

## **Faculty Profile of Dr. S. Narayanamoorthy**



**Dr. S. Narayanamoorthy**  
**Associate Professor**  
**Department of Mathematics**

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Phone No:0422-2428412

Mobile No:98845-88610

### **Research Area**

- Fuzzy Mathematics
- Decision Science
- Differential Equations
- Fuzzy Optimizations

### **Education & Career**

#### **Education**

**Ph. D.**

Subject : MATHEMATICS

Institution :Loyola College

Affiliated University : Madras University

Year of Award : 2008

**M.Phil.,**

Subject : MATHEMATICS

Institution : Loyola College

Affiliated University : Madras University

Year of Award : 2002

**M. Sc.,**

Subject: MATHEMATICS

Institution : Loyola College

Affiliated University :Madras University

Year of Award : 2001

**B. Sc.,**

Subject: MATHEMATICS

Institution: Loyola College

Affiliated University: Madras University

Year of Award: 1999

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

**Associate Professor : 02.02.2021 to till date**

Assistant Professor: 02.02.2009 to 01.02.2021

**Past Experience**

Lecturer: Shree Chandrababhu Jain College, Minjur, Chennai, 02.01.2008 to 31.01.2009

**Awards**

## **Membership**

Indian Science Congress, Member, Lifetime

## **Visits**

- 1.Srilanka, Tendencies, 2014, Conference Talk
- 2.South Korea, Two months, 2019, Visiting Professor
- 3.South Korea, Ten days, 2019, Visiting Professor
4. South Korea, One Month , 2022, Visiting Professor

## **Collaborators**

## **Others**

## **Projects**

Funded Projects (National Level)

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

Ongoing Projects List with necessary Information

Completed Projects List with necessary Information

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 | Student Name        | Title of Thesis / Project | Status |
|-------|---------------------|---------------------------|--------|
| 1.    | T. MANIRATHINAM,    |                           |        |
| 2.    | J.V. BRAINY         |                           |        |
| 3.    | T. N. PARTHASARATHY |                           |        |
| 4.    | S. PRAGATHI         |                           |        |

5. K.SUVITHA
6. SANDRA MICHAEL

Completed

| Sl.No. | Name of the Scholar | Title of the Thesis | Month and Year |
|--------|---------------------|---------------------|----------------|
|--------|---------------------|---------------------|----------------|

1. **P.ANUKOKILA**, Studies on Multiobjective transportation problems with linear and nonlinear programming in fuzzy environment, April 2014
2. **M.NAGARAJAN**, Existence and controllability results for nonlinear impulsive fuzzy integro differential equations and impulsive fuzzy neutral integrodifferential equations, August 2014
3. **S.KALYANI**, Studies on linear fractional transportation problems in fuzzy environment, December 2015
4. **S.SOWMIYA**, Studies on uniqueness, controllability and approximate controllability results for nonlinear and linear fuzzy stochastic differential equations, October 2016
5. **S.MAHESWARI**, Pertinent approaches for network analysis using fuzzy numbers, November 2016
6. **K.MURUGAN**, Pertinent approaches for nonlinear integro-differential equations under fuzzy environment, February 2017
7. **T.L.Yookesh**, Studies on the Numerical Stability of Fuzzy Differential and Integral equations Using Delay Arguments, 2017
8. **Sathiyapriya S.P.**, Some contributions to solve integral and integro-differential equations in fuzzy basis, 2017
9. **P.Karthick**, Studies on Product, connectivity, complement and normalized graph cut measures of intuitionistic fuzzy graphs, 2018
10. **A.C.Prabu**, Studies on fuzzy mathematical approach for segmentation of medical images, 2018
11. **S.Mathankumar**, Studies on Hybrid Differential and system of Integro-Differential Equations in Fuzzy Aspects, 2019
12. **S.Geetha**, Proficient Mathematical Modelling for Multi-Criteria Decision Making Problems with Influential Factors, 2019
13. **V.Annapoorani**, Sustainable mathematical Methods for Multi-Criteria Decision making Problems Based on Hesitant Fuzzy environment, Jan.2020
14. **K. Thangapandi**, Pertinent Mathematical Methods for fractional Order Fuzzy Differential Systems with Biological Applications, 2020

15. **L.Ramya**, Idiosyncratic Mathematical Modelling for MultCriteria Decision making Problems through normal wiggly Hesitant fuzzy Approach, 2020

