



## KONGUNADU ARTS AND SCIENCE COLLEGE

(Autonomous)

Coimbatore - 641 029

### Collaborative Research Work

#### Academic Year 2019-2020

| S. No | Name and Designation of the Faculty                                   | Name of Collaborator      | Name and Place of the Collaborative Institution  | Joint Research work/Title of the Research Article Published   | Duration    |
|-------|---|---------------------------|--|---|-------------|
| 1.    | Dr. B. Gokul<br>Assistant Professor<br>Department of Physics          | Dr.K.Asokan               | Materials Science Division,<br>Inter-University<br>Accelerator Centre, New<br>Delhi                                | Collaborative for research  | August 2019 |
| 2.    | Dr.M.Vigneshwaran<br>Assistant Professor<br>Department of Mathematics | Professor Saeid<br>Jafari | Department of<br>Mathematics, College of<br>Vestsjaelland South,<br>Herrestraede 11, 4200<br>Slag else, Denmark. & | Structural Equivalence between<br>Electrical Circuits via Neutrosophic<br>Nano Topology Induced by Digraphs | 1 year      |
| 3.    | Dr.M.Vigneshwaran<br>Assistant Professor<br>Department of             | Professor Saeid<br>Jafari | Department of<br>Mathematics, College of<br>Vestsjaelland South,   | C# Application to Deal with<br>Neutrosophic $\alpha$ -Closed Sets in<br>Neutrosophic Topology               | 1 year      |

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|    | Mathematics  |   | Herrestraede 11, 4200<br>Slag else, Denmark. &  |  |        |
| 4. | Dr.M.Vigneshwaran<br>Assistant Professor<br>Department of<br>Mathematics | Professor Saeid<br>Jafari<br>Dr.Sang Eon<br>Han | Department of<br>Mathematics, College of<br>Vestsjaelland South,<br>Herrestraede 11, 4200<br>Slag else, Denmark. &<br>Department of<br>Mathematics Education,<br>Institute of Pure and<br>Applied Mathematics,<br>Chonbuk National<br>University, Jeonju-Cit,<br>Jeonbuk, 54896, Republic of<br>Korea | Application of generalized open and<br>closed sets in digital topological spaces | 1 year |
| 5. | Dr.M.Vigneshwaran<br>Assistant Professor<br>Department of<br>Mathematics | Professor Said<br>Broumi                        | Laboratory of Information<br>Processing, Faculty of<br>Science Ben M'Sik,<br>University Hassan II, B.P<br>7955, Sidi Othman<br>Casablanca, Morocco  | Computer Application of Neutrosophic<br>set operations                           | 1 year |
| 6. | Dr.M.Vigneshwaran<br>Assistant Professor<br>Department of<br>Mathematics | Dr.Shuker<br>Mohmood<br>Khalil                  | Department of<br>Mathematics<br>College of Science<br>University of Basrah<br>Basrah, Iraq.   | On N star g alpha continuity in<br>Neutrosophic topological spaces               | 1 year |
| 7. | Dr.M.Venkatachala  | Raul M. Falcon                                  | Department Applied  | On the r-dynamic coloring of   | 1 year |

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|     | m<br>Assistant Professor<br>Department of<br>Mathematics                  |                                 | Mathematics I,<br>Universidad de Sevilla,<br>Spain.  | subdivision-edge coronas of a path                         |        |
| 8.  | Dr.M.Venkatachalam<br>Assistant Professor<br>Department of<br>Mathematics | R Adawiyah                      | Combinatorics Graph<br>Theory and Network<br>Topology (CGANT)<br>research group University<br>of Jember<br>Indonesia Mathematics<br>Education Department<br>University of Jember,<br>Indonesia | The local edge metric dimension of<br>graph                | 1 Year |
| 9.  | Dr.M.Venkatachalam<br>Assistant Professor<br>Department of<br>Mathematics | Muntaner -<br>Batle, F A        | Graph Theory and<br>Applications Research<br>Group, Faculty of<br>Engineering and Built<br>Environment, University of<br>Newcastle, NSW 2308,<br>Australia                                     | Harmonious coloring of multicopy of<br>complete graphs     | 1 Year |
| 10. | Dr.M.Venkatachalam<br>Assistant Professor<br>Department of<br>Mathematics | Prof. Dr. Ismail<br>Naci CANGUL | Uludag University Faculty<br>of Arts & Science<br>Department of<br>Mathematics Görükle,<br>16059 Bursa, Turkey   | On r-dynamic colorings of the<br>friendship graph families | 1 Year |
| 11. | Dr.N.Mohanapriya<br>Assistant Professor<br>Department of<br>Mathematics   | Dr.Johan Kok                    | Licensing services, Metro<br>Police Head office,<br>Tshwane, South Africa  | On dynamic coloring of certain cycle-<br>related graphs    | 1 Year |

