Dr. R. RAJA

Assistant Professor

Contact

Address	:	Ramanujan Centre for Higher Mathematics, Alagappa University, Alagappapuram (P.O), Karaikudi 630 003, Tamil Nadu, India
EmployeeNumber	:	39102
Contact Phone (Office)	:	04565 - 223501
Contact Phone (Mobile)	:	+91-99435 98074
Contact e-mail(s)	:	rajarchm2012@gmail.com, rajar@alagappauniversity.ac.in
Skype id	:	--
Website	:	https://www.alagappauniversity.ac.in/academics/faculty-of-science/school-of-mathematical-sciences/ramanujan-centre-for-higher-mathematics

Academic Qualifications

Degree	Institution	Year	Branch	Class
PhD	Periyar University	2011	Mathematics	Highly Commended
M.Phil	Periyar University	2006	Mathematics	First
M.Sc	Periyar University	2005	Mathematics	First
B. Sc	Govt. Arts College, Salem	2003	Mathematics	First

Teaching Experience

Total Teaching Experience : 12 Years

Position	Institution	Duration
Assistant Professor	Alagappa University	2012-till date

PDF/ Visiting Professor : Abroad

Position	Institution	Duration
Visiting Faculty	Maejo University, Chiang Mai, Thailand	1 month

ResearchExperience

Total Research Experience : 12Years

Position	Institution / University	Duration
Assistant Professor (Stage III)	Alagappa University	2021-till date
Assistant Professor (Stage II)	Alagappa University	2016-2021
Assistant Professor (Stage I)	Alagappa University	2012-2016

AcademicandAdditionalResponsibilities

S.No	Position	UniversityBodies	Period	
			From	To
1.	Deputy Director	Centre for International Relations	16.10.2018	Till date
2.	Coordinator	Centre for Alumni Relations	21.01.2020	Till date
3.	Warden	International Hostel (Boys)	22.10.2023	Till date

Areas of Research

- Abstract & Fractional Differential Equations
- Stability Analysis of Dynamical Systems
- Neural Networks
- Synchronization Theory
- Mathematical Modeling & Optimal Control of Population Systems
- Multi-agent Systems
- Complex Dynamical Networks

- Vehicular Dynamical Suspension System
- Nonlinear Dynamical Systems using Machine Learning Algorithms
- Multi-layered Dynamical Systems

Patents Filed

- **Nil**

ResearchSupervision/Guidance

ProgramofStudy		Completed	Ongoing
Research	PDF	--	--
	PhD	10	04
	M.Phil	35	01
Project	PG	112	14
	UG/ Others	--	--

Publications

International		National		Others
Journals	**Conferences**	**Journals**	**Conferences**	**Books/Chapters/Monographs/Manuals**
140	--	--	--	05

CumulativeImpact Factor(asperJCR) : 350.45

h-index : 33

i10 index : 79

TotalCitations : 3057

Thesis Evaluated

ThesisEvaluated : --

VivavoceExaminer : --

FundedResearchProjects

Ongoing Projects:

S.No	Agency	Period		ProjectTitle	Budget (Rs.In lakhs)
		From	To		
--	--	--	--	--	--

CompletedProjects:

S.No	Agency	Period		ProjectTitle	Budget (Rs.In lakhs)
		From	To		
1.	DST-SERB	2019	2022	Optimal Control of Population Dynamical Systems & Epidemiology: An LMI Approach	14.13
2.	UGC Start-Up Grant	2013	2015	Studies on Stability Issues of Neural Networks	5.4
3.	AURF Inter-Departmental Research Fund	2017	2019	Global Stability Analysis of Neural Networks with Time-Varying Delays: The Continuous and Discrete-Time Case	3.0

OtherFundReceivedasResearchMentor:

S.No	Agency	Period		ProjectTitle	Budget (Rs.In lakhs)
		From	To		
--	--	--		--	--

Consultancy Projects:

S.No	Agency	Period		ProjectTitle	Budget (Rs.In lakhs)
		From	To		
--	--	--		--	--

Others:

S.No	Agency	Period		ProjectTitle	Budget (Rs.In lakhs)
		From	To		
--	--	--		--	--

DistinctiveAchievements / Awards

- Awarded “Promising Researcher Award - 2022“in recognition of the contribution made towards Excellence in Research at Alagappa University.
- Awarded “Vallal Alagappar Research Recognition Award–2020” in contribution towards the enhancement of Research Outcome of the Alagappa University in the form of "h"-index.
- Awarded "365 years of Fractional Calculus Award" for the year 2020 in Testimony of High Regard of Achievements in the Area of Fractional Calculus and Its Applications by Biruni University, Turkey.
- Awarded travel grant for the sum of Rs.1, 80, 000/- from NBHM for attending International Congress of Industrial and Applied Mathematics (ICIAM 2015) in Beijing, China during August 10-14, 2015.
- Awarded travel grant for the sum of Rs.2, 00, 000/- from NBHM for attending International Congress of Mathematicians (ICM 2014) in Seoul, South Korea during August 15-21, 2014.
- Sir. C.V. Raman Budding Innovator Award for the year 2010 from Periyar University, Salem.
- Awarded Senior Research Fellow under Rajiv Gandhi National Fellowship, 2008.
- Awarded Junior Research Fellow under Rajiv Gandhi National Fellowship, 2005.