16 . **A. ANUJA** , Adoptable Mathematical Methods For Multi-Criteria Decision Making Problems Through Q-Rung Orthopair Fuzzy Approach, 2021

Ongoing

**Sl.No. Name of the Student**

1. Najdat Reyad Alkhattab
2. Ilakiya
3. Aarthi

Completed

**Sl.No. Name of the Scholar Title of the Dissertation Month and Year**

1. **V.Annapoorani**, A study on economic order quantity under fuzzy environment, 23.02.2011
2. **M.Jeyalakshmi**, A study on linear matrix equation in fuzzy theory for singular matrix, 23.02.2011
3. **A.Valarmathi**, Application of fuzzy cognitive maps to analyse the socio economic problems faced by tribals, 23.02.2011
4. **M.Kalaiarasi**, A study on improved euler method for solving fuzzy differential equations, 24.02.2012
5. **S.Thilakavathi**, study on mixed integer linear programming problem using fractional cut method with fuzzy variables, 24.02.2012
6. **M.Vasanthamani**, The optimal solution of fuzzy transportation problem using fuzzy stepping stone method, 24.02.2012
7. **R.Venugopal**, A study on secant method for solving fuzzy nonlinear equations, 24.02.2012
8. **S.Maheswari**, Fuzzy critical path method (FCPM) based on ranking method and centroid method, 23.01.2013
9. **K.Murugan**, The exact solutions of fuzzy heat-like equations with variable coefficients, 23.01.2013
10. **S.Saranya**, A fuzzy approach to the transportation problem –Ranking

method and Russell's Method, 23.01.2013

11. **A.Tamilselvi**, Regular bipolar fuzzy hyper graphs and bipolar fuzzy line graphs, 23.01.2013

12. **R.Sangeetha**, Solving Intuitionistic fuzzy transportation problem using modified distribution method, 31.01.2014

13. **T.L.Yookesh**, A study on Adomian decomposition method for the solution of nth order linear fuzzy differential equations, 31.01.2014

14. **P.Ramyalavanya**, A study on fuzzy cognitivemaps verses Neutrosophic cognitive maps and its applications, 31.01.2014

15. **B.Hemalatha**, A study on hybrid fuzzy differential equations using Taylors series method, 28.11.2014

16. **P.Karthick**, Intuitionistic fuzzy line hypergraph and Isomorphism on dual Intitonistic fuzzy directed Hypergraph, 28.11.2014

17. **P.Chandru**, A Comparison study between homotopy perturbation method and variational Iteration method for the solution of nth order linear fuzzy differential equations, 23.12.2015

18. **S.Geetha**, Hesitant fuzzy entropy and distance measure based on hesitant fuzzy tosis for multiattribute decision making, 23.12.2015

19. **D.Meera**, A study on intuitionisticfuzzy linear fractional programming problem using denominator objective restriction method, 23.12.2015

20. **M.Santhiya**, Fuzzy assignment problem and intuitionistic fuzzy assignment problem using Ones assignment method in Robust ranking technique with fuzzy numbers, 23.12.2015

21. **R.Yalini Maheswari**, A study on decomposition method to solve nth order linear differential equations under fuzzy environment, 23.12.2015

22. **Anuja**, A distinctive analyzation of fuzzy queueing with trapezoidal intuitionistic fuzzy number using erlang service model, 26.12.2016

23. **M.Kiruthika**, A fuzzy graph theoretic approach for edge detection, 26.12.2016

24. **A.Nivedha**, A simplex type algorithm for solving intuitionistic fuzzy transportation problem with a novel form of LR Flat Intuitionistic fuzzy numbers, 26.12.2016

25. **K. Thangapandi**, Numerical simulations for fuzzy fractional initial value problem by modified fractional Runge-Kutta method, 26.12.2016

26. **S. Umamaheswari**, Graph based image segmentation of Different medical images using Gaussian Fuzzy membership function, 26.12.2016.

27. **A.Deepa**, Study on Transportation Problems using Intuitionistic Fuzzy Russell's Method, 2017.

