332-350
190. [Integral sliding mode control for T-S fuzzy descriptor systems.](#)
M. Prakash, R. Rakkiyappan, Young Hoon Joo,
Nonlinear Analysis: Hybrid Systems 39, 2021, 100953.
189. [Stability and bifurcation analysis of hepatitis B-type virus infection model](#)
M Prakash, R Rakkiyappan, A Manivannan, H Zhu, J Cao,
Mathematical Methods in the Applied Sciences, 44 (2021), 6462-6481.
188. [Mittag-Leffler stability analysis of multiple equilibrium points in impulsive fractional-order quaternion-valued neural networks.](#)
K Udhayakumar, R Rakkiyappan, J Cao, X Tan
Frontiers of Information Technology & Electronic Engineering 21,2020, 234-246.
187. [Hopf bifurcation of a fractional-order octonion-valued neural networks with time delays.](#)
K Udhayakumar, R Rakkiyappan,
Discrete & Continuous Dynamical Systems-S 13 (9), 2020, 2537-2559.
186. [Quasi-synchronization and bifurcation results on fractional-order quaternion-valued neural networks.](#)
K Udhayakumar, Xiaodi Li, R Rakkiyappan,
IEEE Transactions on Neural Networks and Learning Systems, 31 (10) 2020, 4063 – 4072.

185. [Exponential synchronization of inertial memristor-based neural networks with time delay using average impulsive interval approach.](#)
R Rakkiyappan, D Gayathri, G Velmurugan, J Cao,
Neural Processing Letters 50 (3), 2019, 2053-2071.
184. [A fractional-order model for Zika virus infection with multiple delays.](#)
R Rakkiyappan, VP Latha, FA Rihan.
Complexity 2019, 2019, 4178073.
183. [T-S Fuzzy Model-Based Single-Master Multislave Teleoperation Systems With Decentralized Communication Structure and Varying Time Delays.](#)
R Baranitha, R Rakkiyappan, X Li,
IEEE Transactions on Fuzzy Systems 28 (12), 2020, 3406-3417.
182. [Fuzzy Sampled-Data Control for DFIG-Based Wind Turbine With Stochastic Actuator Failures.](#)
V Sharmila, R Rakkiyappan, YH Joo.
IEEE Transactions on Systems, Man, and Cybernetics: Systems, 51 (4) 2021,
2199 – 2211.
181. [Robust synchronisation control of discontinuous CGNNs with time-varying delays.](#)
F Kong, Q Zhu, R Rakkiyappan,
International Journal of Control, 2019.
180. [Design of observer-based event-triggered fuzzy ISMC for TS fuzzy model and its application to PMSG.](#)
M. Prakash, R. Rakkiyappan, YH Joo.
IEEE Transactions on Systems, Man, and Cybernetics: Systems 51 (4), 2021,
2221 – 2231.
179. [Dynamical analysis of antigen-driven T-cell infection model with multiple delays.](#)
M Prakash, R Rakkiyappan, A Manivannan, J Cao.
Applied Mathematics and Computation 354, 2019, 266-281.
178. [Adaptive control for fractional order induced chaotic fuzzy cellular neural networks and its application to image encryption.](#)
M. Prakash, R. Rakkiyappan, S. Lakshmanan, YH Joo
Information Sciences 491, 2019, 74-89.