Eventsorganizedinleadingroles

NumberofSeminars /Conferences /Workshops/ Eventsorganized:

Position	Programme	Duration	Institution
Convener	2nd International Conference on Mathematical Modeling and Computational Methods in Science & Engineering (ICMMCMSE-2020)	January 22-24, 2020	Alagappa University
Convener	1st International Conference on Mathematical Modeling and Computational Methods in Science	February 20-22, 2017	Alagappa University

	& Engineering (ICMMCMSE-2017)		

EventsParticipated

Number of Conferences/Seminars/Workshops: 20

OverseasExposure/Visits

- South Korea
- China
- Thailand
- Italy

Membership

AdvisoryBoard

Year/Period	NameoftheBoS/AdministrativeCommittee / AcademicCommittee	Role
2012 to till date	Broad-Based Board of Studies of Department of Mathematics	Member

AcademicBodiesin OtherInstitutes/Universities

Year/Period	NameoftheBoS/AdministrativeCommittee / AcademicCommittee	Role
2012 to till date	International Non-Olympic University	Research Advisor

Ph.D. Thesis Guided

1. No.ofPhDThesis evaluated : 10
2. No.ofPhDPublic VivaVoceExaminationconducted : 10

S.No	Name of theScholar	TitleoftheThesis	Year ofCompletion
1.	B. Sundaravadivoo	Studies on Controllability of Fractional Integro-Differential Equations and Inclusions	2018

2.	C. Maharajan	Stability Issues of Neural Networks with Time-Varying Delays: A Continuous-Time Case	2018
3.	C. Sowmiya	Stability Analysis of Discrete-Time Neural Networks with Time-Varying Delays	2019
4.	S. Pandiselvi	Stability Issues of Genetic Regulatory Network	2019
5.	A. Pratap	Synchronization of Fractional Order Neural Networks	2020
6.	J. Dianavinnarasi	Mathematical Modeling and Optimal Control of Population Systems and Epidemiology	2022
7.	M. Iswarya	A Graph Theoretic Approach to Stability Analysis of Neural Networks with Time-Varying Delays	2022
8.	A. Stephen	Stability and Synchronization of Multi-Agent Nonlinear Dynamic Systems	2023
9.	Sayooj Aby Jose	MathematicalModeling on Population Dynamical Systems and Epidemiology	2024
10.	S. Aadhithiyan	Synchronizationof Nonlinear Complex Dynamical Networks	2024

ListofRecentResearchPublications (2018-2023)

S. No	Authors/Titleofthepaper/Journal	Impact Factor
1.	Sayooj Aby Jose, **Raja Ramachandran**, Dumitru Baleanu, Hasan S. Panigoro, Jehad Alzabut, Valentina E. Balas, Computational dynamics of a fractional order substance addictions transfer model with Atangana-Baleanu-Caputo derivative, ***Mathematical Methods in the Applied Sciences,***Vol. 46, Iss.no.5, (Mar 2023), Pp. 5060-5085, *(SCI, Wiley Publication).*	3.0
2.	Sayooj Aby Jose, **R. Raja**, B. I. Omede Ravi P. Agarwal, J. Alzabut, J. Cao, V. E. Balas, Mathematical modeling on co-infection: transmission dynamics of Zika virus and Dengue fever, ***Nonlinear Dynamics,*** Vol.111, Iss.no.5, (30 Mar 2023), Pp. 4879-4914. *(SCI, Springer Publication).*	5.6
3.	Dianavinnarasi Joseph, **Raja Ramachandran**, Jehad Alzabut, Sayooj Aby Jose, Hasib Khan,A Fractional-Order Density-Dependent Mathematical Model to Find the Better Strain of Wolbachia, ***Symmetry***, vol. 15, Iss. 4,(Apr 2023),*(SCI, MDPI Publication).*	2.7
4.	Stepehen Arockiasamy, **Raja Ramachandran**, Pratap Anbalagan, Yang Cao, Synchronization of nonlinear multiagent systems and its application to circuit systems, ***Frontiers of Information technology & Electronic Engineering***, Vol.24, Iss.4, (May 2023), Pp 553-566, *(SCIE, Springer*	3.0