28. **M.Dharamalingam**, Study on Image Segmentation Using Modified Fuzzy C-Means Algorithm, 2017
29. **S.Ranjitha**, Study on Fuzzy Transportation Problem Using LR Flat Intuitionistic Fuzzy Numbers, 2017
30. **P.Vidhya**, A Robust ranking Technique to Solve Fuzzy Assignment Problem-Branch and Bound Method, 2017
31. **Vyshna Unni**, Study on Fredholm Fuzzy Integro-Differential equations with Separable Kernels using Direct Computation and Decomposition Methods, 2017
32. **T.Manirathinam**, An observer-based active Fault-tolerant Controller for a non-linear T-S Fuzzy system with affected Sensors, 2018
33. **Reetha Thomas**, Glucose Insulin Regulatory Model using Fourth order Runge Kutta and Homotopy perturbation Methods in Fuzzy domain, 2018
34. **M.Sabeetha**, Fuzzy Russell's Method Using Fractional Heptagonal and Pentagonal fuzzy Numbers, 2018
35. **T.Thangaraj**, Fractional Fuzzy Differential Equations Using He's variational Iteration Method, 2018
36. **A. Chithra**, Single valued Trapezoidal Neutrosophic Multi-Criteria Decision making Problems-Promethee II, 2019
37. **J.V.Brainy**, Trapezoidal Interval Type-2 fuzzy set: Multi-Criteria Decision Making problem using Extended VIKOR and WASPAS techniques (2021)
38. **S. Suvitha**, The Unified and Fermatean Probabilistic Hesitant Fuzzy Set: Multi-Criteria Decision Making Techniques, (2022)

Ongoing

Sample Data.

Completed

**Sl.no, Name of the Scholar, Title of the Thesis, Month and Year**

1. S.T.Surekha (08AMAA19), A study on fuzzy relation equations using matlab, April 2010

2. T.Sowmiyathangalakshmi (08AMAA20), A study on Neuro –Fuzzy Modeling, April 2010
3. N.Sugitha(08AMAA21), A study on fuzzy cognitive maps and its applications, April 2010
4. S.Thilakavathi(08AMAA22), A study on Fuzzy logic using matlab, April 2010
5. M.Vasanthamani(08AMAA23), The socio economic problems faced by cotton mill workers using fuzzy neural networks, April 2010
6. R.Venugopal(08AMAA24), A fuzzy analysis of the health hazards faced by the dyeing industries labourers in tirupur district in Tamilnadu, April 2010
7. S.Aruna(09AMAA03), A study on automated car parking system using fuzzy logic controller, March 2011
8. N.Kanimozhi (09AMAA10), A study on neuro- fuzzy in medical diagnosis, March 2011
9. S.Karthik (09AMAA11), Program evaluation and review technique and critical path method using C-Program, March 2011
10. K.Mythily(09AMAA17), Fuzzy cognitive maps(FCMs) to analyse the problems faced by turmeric cultivators at the time of marketing, March 2011
11. S.Saranya(09AMAA23), A study on fuzzy transportation problem in two stage using C-Programming, March 2011
12. S.Sathya(09AMAA24), Some operators on fuzzy matrices using matlab, March 2011
13. T.Gomathi(10AMAA04), Numerical solution of fuzzy differential equations using modified two-step simpson method, April 2012.
14. K.Jayabharathi(10AMAA06), A study on IVFM in medical diagnosis using arithmetic mean, April 2012
15. A.Kalpana(10AMAA07), Study on garments transportation using fuzzy mathematical modelling in tirupur , Tamilnadu, April 2012
16. S.Sangeetha(10AMAA20), Adaptation of induced FCMs to the problems faced by the power loom workers in Avinashi, April 2012
17. J.Shalini(10AMAA25), A study on regular fuzzy graphs and its characterization of regular fuzzy graphs on a cycle, April 2012
18. T.Vidyalakshmi(10AMAA31), A study on coloring graphs and five corner traffic light problem using fuzzy theory, April 2012
19. R.Anbarasi(11AMAA04), A study on super fuzzy cognitive maps and its applications, April 2013
20. H.Deepika(11AMAA09), A study on robotic control for motion of cycles using fuzzy logic, April 2013
21. B.Hemalatha(11AMAA13), A study on exact and approximation solution of