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| 12. | Dr.N.Mohanapriya<br>Assistant Professor<br>Department of<br>Mathematics    | Professor Dafik  | The Department of<br>Mathematics Education<br>Postgraduate<br>The University of Jember,<br>Jember, Indonesia                                    | On r-dynamic coloring of snark graph<br>families  | 1 Year   |
| 13. | Dr.N.Mohanapriya<br>Assistant Professor<br>Department of<br>Mathematics    | Professor Dafik  | The Department of<br>Mathematics Education<br>Postgraduate<br>The University of Jember,<br>Jember, Indonesia                                    | On r-dynamic coloring of complete<br>graph families   | 1 Year   |
| 14. | Dr. C. Ravichandran<br>Assistant Professor<br>Department of<br>Mathematics | Professor <b>Dr.<br/>Kottakkaran<br/>Sooppy Nisar,</b> | Department of<br>Mathematics, College of<br>Arts and Sciences, Prince<br>Sattam Bin Abdulaziz<br>University,<br>WadiAldawasir, Saudi<br>Arabia. | Results on<br>controllability of non-densely<br>characterized<br>neutral fractional delay differential<br>system, Evolution<br>Equations & Control<br>Theory,<br>10.3934<br>/eect.2020083                                   | 1 Year   |
| 15. | Dr. C. Ravichandran<br>Assistant Professor<br>Department of<br>Mathematics | Professor<br>Dr. Juan Jose<br>Nieto                    | Instituto de Matemáticas,<br>Facultade de Matemáticas,<br>Universidade de Santiago<br>de Compostela, Santiago<br>de Compostela 15782,<br>Spain  | New results on exact controllability of a<br>class of fractional neutral integro-<br>differential systems with state-<br>dependent delay in Banach spaces,<br>Journal of the Franklin Institute 356(3),<br>2019, 1535-1565. | 2 years  |
| 16. | Dr. C. Ravichandran<br>Assistant Professor<br>Department of<br>Mathematics | Professor<br>Dr.<br>Dimplekumar<br>Chalishajar,        | Department of Applied<br>Mathematics, Virginia<br>Military Institute (VMI),<br>431, Mallory Hall,<br>Lexington, VA 24450, USA                   | Existence of fractional impulsive<br>functional integro-differential equations<br>in Banach spaces, Applied System<br>Innovation, 2(2), 2019, 18.   | 5 Months |

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| 17. | Dr. C. Ravichandran<br>Assistant Professor<br>Department of<br>Mathematics | Professor<br>Dr. Fahd Jarad  | <b>Cankaya University</b><br>Yukariyurtcu<br>Mahallesi<br>Mimar Sinan Caddesi<br>No:4 , 06790<br>Etimesgut/<br>Ankara/<br>Turkey.             | New results on existence in the<br>framework of Atangana–Baleanu<br>derivative for fractional integro-<br>differential equations, Chaos, Solitons &<br>Fractals, 125, 2019, 194-200.                             | 6 Months |
| 18. | Dr. C. Ravichandran<br>Assistant Professor<br>Department of<br>Mathematics | Professor <b>Dr.<br/>Zakia<br/>Hammouch</b>  | Department of<br>Mathematics,<br>Moulay<br>Ismail University,<br>Morocco.   | New results on controllability in the<br>frame work of fractional<br>integrodifferential equations with<br>nondense domain, The European<br>Physical Journal Plus, 134(9), 2019, 441.                            | 2 years  |
| 19. | Dr. C. Ravichandran<br>Assistant Professor<br>Department of<br>Mathematics | Professor<br><b>Dr. Devendra<br/>Kumar</b>   | Department of<br>Mathematics, University of<br>Rajasthan,<br>Jaipur-302004.   | Controllability on Non-dense Delay<br>Fractional Differential System with Non-<br>Local Conditions, Methods of<br>Mathematical Modelling: Fractional<br>Differential Equations, 2019, 219.                       | 6 Months |
| 20. | Dr. C. Ravichandran<br>Assistant Professor<br>Department of<br>Mathematics | Professor <b>Dr.<br/>Zakia<br/>Hammouch</b><br>Professor <b>Dr.<br/>Haci Mehmet<br/>Baskonus</b> | Department of<br>Mathematics,<br>Moulay<br>Ismail University,<br>Morocco.<br>Harran University, Faculty<br>of Education, Sanliurfa,<br>Turkey | A new investigation on fractional-<br>ordered neutral differential systems<br>with state-dependent delay,<br>International Journal of Nonlinear<br>Sciences and Numerical Simulation,<br>20(7-8), 2019, 803-809. | 5 Months |
| 21. | Dr. C. Ravichandran<br>Assistant Professor<br>Department of                | Professor <b>Dr.<br/>Manar A.<br/>Alqudah</b>  | Department of<br>Mathematical Sciences,<br>Princess Nourahbint  | New results on Caputo fractional order<br>neutral differential inclusions without<br>compactness, Advances in Difference   | 6 Months |