	Publication).	
5.	Sayooj Aby Jose, **R Raja**, J Dianavinnarasi, D Baleanu, A Jirawattanapanit, Mathematical modeling of chickenpox in Phuket: Efficacy of precautionary measures and bifurcation analysis, ***Biomedical Signal Processing and Control***, Vol.84. Paper ID. no.104714,(July. 2023), Pp.1-13,*(SCI, Elsevier Publication).*	5.0
6.	Stephen, **R Raja**, Xiaoshan Bai, J Alzabut, R Swaminathan, G Rajchakit, Asymptotic pinning synchronization of nonlinear multi-agent systems: Its application to tunnel diode circuit, ***Nonlinear Analysis: Hybrid Systems***, Vol. 49, Paper ID no.101366,(Aug. 2023), Pp.1-17, *(SCI, Elsevier Publication).*	4.2
7.	S Aadhithiyan, **R Raja**, Jehad Alzabut, G Rajchakit, Ravi P Agarwal, Passivity Analysis and Complete Synchronization of Fractional Order for Both Delayed and Non-Delayed Complex Dynamical Networks with Couplings in the Derivative**,** ***Axioms***, Vol. 12, Iss.8, Paper ID no.730, (July. 2023),Pp.1-21, *(SCIE, MDPI Publication).*	2.0
8.	S Aadhithiyan, **R Raja**, J Dianavinnarasi, J Alzabut, D Baleanu, Robust synchronization of multi-weighted fractional order complex dynamical networks under nonlinear coupling via non-fragile control with leakage and constant delays, ***Chaos, Solitons & Fractals,***Vol. 174,(Sep. 2023), Paper ID no. 113788, Pp.1-12, *(SCI, Elsevier Publication).*	7.8
9.	A Stephen, R Karthikeyan, C Sowmiya, **R Raja**, Ravi P Agarwal, Sampled-data controller scheme for multi-agent systems and its application to circuit network, ***Neural Networks,*** Vol.170, (Feb. 2023), Pp.506-520, *(SCI, Elsevier Publication).*	7.8
10.	Dianavinnarasi Joseph, **Raja Ramachandran**, Anitha Karthikeyan, Karthikeyan Rajagopal, Synchronization Studies of Hindmarsh–Rose Neuron Networks: Unraveling the Influence of connection induced memristive synapse, ***Biosystems***, Vol.234, Paper ID no. 105069, (Dec. 2023), Pp.1-9, *(SCI, Elsevier Publication).*	1.6
11.	R. Thomas, SA. Jose, **R.Raja**, J. Cao, V.E.Balas, Modeling and analysis of SEIRS epidemic models using Homotopy perturbation method: A special outlook to 2019-nCoV in India, ***International Journal of Biomathematics***, Vol.15, Iss.8, (Apr. 2022), ID:2250059, *(SCIE, World Scientific Publication).*	2.2
12.	Sayooj Aby Jose, **Raja Ramachandran**, Jinde Cao, Jehad Alzabut, Michal Niezabitowski, Valentina E. Balas, Stability analysis and comparative study on different eco-epidemiological models: Stage structure for prey and predator concerning impulsive control, ***Optimal control Applications and Methods***, Vol.43, Iss.3,(June. 2022),Pp. 842-866, *(SCI, Wiley Publication).*	1.8
13.	S.A. Jose, **R.Raja**, Q.Zhu, M.Niezabitowski, V.E.Impact of strong determination and awareness on substance addictions: A mathematical modeling approach, ***Mathematical Methods in the Applied Sciences,***Vol.45, Iss.8, Balas, (May. 2022),Pp. 4140–4160,*(SCI, Wiley*	2.9