- fuzzy differential equations using third order taylor method, April 2013
- 22.K.Nirmala(11AMAA19), Super matrices and super fuzzy matrices using matlab, April 2013
- 23.S.Selvakumar(11AMAA24), A study on exact solution of fuzzy heat equations, April 2013
- 24.K.Usharani(11AMAA29), A study on fuzzy decision making-minimization of regret method, April 2013
25. S.Geetha(12AMAA10), A study on interval goal programming approach to multiobjective fuzzy goal programming problem with interval weights, April 2014
26. Hridya.T.Pushpam(12AMAA11), A study on nuclear decay equation using runge-kutta method, April 2014
27. M.Indumathi(12AMAA13), A study on fuzzy database for heat disease diagnosis, April 2014
28. T.Jayasudha(12AMAA14), A study on fuzzy shortest path problem using index ranking, April 2014
29. D.Pavithra(12AMAA17), A study on fuzzy logic in transport planning with application, April 2014
30. M.Santhiya(12AMAA23), A study on coloring graphs and job allocations using fuzzy graphs, April 2014
31. R.Sathiyapriya(12AMAA29), A modified subgradient method for fuzzy linear programming problem with fuzzy constraints, April 2014
- 32 T.Shanmugapriya(12AMAA32), A study on fuzzy critical path method(FCPM) based on metric distance ranking method, April 2014
- 33 P.Sriranjini(12AMAA35), A study on fuzzy pseudo symmetric supermatrix, April 2014
- 34 R.Yalinimaheswari(12AMAA41), A study on population dynamics using Malthusian method, April 2014
- 35 D.Banupriya(13AMAA02), A study on fuzzy matrix games – two person zero sum games, April 2015
- 36 M.Gnanasekar(13AMAA07), A study on representation of fuzzy matrices based on reference function, April 2015
- 37 G.Kabin Antony(13AMAA12), Fuzzy assignment problems using triangular and trapezoidal fuzzy numbers, April 2015
- 38 B.Loganayaki(13AMAA17), A study on fuzzy differential equation using runge-kutta method of order five-numerical solutions, April 2015
- 39 E.Nandhini(13AMAA23), An optimization model for single-period inventory problem under fuzzy environment, April 2015
- 40 M.Sivayoga(13AMAA31), A study on assignment problem with restriction

on cost under fuzzy environment, April 2015

41 S.Umamaheswari(13AMAA34), A study on linear differential equation with boundary values under fuzzy environment, April 2015

42 J.Veluprasanth(13AMAA37), The intelligence of fuzzy logic to study on antilock –braking system, April 2015

43 M.Dharmalingam(14AMAA06), A Study on behaviour-based autonomous robotics using fuzzy model, April 2016

44 E.Durgadevi(14AMAA08), A Study on the initial basic feasible solution of a transportation problem in fuzzy domain, April 2016

45 T.Geethpriya(14AMAA11), A Study on local 7-coloring for planar subgraphs, April 2016

46 M.Gokilalakshmi(14AMAA13), A Study on image security by using fuzzy graph theory, April 2016

47 R.Keerthana(14AMAA16), A Study on activities criticality of a network in fuzzy environment, April 2016

48 S.Pavithra(14AMAA19), Study of problems faced by parents of children with disability from veerapandi in Coimbatore using fuzzy cognitive maps model

April 2016

49 L.Ramya(14AMAA22), Study on traffic flow patterns using fuzzy C-means clustering in lolly road signal, Coimbatore, April 2016

50 M.Sabeena(14AMAA26), A Study on shortestpath problem in a network using intervalvalued intuitionistic fuzzy number, April 2016

51 K.Saranya(14AMAA28), A Study on Hypergraph, April 2016

52 V.Soffya(14AMAA35), A Study on numerical solutions of fuzzy differential equations by extended runge-kutta-like formulae of order four, April 2016

53 R.Uma Mageshwari(14AMAA38), A Study on fuzzy logic with application April 2016

## Research Publication

- 
- 
- [International](#)
- [National](#)
- [Patents](#)

- [Conferences](#)
- [Books / Chapters](#)
- [Database](#)

136. Integrated MCDM Approaches for Exploring the Ideal Therapeutic Plastic Disposal Technology: Probabilistic Hesitant Fuzzy Domain

Ramasamy Jaisankar · Veeramuthu Murugesan · Samayan Narayanamoorthy · Ali Ahmadian · Krishnan Suvitha · Massimiliano Ferrara · Daekook Kang

Water, Air and Soil Pollution: <https://doi.org/10.1007/s11270-022-05970-6> :

**I.F : 2.98**

135. [A dual hesitant q-rung orthopair enhanced MARCOS methodology under uncertainty to determine a used PPE kit disposal](#)