177. [Interval-valued intuitionistic hesitant fuzzy entropy based VIKOR method for industrial robots selection.](#)
S Narayanamoorthy, S Geetha, R Rakkiyappan, YH Joo.
Expert Systems with Applications 121, 2019, 28-37.
176. [Bilateral teleoperation of single-master multislave systems with semi-Markovian jump stochastic interval time-varying delayed communication channels](#)
R Baranitha, R Mohajerpoor, R Rakkiyappan,
IEEE transactions on cybernetics, 51 (1), 2021, 247 - 257.
175. [An event-triggered synchronization of semi-Markov jump neural networks with time-varying delays based on generalized free-weighting-matrix approach.](#)
C Pradeep, Y Cao, R Murugesu, R Rakkiyappan,
Mathematics and Computers in Simulation 155, 2019, 41-56.
174. [Adaptive fractional fuzzy integral sliding mode control for PMSM model.](#)
M. Prakash, R. Rakkiyappan, S. Lakshmanan, YH Joo.
IEEE Transactions on Fuzzy Systems 27 (8), 2019, 1674-1686.
173. [Adaptive synchronization of reaction-diffusion neural networks and its application to secure communication.](#)
L Shanmugam, P Mani, R Rajan, YH Joo,
IEEE transactions on cybernetics 50 (3), 2020, 911-922.
172. [Stability analysis of nonlinear telerobotic systems with time-varying communication channel delays using general integral inequalities.](#)
R Baranitha, R Rakkiyappan, R Mohajerpoor, S Al-Wais,
Information Sciences 465, 2018, 353-372.
171. [Delayed state-feedback control for stabilization of neural networks with leakage delay.](#)
H Zhu, R Rakkiyappan, X Li,
Neural Networks 105, 2018, 249-255.
170. [Event-triggered \$H_\infty\$ state estimation for semi-Markov jumping discrete-time neural networks with quantization.](#)
R Rakkiyappan, K Maheswari, G Velmurugan, JH Park,
Neural Networks 105, 2018, 236-248.

169. [A fractional-order model for Ebola virus infection with delayed immune response on heterogeneous complex networks.](#)
V Preethi Latha, FA Rihan, R Rakkiyappan, G Velmurugan
Journal of Computational and Applied Mathematics 339, 2018, 134-146.
168. [Non-fragile finite-time \$L_2\$ – \$L_\infty\$ state estimation for discrete-time neural networks with semi-Markovian switching and random sensor delays based on Abel lemma approach.](#)
R Rakkiyappan, K Maheswari, K Sivaranjani, YH Joo,
Nonlinear Analysis: Hybrid Systems 29, 2018, 283-302.
167. [Persistent impulsive effects on stability of functional differential equations with finite or infinite delay.](#)
X Li, J Shen, R Rakkiyappan.
Applied Mathematics and Computation 329, 2018, 14-22.
166. [\$\mu\$ -stability criteria for nonlinear differential systems with additive leakage and transmission time-varying delays.](#)
X Lv, R Rakkiyappan, X Li.
Nonlinear Analysis: Modelling and Control 23 (3), 2018, 380-400.
165. [Event triggered reliable synchronization of semi-Markovian jumping complex dynamical networks via generalized integral inequalities.](#)
K Sivaranjani, R Rakkiyappan, YH Joo
Journal of the Franklin Institute 355 (8), 2018, 3691-3716.
164. [Stabilization of a Class of Nonlinear Coupled Ordinary Differential Equation-Partial Differential Equation Systems Via Sampled-Data \$H_\infty\$ Fuzzy Controller.](#)
S Dharani, R Rakkiyappan, S Lakshmanan,
Journal of Dynamic Systems, Measurement, and Control 140 (4), 2018,
041007.
163. [Comparison principle for impulsive functional differential equations with infinite delays and applications.](#)
X Li, J Shen, H Akca, R Rakkiyappan.
Communications in Nonlinear Science and Numerical Simulation 57, 2018,
309-321.

162. [New delay range-dependent stability criteria for interval time-varying delay systems via Wirtinger-based inequalities.](#)
R Mohajerpoor, L Shanmugam, H Abdi, R Rakkiyappan, S Nahavandi, P. Shi.
International Journal of Robust and Nonlinear Control 28 (2), 2018, 661-677
161. [Applications of delay differential equations in biological systems.](#)
FA Rihan, C Tunc, SH Saker, S Lakshmanan, R Rakkiyappan.
Complexity 2018, 2018, 4584389.
160. [Extended dissipativity state estimation for switched discrete-time complex dynamical networks with multiple communication channels: A sojourn probability dependent approach.](#)
R Sasirekha, R Rakkiyappan.
Neurocomputing 267, 2017, 55-68.
159. [Stability and synchronization of fractional-order complex-valued neural networks with time delay: LMI approach.](#)
K Udhayakumar, R Rakkiyappan, G Velmurugan.
The European Physical Journal Special Topics 226 (16), 2018, 3639-3655.
158. [Stability and Hopf bifurcation analysis of fractional-order complex-valued neural networks with time delays.](#)
R Rakkiyappan, K Udhayakumar, G Velmurugan, J Cao, A Alsaedi
Advances in Difference Equations 2017 (1), 2017, 1-25.
157. [A fractional-order delay differential model for Ebola infection and CD8 T-cells response: Stability analysis and Hopf bifurcation.](#)
V Preethi Latha, FA Rihan, R Rakkiyappan, G Velmurugan,
International Journal of Biomathematics 10 (08), 2017, 1750111
156. [Combined and passivity control for networked control systems with random gain fluctuations and sojourn probabilities: A switched system approach.](#)
R Sasirekha, R Rakkiyappan, J Cao,
International Journal of Robust and Nonlinear Control 27 (17), 2017, 3524-3548.
155. [State estimation of discrete-time markov jump neural networks with general transition probabilities and output quantization.](#)