	Publication).	
14.	A. Stephen, **R. Raja**, J. Alzabut, Q. Zhu, M. Niezabitowski, O. Bagdasar, Mixeddelayed nonlinear multi-agent dynamic systems for asymptotic stability and non-fragile synchronization criteria,***Neural Processing Letters***, Vol.54, Iss.1, (Feb.2022),Pp.43-74, *(SCI, Springer Publication)*.	3.1
15.	S. Aadhithiyan, **R. Raja**, Q. Zhu, J. Alzabut, M. Niezabitowski, C.P. Lim, A Robust Non-Fragile Control Lag Synchronization for Fractional Order Multi-Weighted Complex Dynamic Networks with Coupling Delays, ***Neural Processing Letters,***Vol.54, (Feb. 2022) Pp.2919-2940,*(SCI, Springer Publication)*.	3.1
16.	A. Pratap, **R.Raja**, R.P.Agarwal, M.Niezabitowski, E. Hincal, (Feb. 2022),Further results on asymptotic and finite-time stability analysis of fractional-order time-delayed genetic regulatory networks, ***Neurocomputing***, Vol.475, Pp. 26–37, *(SCI, Elsevier Publication)*.	6.0
17.	Dianavinnarasi Joseph, **Raja Ramachandran**, Jehad Alzabut, Jinde Cao, Michal Niezabitowski, Chee Peng Lim,Global exponential stability results for the host-parasitoid model of sugarcane borer in stochastic environment with impulsive effects via non-fragile control: An LMI approach, ***Optimal Control Applications and Methods***,Vol.43, Iss.2, (Apr.2022), Pp.512-531, *(SCI, Wiley Publication)*.	1.8
18.	S. Aadhithiyan, **R. Raja**, Q. Zhu, J. Alzabut, M. Niezabitowski, Robust non-fragile MittagLeffler synchronization of fractional order non-linear complex dynamical network with constant and infinite distributed delays, ***Mathematical Methods in the Applied Sciences***,Vol.45, Iss.4, (Mar.2022), Pp.2166-2189, *(SCI, Wiley Publication)*.	2.9
19.	Pratap Anbalagan, **Raja Ramachandran**, Jehad Alzabut, Evren Hincal, Michal Niezabitowski, Improved Results on Finite-Time Passivity and Synchronization Problem for Fractional-Order Memristor-Based Competitive Neural Networks: Interval Matrix Approach, ***Fractal and Fractional,*** Vol.6, Iss.1, (Jan.2022), Pp.1-28,*(SCI, MDPI Publication)***.**	3.5
20.	Subramaniyan Aadhithiyan, **Ramachandran Raja**, Bo Kou, Govindaraj Selvam, Michal Niezabitowski, Chee Peng Lim, Jinde Cao, Asymptotic synchronization of fractional-order non-identical complex dynamical networks with parameter uncertainties, ***Mathematical Methods in the Applied Sciences***, (Feb. 2022), *(SCI, Wiley Publication)*	2.9
21.	A. Pratap, **R.Raja**, J. Cao, J.Alzabut, O. Bagdasar, $O(t^{-\beta})$ -Synchronization and Asymptotic Synchronization of Delayed Fractional Order Neural Networks, ***Acta Mathematica Scientia***, Vol.42, Iss.4,(June. 2022), Pp. 1273–1292,*(SCI, Springer Publication)*.	1.0
22.	S.A. Jose, **R. Raja**, J. Alzabut, J. Cao, V.E. Balas, (Sep 2022), Mathematical modeling on transmission and optimal control strategies of corruption dynamics, ***Nonlinear Dynamics***, Vol.109, Iss.4, (Jun 2022), Pp. 3169–3187. *(SCI, Springer Publication)*.	5.6
23.	M. Iswarya, **R. Raja**, J. Cao, J. Alzabut, C. Maharajan, (Nov 2022), New results on exponential input-to-state stability analysis of memristor based complex-valued inertial neural networks with proportional and distributed	4.6