D Kang, A Anuja, S Narayanamoorthy, M Gangemi, A Ahmadian

Environmental Science and Pollution Research 29 (59), 89625-89642: **I.F : 5.19**

134. [An approach to assess PWR methods to cope with physical barriers on plastic waste disposal and exploration from developing nations](#)

S Narayanamoorthy, T Manirathinam, Selvaraj Geetha, Soheil Salahshour, Ali Ahmadian, Daekook Kang

Expert Systems with Applications 207, 117996 : **I.F : 8.66**

133. [An enhanced fuzzy decision making approach for the assessment of sustainable energy storage systems](#)

S Narayanamoorthy, JV Brainy, Raed A Shalwala, Theyab R Alsenani, Ali Ahmadian, Daekook Kang

Sustainable Energy, Grids and Networks, 100962 : **I.F : 5.40**

132. [The novel augmented Fermatean MCDM perspectives for identifying the optimal renewable energy power plant location](#)

S Narayanamoorthy, Thirumalai Nallasivan Parthasarathy, Subramaniam Pragathi, Ponnann Shanmugam, Dumitru Baleanu, Ali Ahmadian, Daekook Kang

Sustainable Energy Technologies and Assessments 53, 102488 : **I.F : 7.63**

131. [An intuitionistic fuzzy decision support system for COVID-19 lockdown relaxation protocols in India](#)

SA Devi, A Felix, S Narayanamoorthy, A Ahmadian, D Balaenu, D Kang

Computers and Electrical Engineering 102, 108166 : **I.F : 4.15**

130. [An integrated decision making approach for selecting a sustainable waste water treatment technology](#)

S Narayanamoorthy, JV Brainy, R Sulaiman, Massimiliano Ferrara, Ali Ahmadian, Daekook Kang

Chemosphere 301, 134568 : **I.F : 8.94**

129. [Knowledge-based normative safety measure approach: systematic assessment of capabilities to conquer COVID-19](#)

S Geetha, S Narayanamoorthy, T Manirathinam, A Ahmadian, Mohd Yazid Bajuri, Daekook Kang

The European Physical Journal Special Topics, 1-13 : **I.F : 2.89**

128. [Development of the evaluation model for national innovation capability](#)

J Jeon, S Geetha, D Kang, S Narayanamoorthy

Technology Analysis & Strategic Management 34 (3), 335-348 : **I.F : 3.74**

127. [An extension of the hesitant Pythagorean fuzzy ELECTRE III: techniques for disposing of e-waste without any harm](#)

L Ramya, S Narayanamoorthy, T Manirathinam, S Kalaiselvan, D Kang

Applied Nanoscience, 1-19: **I.F : 3.86**

126. [Intuitionistic fuzzy MAUT-BW Delphi method for medication service robot selection during COVID-19](#)

D Kang, SA Devi, A Felix, S Narayanamoorthy, Samayan Kalaiselvan, Dumitru Balaenu, Ali Ahmadian

Operations Research Perspectives 9, 100258 : **I.F : 3.38**

125. [Analysis of Vaccine efficacy during the COVID-19 pandemic period using CSF-ELECTRE-I approach](#)

S Narayanamoorthy, S Pragathi, M Shutaywi, A Ahmadian, D Kang

Operations Research Perspectives 9, 100251 : **I.F : 3.38**

124. [An adoptive renewable energy resource selection using Hesitant Pythagorean Fuzzy DEMATEL and VIKOR methods](#)

G Selvaraj, N Samayan, K Daekook, B Dumitru

Journal of Intelligent & Fuzzy Systems, 1-18 : **I.F : 1.73**

123. [Assessment of the Solid Waste Disposal Method during COVID-19 Period Using the ELECTRE III Method in an Interval-Valued q-Rung Orthopair Fuzzy Approach](#)

S Narayanamoorthy, A Anuja, JV Brainy, T Manirathinam, Subramaniam Pragathi, Thirumalai Nallasivan Parthasarathy, Daekook Kang

CMES-Computer Modeling in Engineering and Sciences, 1229-1261: **I.F : 2.02**

122. [An adoptable multi-criteria decision-making analysis to select a best hair mask product-extended weighted aggregated sum product assessment method](#)

S Narayanamoorthy, JV Brainy, T Manirathinam, Samayan Kalaiselvan, Joseph Varghese Kureethara, Daekook Kang

International Journal of Computational Intelligence Systems 14 (1), 1-16: **I.F : 2.25**