R Sasirekha, R Rakkiyappan, J Cao, Y Wan, A Alsaedi

Journal of Difference Equations and Applications 23 (11), 2017, 1824-1852.

154. [Non-weighted \$H^\infty\$ state estimation for discrete-time switched neural networks with persistent dwell time switching regularities based on Finsler's lemma.](#)

R Rakkiyappan, K Maheswari, K Sivaranjani,
Neurocomputing 260, 2017, 131-141.

153. [Synchronization of nonlinear singularly perturbed complex networks with uncertain inner coupling via event triggered control.](#)

K Sivaranjani, R Rakkiyappan, J Cao, A Alsaedi
Applied Mathematics and Computation 311, 2017, 283-299.

152. [Exponential \$H^\infty\$ Synchronization of Lur'e Complex Dynamical Networks Using Pinning Sampled-Data Control.](#)

R Rakkiyappan, V Preethi Latha, K Sivaranjani,
Circuits, Systems, and Signal Processing 36 (10), 2017, 3958-3982.

151. [Exponential synchronization of Lur'e complex dynamical networks with uncertain inner coupling and pinning impulsive control.](#)

R Rakkiyappan, G Velmurugan, JN George, R Selvamani,
Applied Mathematics and Computation 307, 2017, 217-231.

150. [Synchronization of generalized reaction-diffusion neural networks with time-varying delays based on general integral inequalities and sampled-data control approach.](#)

S Dharani, R Rakkiyappan, J Cao, A Alsaedi.
Cognitive neurodynamics 11 (4), 2017, 369-381.

149. [Exponential synchronization of Markovian jumping chaotic neural networks with sampled-data and saturating actuators.](#)

R Rakkiyappan, VP Latha, Q Zhu, Z Yao.
Nonlinear Analysis: Hybrid Systems 24, 2017, 28-44.

148. [Pinning sampled-data synchronization of coupled inertial neural networks with reaction-diffusion terms and time-varying delays.](#)

S Dharani, R Rakkiyappan, JH Park,
Neurocomputing 227, 2017, 101-107.

147. [Sampled-data synchronization of randomly coupled reaction–diffusion neural networks with Markovian jumping and mixed delays using multiple integral approach.](#)
R Rakkiyappan, S Dharani,
Neural Computing and Applications 28 (3), 449-462.
146. [Robust stochastic sampled-data control for offshore steel jacket platforms with non-linear perturbations.](#)
K Sivaranjani, R Rakkiyappan, S Lakshmanan, CP Lim.
IMA Journal of Mathematical Control and Information 34 (1), 2017, 337-357.
145. [Dissipativity and stability analysis of fractional-order complex-valued neural networks with time delay.](#)
G Velmurugan, R Rakkiyappan, V Vembarasan, J Cao, A Alsaedi,
Neural Networks 86, 2017, 42-53.
144. [Delayed impulsive synchronization of nonlinearly coupled Markovian jumping complex dynamical networks with stochastic perturbations.](#)
K Sivaranjani, R Rakkiyappan.
Nonlinear Dynamics, 88, 2017, 1917–1934.
143. [Improved delay-dependent stability criteria for neutral systems with mixed interval time-varying delays and nonlinear disturbances.](#)
R Mohajerpoor, L Shanmugam, H Abdi, R Rakkiyappan, S Nahavandi, Ju. H. Park,
Journal of the Franklin Institute 354 (2), 2017, 1169-1194.
142. [Asymptotical Synchronization of Lur'e Systems Using Network Reliable Control.](#)
R Rakkiyappan, S Lakshmanan, CP Lim,
Journal of Dynamic Systems, Measurement, and Control 139 (1) 2017, 011004.
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R Rakkiyappan, E Udhaya Kumari, A Chandrasekar, R Krishnasamy,
Neurocomputing 214, 2016, 739-749
140. [Synchronization of an inertial neural network with time-varying delays and](#)