	delays***, Mathematics and Computers in Simulation***, Vol.201,(Jun 2022), Pp. 440–461, *(SCI, Elsevier Publication).*	
24.	J. Dianavinnarasi, **R. Raja**, J. Alzabut, M. Niezabitowski, O. Bagdasar, (Nov 2022), Application of Caputo–Fabrizio operator to suppress the Aedes Aegypti mosquitoes via Wolbachia: An LMI approach, ***Mathematics and Computers in Simulation***, Vol.201, (Jun 2022), Pp. 462–485, *(SCI, Elsevier Publication).*	4.6
25.	S.O. Neill, O. Bagdasar, S. Berry, N. Popovici., **R. Raja**, (Nov 2022), Modelling equilibrium for a multi-criteria selfish routing network equilibrium flow problem, ***Mathematics and Computers in Simulation***, Vol.201, (Jun 2022), Pp. 658–669, *(SCI, Elsevier Publication).*	4.6
26.	Pratap Anbagalan, Evren Hincal, **Raja Ramachandran**, Dumitru Baleanu, Jinde Cao, Michal Niezabitowski, (Nov 2022), An asymptotic state estimator design and synchronization criteria for fractional order time-delayed genetic regulatory networks, ***Asian Journal of Control***, Vol.24, Iss. 6, (Jun 2022), Pp.3163-3174, *(SCI, Wiley Publication).*	2.4
27.	Pratap, **R. Raja**, J. Cao, C. Huang, M. Niezabitowski,Stability of discrete-time fractional-order time-delayed neural networks in complex field, ***Mathematical Methods in the Applied Sciences,***Vol., Pp. 1-22, (Jan.2021).	2.9
28.	1. S. Aadhithiyan, R. Raja, Q. Zhu, J. Alzabut, M. Niezabitowski, Exponential synchronization of nonlinear multi-weighted complex dynamic networks with hybrid time varying delays, ***Neural Processing Letters,***Vol. 53, (Feb. 2021),Pp. 1035-1063, (SCI, Springer Publication).	3.1
29.	J. Dianavinnarasi, **R. Raja**, J. Alzabut, M. Niezabitowski, O. Bagdasar, Controlling Wolbachia Transmission and Invasion Dynamics among Aedes Aegypti Population via Impulsive Control Strategy, ***Symmetry,***Vol. 13, Iss.3,(Mar. 2021), Pp.1-33, *(SCI, MDPI Publication).*	2.7
30.	S. Aadhithiyan, **R. Raja**, Q. Zhu, J. Alzabut, M. Niezabitowski, C.P. Lim, (2021),Modified projective synchronization of distributive fractional order complex dynamic networks with model uncertainty via adaptive control,***Chaos, Solitons & Fractals***, Vol.147, ID: 110853,Pp. *(SCIE, Elsevier Publication).*	7.8
31.	S. Senthilraj, T. Saravanakumar, **R. Raja**, J. Alzabut, (July 2021),Delay-dependent passivity analysis of nondeterministic genetic regulatory networks with leakage and distributed delays against impulsive perturbations,***Advances in Difference Equations***, Vol.2021, Iss.1, Pp.1-26,*(SCIE, Springer Publication)*	3.7
32.	A. Pratap, **R. Raja**, C. Sowmiya, O. Bagdasar, J. Cao, G. Rajchakit, Global projective lag synchronization of fractional order memristor based BAM neural networks with mixed time varying delays, ***Asian Journal of Control***, Vol.22, Iss.1,(Jan.2020), Pp. 570-583, *(SCI, Wiley Publication).*	2.4
33.	A. Pratap, **R. Raja**, J. Alzabut, J. Dianavinnarasi, J. Cao, G. Rajchakit, Finite-time Mittag-Leffler stability of fractional-order quaternion-valued Memristive neural networks with impulses, ***Neural Processing Letters,***Vol. 51, (Apr.2020), Pp. 1485-1526,*(SCI, Springer Publication).*	3.1

34.	C. Sowmiya, Y. Cao, **R. Raja**, G. Rajchakit, C.P. Lim, A delay-dependent asymptotic stability criteria for uncertain BAM neural networks with leakage and discrete time-varying delays: A novel summation inequality, ***Asian Journal of Control***, Vol.22, Iss.2, (Sep.2020),Pp. 1880-1891, *(SCI, Wiley Publication).*	2.4
35.	T. Saravanakumar, V.J. Nirmala, **R. Raja**, J. Cao, G. Lu, Finite-time reliable dissipative control of neutral-type switched artificial neural networks with non-linear fault inputs and randomly occurring uncertainties, ***Asian Journal of Control,***Vol.22, Iss.6, (Nov.2020), Pp.2487-2499, *(SCI, Wiley Publication).*	2.4
36.	Pratap, **R. Raja**, J. Cao, F.A. Rihan, A.R. Seadawy, Quasi-pinning synchronization and stabilization of fractional order BAM neural networks with delays and discontinuous neuron activations, ***Chaos, Solitons and Fractals***, Vol.131, Paper ID no.109491, (Feb. 2020), *(SCI,Elsevier Publication).*	7.8
37.	Pratap, **R. Raja**, J. Cao, J. Alzabut, C. Huang,Finite-time synchronization criterion of graph theory perspective fractional-order coupled discontinuous neural networks, ***Advances in Difference Equations***, Vol.97, (Feb. 2020), Pp1-24.*(SCI, Springer Publication).*	3.7
38.	Pratap, **R. Raja**, R. Agarwal, J. Cao, O. Bagdasar, Multi-weighted complex structure on fractional order coupled neural networks with linear coupling delay: a robust synchronization problem, ***Neural Processing Letters,***Vol.51, (Feb. 2020),Pp. 2453-2479, *(SCI, Springer Publication).*	3.1
39.	Pratap, **R. Raja**, J. Alzabut, J. Cao, G. Rajchakit, C. Huang, Mittag-Leffler stability and adaptive impulsive synchronization of fractional order neural networks in quaternion field, **Mathematical Methods in the Applied Sciences,**Vol. 43, July(2020),Pp. 6223-6253.*(SCI, WileyPublication).*	2.9
40.	Pharunyou Chanthorn, Grienggrai Rajchakit, Sriraman Ramalingam, Chee Peng Lim and **R. Raja**, (Apr 2020) Robust Dissipativity Analysis of Hopfield-Type Complex-Valued Neural Networks with Time-Varying Delays and Linear Fractional Uncertainties, **Mathematics**, Vol. 8, Iss. 4, Pp.595,*(SCI, MDPI Publication).*	2.4
41.	Pratap, **R. Raja**, Jinde Cao, J. Alzabut & Chuangxia Huang, (2020) Finite-time synchronization criterion of graph theory perspective fractional-order coupled discontinuous neural networks, **Advances in Difference Equations**, Vol.97,*(SCI, Springer Publication).*	3.7
42.	J. Dianavinnarasi, Y. Cao, **R. Raja**, G. Rajchakit, C.P. Lim, Delay-dependent stability criteria of delayed positive systems with uncertain control inputs: Application in mosquito-borne morbidities control, ***Applied Mathematics and Computation,***Vol. 382, (Oct. 2020), Pp.125210, *(SCI,Elsevier Publication).*	4.0
43.	G. Rajchakit, P. Chanthorn, M. Niezabitowski, **R. Raja**,D. Baleanu, A. Pratap, Impulsive effects on stability and passivity analysis of memristor-based fractional-order competitive neural networks, ***Neurocomputing***, Vol. 417, (Dec. 2020),Pp. 290-301,*(SCI, Elsevier Publication).*	6.0
44.	S. Pandiselvi, **R. Raja**, Jinde Cao, G. Rajchakit, Stabilization of switched stochastic genetic regulatory networks with leakage and impulsive effects, *Neural Processing Letters*, Vol.49, I**ss**.2, **(**Apr. 2018**),**Pp. 593-610, *(SCI,*	3.1