121. [A modified fuzzy approach to project team selection](#)

SJ Kalayathankal, JV Kureethara, S Narayanamoorthy

Soft Computing Letters 3, 100012 (Scopus Indexed)

120. [Fuzzy case-based reasoning approach for finding COVID-19 patients priority in hospitals at source shortage period](#)

S Geetha, S Narayanamoorthy, T Manirathinam, D Kang

Expert Systems with Applications 178, 114997 : **I.F : 8.66**

119. [A congruent approach to normal Wiggly interval-valued hesitant pythagorean fuzzy set for thermal energy storage technique selection applications](#)

L Ramya, S Narayanamoorthy, S Kalaiselvan, Joseph Varghese Kureethara, Veerappan Annapoorani, Daekook Kang

International Journal of Fuzzy Systems 23 (6), 1581-1599, : **I.F : 4.08**

118. [Efficient image segmentation performance of gray-level image using normalized graph cut based neutrosophic membership function](#)

P Karthick, S Narayanamoorthy, S Maheswari, S Sowmiya

Journal of Electronic Imaging 30 (4), 043014 : **I.F : 0.83**

117. [Use of DEMATEL and COPRAS method to select best alternative fuel for control of impact of greenhouse gas emissions](#)

S Narayanamoorthy, L Ramya, S Kalaiselvan, JV Kureethara, D Kang

Socio-Economic Planning Sciences 76, 100996: **I.F : 4.64**

116. [The COVID-19 vaccine preference for youngsters using promethee-ii in the ifss environment](#)

S Narayanamoorthy, S Pragathi, TN Parthasarathy, Samayan Kalaiselvan, Joseph Varghese Kureethara, Ranganathan Saraswathy, Poosamani Nithya, Daekook Kang

Symmetry 13 (6), 1030 : **I.F : 2.94**

115. [The hesitant Pythagorean fuzzy ELECTRE III: an adaptable recycling method for plastic materials](#)

S Geetha, S Narayanamoorthy, JV Kureethara, D Baleanu, D Kang

Journal of Cleaner Production 291, 125281; **I.F : 11. 02**

114. [A new extension of hesitant fuzzy set: An application to an offshore wind turbine technology selection process](#)

S Narayanamoorthy, L Ramya, D Kang, D Baleanu, Joseph Varghese Kureethara, Veerappan Annapoorani

IET Renewable Power Generation: **I.F : 3.034**

113. [Hybrid hesitant fuzzy multi-criteria decision making method: A symmetric analysis of the selection of the best water distribution system](#)

S Narayanamoorthy, V Annapoorani, S Kalaiselvan, D Kang

Symmetry 12 (12), 2096, **I.F : 2.94**

112. [A novel assessment of bio-medical waste disposal methods using integrating weighting approach and hesitant fuzzy MOOSRA](#)

S Narayanamoorthy, V Annapoorani, D Kang, D Baleanu, Jeonghwan Jeon, Joseph Varghese Kureethara, L Ramya

Journal of Cleaner Production 275, 122587: **I.F : 11. 02**

111. [A Distinctive Symmetric Analyzation of Improving Air Quality Using Multi-Criteria Decision Making Method under Uncertainty Conditions](#)

S Narayanamoorthy, A Anuja, D Kang, JV Kureethara, S Kalaiselvan, Thangaraj Manirathinam

Symmetry 12 (11), 1858: **I.F : 2.94**

110. [The effect of gravity driven thermal instability in the presence of applied magnetic field and internal heating](#)

SH Manjula, P Kiran, S Narayanamoorthy

AIP Conference Proceedings 2261 (1), 030042 ( Scopus Indexed)

109. [Glucose-insulin regulatory model using Runge Kutta method of order four](#)

R Thomas, S Maheswari, S Narayanamoorthy

AIP Conference Proceedings 2261 (1), 030069( Scopus Indexed)

108. [A distinctive analyzation of intuitionistic fuzzy queueing system using Erlang service model](#)

S Narayanamoorthy, A Anuja, V Murugesan, D Kang

AIP Conference Proceedings 2261 (1), 030040( Scopus Indexed)

107. [Fractal differential transform method for solving fuzzy logistic equation](#)

S Narayanamoorthy, T Manirathinam, S Lee, K Thangapandi

AIP Conference Proceedings 2261 (1), 030050( Scopus Indexed)

106. [Normal wiggly hesitant fuzzy set with multi-criteria decision making problem](#)