[its application to secure communication.](#)

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IEEE transactions on neural networks and learning systems 29 (1), 2018, 195-207.

139. [Synchronization of memristor-based delayed BAM neural networks with fractional-order derivatives.](#)

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Complexity 21 (S2), 2016, 412-426 .

138. [Synchronization of discrete-time Markovian jump complex dynamical networks with random delays via non-fragile control.](#)

R Rakkiyappan, R Sasirekha, S Lakshmanan, CP Lim
Journal of the Franklin Institute 353 (16), 2016, 4300-4329.

137. [Stability and synchronization analysis of inertial memristive neural networks with time delays.](#)

R Rakkiyappan, S Premalatha, A Chandrasekar, J Cao,
Cognitive neurodynamics 10 (5), 2016, 437-451.

136. [Pinning sampled-data synchronization of complex dynamical networks with Markovian jumping and mixed delays using multiple integral approach.](#)

K Sivaranjani, R Rakkiyappan
Complexity 21 (S1), 2016, 622-632.

135. [Effects of bounded and unbounded leakage time-varying delays in memristor-based recurrent neural networks with different memductance functions.](#)

A Chandrasekar, R Rakkiyappan, X Li.
Neurocomputing 202, 2016, 67-83.

134. [Stochastic sampled data robust stabilisation of TS fuzzy neutral systems with randomly occurring uncertainties and time-varying delays.](#)

R Rakkiyappan, A Chandrasekar, S Lakshmanan.
International Journal of Systems Science 47 (10), 2016, 2247-2263.

133. [Analysis of global \$O\(t-\alpha\)\$ stability and global asymptotical periodicity for a class of fractional-order complex-valued neural networks with time varying](#)

[delays.](#)

R Rakkiyappan, R Sivaranjani, G Velmurugan, J Cao.
Neural Networks 77, 2016, 51-69.

132. [Sampled-data synchronization and state estimation for nonlinear singularly perturbed complex networks with time-delays.](#)

R Rakkiyappan, K Sivaranjani.
Nonlinear Dynamics 84 (3), 2016, 1623-1636.

131. [Hybrid projective synchronization of fractional-order chaotic complex nonlinear systems with time delays.](#)

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Journal of Computational and Nonlinear Dynamics 11 (3), 2016, 031016.

130. [Robust stability analysis of stochastic neural networks with Markovian jumping parameters and probabilistic time-varying delays.](#)

C Pradeep, A Chandrasekar, R Murugesu, R Rakkiyappan,
Complexity 21 (5), 2016, 59-72.

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Applied Mathematical Modelling 40 (7-8), 2016, 5026-5043.

128. [H \$\infty\$ state estimator design for discrete-time switched neural networks with multiple missing measurements and sojourn probabilities.](#)

R Rakkiyappan, R Sasirekha, Y Zhu, L Zhang
Journal of The Franklin Institute 353 (6), 2016, 1358-1385.

127. [Global dissipativity of memristor-based complex-valued neural networks with time-varying delays.](#)

R Rakkiyappan, G Velmurugan, X Li, D O'Regan.
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Circuits, Systems, and Signal Processing 35 (3), 2016, 811-835.

124. [Stability analysis of memristor-based complex-valued recurrent neural networks with time delays.](#)

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Complexity 21 (4), 2016, 14-39.

123. [Impulsive controller design for exponential synchronization of delayed stochastic memristor-based recurrent neural networks.](#)

A Chandrasekar, R Rakkiyappan.

Neurocomputing 173, 2016, 1348-1355.

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