	Springer Publication).	
45.	Anbalagan Pratap, **R. Raja**, Ravi P Agarwal, Jinde Cao,Stability analysis and robust synchronization of fractional-order competitive neural networks with different time scales and impulsive perturbations, ***International Journal of Adaptive Control and Signal Processing***, Vol.33, Iss.11, (Nov.2019), Pp.1635-1660,*(SCI, Wiley Publication).*	3.1
46.	S.V. Kumar, S.M. Anthoni, **R. Raja**,Dissipative analysis for aircraft flight control systems with randomly occurring uncertainties via non-fragile sampled-data control, ***Mathematics and Computers in Simulation,***Vol. 155, (Jan. 2019), Pp. 217-226,*(SCI, Elsevier Publication).*	4.6
47.	C. Maharajan, **R. Raja**, J. Cao, G. Rajchakit**,**Fractional delay segments method on time-delayed recurrent neural networks with impulsive and stochastic effects: an exponential stability approach, ***Neurocomputing,***Vol. 323, (Jan. 2019),Pp. 277-298.	6.0
48.	K. Balasundaram, **R. Raja**, A. Pratap, S. Chandrasekaran,Impulsive effects on competitive neural networks with mixed delays: existence and exponential stability analysis**,** ***Mathematics and Computers in Simulation***, Vol. 155, (Jan. 2019), Pp. 290-302.	4.6
49.	C. Sowmiya, **R. Raja**, Q. Zhu, G. Rajchakit, Further mean-square asymptotic stability of impulsive discrete-time stochastic BAM neural networks with Markovian jumping and multiple time-varying delays, ***Journal of the Franklin Institute,***Vol. 356, (Jan. 2019),Pp. 561-591, *(SCI,Elsevier Publication).*	4.1
50.	O. Bagdasar, S. Berry, S.O. Neill, N. Popovici, **R. Raja**, Traffic assignment: Methods and simulations for an alternative formulation of the fixed demand problem,***Mathematics and Computers in Simulation,***Vol. 155, (Jan. 2019), Pp. 360-373, *(SCI,Elsevier Publication).*	4.6
51.	S.Pandiselvi, **R. Raja**, J. Cao, X. Li, G. Rajchakit**,**Impulsive discrete-time GRNs with probabilistic time delays, distributed and leakage delays: an asymptotic stability issue, ***IMA Journal of Mathematical Control and Information,***Vol. 36, (Mar. 2019),Pp. 79-100, *(SCI, Oxford University Press).*	1.5
52.	A. Pratap, **R. Raja**, G. Rajchakit, J. Cao, O. Bagdasar, Mittag-Leffler state estimator design and synchronization analysis for fractional-order BAM neural networks with time delays, ***International Journal of Adaptive Control and Signal Processing,***Vol. 32, Iss.7, (Mar. 2019),Pp. 1-20,*(SCI, Wiley Publication).*	3.1
53.	A. Pratap, **R. Raja**, J. Cao, G. Rajchakit, H.M. Fardoun, Stability and synchronization criteria for fractional order competitive neural networks with time delays: An asymptotic expansion of Mittag Leffler function, ***Journal of the Franklin Institute***, Vol. 356, (Mar. 2019), Pp. 2212-2239, *(SCI, ElsevierPublication).*	4.1
54.	A. Pratap, **R. Raja**, C. Sowmiya, O. Bagdasar, J. Cao, G. Rajchakit,Global projective lag synchronization of fractional order memristor based BAM neural networks with mixed time varying delays, ***Asian Journal of Control,***Vol., (May. 2019), Pp. 1-14,*(SCI, Wiley Publication).*	2.4
55.	S. Senthilraj, **R. Raja**, J. Cao, H.M. Fardoun,Dissipativity analysis of stochastic fuzzy neural networks with randomly occurring uncertainties	2.0