S Narayanamoorthy, L Ramya, D Kang

AIP Conference Proceedings 2261 (1), 030023( Scopus Indexed)

105. [Analyzation of fuzzy queueing performance measures by the LR method with Erlang service model](#)

S Narayanamoorthy, A Anuja, JV Brainy, D Kang, S Maheswari

AIP Conference Proceedings 2261 (1), 030055( Scopus Indexed)

104. [Assessment of E-waste site selection using MOOSRA based hesitant fuzzy multi-criteria decision making method](#)

S Narayanamoorthy, V Annapoorani, D Kang

AIP Conference Proceedings 2261 (1), 030013 ( Scopus Indexed)

103. [Fuzzy generalized differential transform method: A versatile tool for solving fractional order prey-predator model with prey refuge](#)

K Thangapandi, S Narayanamoorthy, D Kang, T Manirathinam

AIP Conference Proceedings 2261 (1), 030003 ( Scopus Indexed)

102 . [Single valued trapezoidal neutrosophic multi-criteria decision making problems-PROMETHEE II](#)

S Narayanamoorthy, A Chithra, D Kang

AIP Conference Proceedings 2261 (1), 030033 ( Scopus Indexed)

101. Extended hesitant fuzzy SWARA techniques to examine the criteria weights and VIKOR method for ranking alternatives

[Selvaraj Geetha](#), [Samayan Narayanamoorthy](#), and [Daekook Kang](#)

AIP Conference Proceedings **2261**, 030144 (2020);

<https://doi.org/10.1063/5.0017049> ( Scopus Indexed)

100. Modified Fractional Runge–Kutta Method for Solving Fuzzy Differential Equations of Fractional Order.

S Narayanamoorthy, K Thangapandi ,

99. Interval-Valued Intuitionistic Hesitant Fuzzy Entropy-Based VIKOR Method For Industrial Robots Selection,

S Narayanamoorthy, S Geetha, R Rakkiyappan, Young Hoon Joo,  
Expert Systems with Applications, 121, 28-37( 2019) : **I.F : 8.66**

98. A Novel Assessment of Healthcare Waste Disposal Methods: Intuitionistic Hesitant Fuzzy MULTIMOORA Decision Making Approach,

S. Geetha, S. Narayanamoorthy, D Kang, Joseph Varghese Kureethara,  
IEEE Access, 7, 130283-130299(2019) : **I.F : 3.47**

97. Sustainable Assessment for Selecting the Best Alternative of Reclaimed Water Use Under Hesitant Fuzzy Multi-Criteria Decision Making .

S Narayanamoorthy, V Annapoorani, D Kang, L Ramya,  
IEEE Access, 7, 137217-137231 (2019 ) : **I.F : 3.47**

96. Application of Normal Wiggly Dual Hesitant Fuzzy Sets to Site Selection for Hydrogen Underground Storage,

Samayan Narayanamoorthy, L. Ramya, DumitruBaleanu, Joseph Varghese Kureethara & V.Annapoorani,

International Journal of Hydrogen Energy, 44, 28874-28892(2019): **I.F : 7.13**

95. Analysis For Fractional-Order Predator-Prey Model With Uncertainty.

S. Narayanamoorthy<sup>1</sup>, D. Baleanu, K.Thangapandi, SSN. Perera,  
IET Systems Biology, 13, 277-289(2019) : **I.F : 1.46**

94. A Novel Assessment of Bio-Medical Waste Disposal Methods Using Integrating Weighting Approach And Hesitant Fuzzy MOOSRA,

Narayanamoorthy Samayan; Annapoorani Veerappan; Dumitru Baleanu;  
Daekook Kang, Jeonghwan Jeon; Ramya Lakshmanaraj,

Journal of Cleaner Production, Accepted Article, (2020) : **I.F : 11.02**

93. Variational iterative method: an appropriate numerical scheme for solving system of linear Volterra fuzzy integrodifferential equation,

S Narayanamoorthy, S Mathankumar,  
Advances in Difference Equations, 2018 : **I.F : 3.76**

92. Fuzzy assignment problem Using OAM with hexagonal fuzzy number.

H ALEXISSELVARAJ, S NARAYANAMOORTHY, V MURUGESAN, M SANTHIYA,  
International Journal of Mathematical Archive, Vol. 9(1), 2018, 219-223, ISSN

2229 – 5046.

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