	using delay dividing approach, ***Nonlinear Analysis: Modelling and Control,***Vol. 24, Iss.no. 4, (June. 2019), Pp. 561-581, *(Vilnius University Press).*	
56.	S. Chandran, **R. Ramachandran**, J. Cao, R.P. Agarwal, G. Rajchakit, Passivity analysis for uncertain BAM neural networks with leakage, discrete and distributed delays using novel summation inequality, ***International Journal of Control, Automation and Systems,***Vol. 17, Iss.no. 8, (July. 2019), Pp. 2114-2124, *(SCI,ElsevierPublication).*	3.2
57.	G. Rajchakit, A. Pratap, **R. Raja**, J. Cao, J. Alzabut, C. Huang,Hybrid control scheme for projective lag synchronization of Riemann–Liouville sense fractional order memristive BAM NeuralNetworks with mixed delays, ***Mathematics***, Vol. 7, (Aug. 2019),Pp.1-23, *(SCI, MDPI Publication).*	2.4
58.	Pratap, **R. Raja**, J. Cao, C.P. Lim, O. Bagdasar, Stability and pinning synchronization analysis of fractional order delayed Cohen–Grossberg neural networks with discontinuous activations, ***Applied Mathematics and Computation,***Vol. 359, (Oct. 2019),Pp. 241-260, (SCI,Elsevier Publication).	4.0
59.	Pratap, **R. Raja**, R.P. Agarwal, J. Cao,Stability analysis and robust synchronization of fractional-order competitive neural networks with different time scales and impulsive perturbations, ***International Journal of Adaptive Control and Signal Processing,*** Vol.33, Iss.11, (Oct. 2019), Pp. 1635-1660,*(SCI, Wiley Publication).*	3.1
60.	Q.Zhu, S.V. Kumar, **R. Raja**, F. Rihan, Extended dissipative analysis for aircraft flight control systems with random nonlinear actuator fault via non-fragile sampled-data control, ***Journal of the Franklin Institute,***Vol. 356, (Oct. 2019), Pp. 8610-8624,*(SCI,Elsevier Publication)*	4.1
61.	Iswarya, **R. Raja**, G. Rajchakit, J. Cao, J. Alzabut,A perspective on graph theory-based stability analysis of impulsive stochastic recurrent neural networks with time-varying delays, ***Advances in Difference Equations***, Vol.2019, Article ID: 502, (Dec. 2019),Pp.1-21***,*** *(SCI, Springer Publication)*	3.7
62.	C. Maharajan, **R. Raja**, Jinde Cao, G. Rajchakit, Ahmed Alsaedi,Impulsive Cohen–Grossberg BAM neural networks with mixed time-delays: An exponential stability analysis issue, ***Neurocomputing***, Vol. 214, I**ss**.,**(**Jan. 2018**)**,Pp. 981-990, *(SCI, ElsevierPublication).*	6.0
63.	C. Sowmiya, **R. Raja**, J. Cao, G. Rajchakit, Impulsive discrete-time BAM neural networks with random parameter uncertainties and time-varying leakage delays: an asymptotic stability analysis, ***Nonlinear Dynamics***, Vol. 91, (Jan. 2018),Pp. 2571-2592, *(SCI, Springer Publication).*	5.6
64.	S. Vimal Kumar, **R. Raja,** S. Marshal Anthoni, Jinde Cao, Zhengwen Tu,Robust finite-time non-fragile sampled-data control for TS fuzzy flexible spacecraft model with stochastic actuator faults, *Applied Mathematics and Computation,* Vol. 321, I**ss**., Pp. 483-497, Mar. 2018,*(SCI, ElsevierPublication).*	4.0

65.	C. Sowmiya, **R. Raja**, Jinde Cao, X. Li, G. Rajchakit,Discrete-time stochastic impulsive BAM neural networks with leakage and mixed time delays: An exponential stability problem, *Journal of the Franklin Institute*, Vol. 355, I**ss**.10, Pp. 4404-4435, **J**uly. 2018, *(SCI, ElsevierPublication).*	4.1
66.	C. Maharajan, **R. Raja**, Jinde Cao, G. Ravi, G. Rajchakit, Global exponential stability of Markovian jumping stochastic impulsive uncertain BAM neural networks with leakage, mixed time delays, and α-inverse Hölder activation functions, ***Advances in Difference Equation***, Vol.113, (Mar. 2018), Pp.1-31, *(SCI, Springer Publication).*	3.7
67.	S. Pandiselvi, **R. Raja**, Q. Zhu, G. Rajchakit,A state estimation H∞ issue for discrete-time stochastic impulsive genetic regulatory networks in the presence of leakage, multiple delays and Markovian jumping parameters, *Journal of the Franklin Institute*, Vol.355, I**ss.**5, **(**Mar. 2018**),** Pp. 2735-2761**,** *(SCI, ElsevierPublication)*	4.1
68.	C.Sowmiya, **R.Raja**, JindeCao, G.Ravi, XiaodiLi, A.Alsaedi, Zhengwen Tu,Global exponential stability of antiperiodic solutions for impulsive discrete-time Markovian jumping stochastic BAM neural networks with additive time-varying delays and leakage delay, ***International Journal of Adaptive Control and Signal Processing***, Vol.36, I**ss**. 6, **(**Apr. 2018**)**,Pp. 908-936, *(SCI, Wiley Publication).*	3.1
69.	S. Pandiselvi, **R. Raja**, Jinde Cao, G. Rajchakit, Bashir Ahmad, Approximation of state variables for discrete-time stochastic genetic regulatory networks with leakage, distributed, and probabilistic measurement delays: a robust stability problem, ***Advances in Difference Equation***, Vol.2018,**(**Apr. 2018**)**,Pp. 1-27, *(SCI, Springer Publication).*	3.7
70.	C. Maharajan, **R. Raja**, Jinde Cao, G. Rajchakit, Novel global robust exponential stability criterion for uncertain inertial-type BAM neural networks with discrete and distributed time-varying delays via Lagrange sense, ***Journal of the Franklin Institute***, Vol.355, Iss.11, (July. 2018),Pp. 4727-4754, *(SCI,Elsevier Publication).*	4.1
71.	C.Sowmiya, **R. Raja**, Jinde Cao, G. Rajchakit,Enhanced result on stability analysis of randomly occurring uncertain parameters, leakage, and impulsive BAM neural networks with time-varying delays: Discrete-time case, ***International Journal of Adaptive Control and Signal Processing,***Vol.32, Iss.7, (May. 2018), Pp. 1010-1039, *(SCI, Wiley Publication).*	3.1
72.	C. Maharajan, **R. Raja**, J. Cao, G. Rajchakit, Z. Tu, A. Alsaedi,LMI-based results on exponential stability of BAM-type neural networks with leakage and both time-varying delays: A non-fragile state estimation approach, ***Applied Mathematics and Computation***, Vol.326, (June. 2018),Pp. 33-55, *(SCI,Elsevier Publication).*	4.0
73.	A. Pratap, **R. Raja**, C. Sowmiya, O. Bagdasar, J. Cao, G. Rajchakit, Robust generalized Mittag-Leffler synchronization of fractional order neural networks with discontinuous activation and impulses, ***Neural Networks,***Vol.103, (July. 2018), Pp.128-141,*(SCI,Elsevier Publication).*	7.8
74.	C. Maharajan, **R. Raja**, J. Cao, G. Rajchakit, A. Alsaedi, Novel results on passivity and exponential passivity for multiple discrete delayed neutral-	7.8.

	type neural networks with leakage and distributed time-delays, ***Chaos, Solitons and Fractals,***Vol. 115, (Oct. 2018), Pp. 268-282, *(SCI,Elsevier Publication).*	
75.	A. Pratap, **R. Raja**, J. Cao, G. Rajchakit, F.E. Alsaadi, Further synchronization in finite time analysis for time-varying delayed fractional order Memristive competitive neural networks with leakage delay, ***Neurocomputing***, Vol.317, (Nov. 2018), Pp.110-126, *(SCI,Elsevier Publication).*	6.0
76.	Sowmiya, **R. Raja**, Jinde Cao, G. Rajchakit, and Ahmed Alsaedi, Exponential stability of discrete-time cellular uncertain BAM neural networks with variable delays using Halanay-type inequality, ***Applied Mathematics and Information Sciences,***Vol.12, no. 3, pp. 545-558, 2018, *(SCIE, Natural Science Publishing)*	1.0

Resourcepersonsin variouscapacities

National Conferences : 04

InternationalConferences : 15

InvitedLectures : 06

Date : 25.02.2024

Place : Karaikudi

Dr.R.RAJA

Assistant Professor