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|-----|---|---|---|--|----------|
|     | Mathematics   | Professor <b>Dr. T. Abdeljawad</b>        | <p>Abdulrahman University, Riyadh, Saudi Arabia<br/>Department of Mathematics and General Sciences, Prince Sultan University, Prince Nasser Bin Farhan Street, Salah Ad Din, Riyadh 12435, Saudi Arabia.</p> <p>Department of Medical Research, China Medical University, Taichung, Taiwan.</p> <p>Department of Computer Science and Information Engineering, Asia University, Taichung, Taiwan.</p> | Equations, 2019(1), 2019, 1-14.  |          |
| 22. | Dr. C. Ravichandran<br>Assistant Professor<br>Department of Mathematics | Professor <b>Dr. Haci Mehmet Baskonus</b> | Harran University, Faculty of Education, Sanliurfa, Turkey  | Existence results of Hilfer integro-differential equations with fractional order, Discrete & Continuous Dynamical Systems-S, 13(3), 2020, 911. | 5 Months |
| 23. | Dr. C. Ravichandran<br>Assistant Professor                              | Professor <b>Dr. Sumati</b>               | Department of Mathematics, GMR  | A complex valued approach to the solutions of Riemann-Liouville integral,  | 6 Months |

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|     | Department of Mathematics   | <b>Kumari Panda</b><br>Professor <b>Dr. T. Abdeljawad</b>             | Institute of Technology, Rajam 532 127, Andhra Pradesh, India.<br>Department of Mathematics and General Sciences, Prince Sultan University, Prince Nasser Bin Farhan Street, Salah Ad Din· Riyadh 12435, Saudi Arabia.<br>Department of Medical Research, China Medical University, Taichung, Taiwan.<br>Department of Computer Science and Information Engineering, Asia University, Taichung, Taiwan. | Atangana-Baleanu integral operator and non-linear Telegraph equation via fixed point method, Chaos, Solitons & Fractals, 130, 2020. |          |
| 24. | Dr. C. Ravichandran<br>Assistant Professor<br>Department of Mathematics | Professor <b>Dr. Samiha Belmor</b><br>Professor <b>Dr. Fahd Jarad</b> | Department of Mathematics, University Mustapha Ben Boulaid, Batna, Algeria<br><a href="#">Cankaya University</a> ,<br>Yukariyurtcu Mahallesi<br>Mimar Sinan Caddesi   | Nonlinear Generalized fractional differential equations with generalized fractional integral conditions, Journal of Taibah          | 5 Months |

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|     |  |   | <b>No:4 , 06790,<br/>Etimesgut<br/>/Ankara<br/>/Turkey.</b>   | University<br>for Science, 14(1), 2020, 114-123.  |          |
| 25. | Dr. C. Ravichandran<br>Assistant Professor<br>Department of<br>Mathematics | Professor<br><b>Dr.Sumati<br/>Kumari<br/>Panda,</b><br>Professor <b>Dr.<br/>T. Abdeljawad</b> | Department of<br>Mathematics,<br>GMR Institute<br>of Technology,<br>Rajam 532 127,<br>Andhra Pradesh, India<br>Department of<br>Mathematics and General<br>Sciences,Prince Sultan<br>University, Prince Nasser<br>Bin Farhan Street, Salah Ad<br>Din, Riyadh 12435, Saudi<br>Arabia.<br><br>Department of Medical<br>Research, China Medical<br>University, Taichung,<br>Taiwan.<br><br>Department of Computer<br>Science and Information<br>Engineering, Asia<br>University, Taichung,<br>Taiwan | Novel fixed point approach to<br>Atangana-Baleanu fractional and Lp-<br>Fredholm integral equations, Alexandria<br>Engineering Journal, 59(4), 2020, 1959-<br>1970. | 6 Months |
| 26. | Dr. C. Ravichandran<br>Assistant Professor                                 | Professor<br><b>Dr.</b>   | Department of<br>Mathematics, College of  | New results on nonlocal functional<br>integro-differential equations via Hilfer   | 5 Months |



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|     | Department of Mathematics   | <b>Kottakkaran Sooppy Nisar,</b>   | Arts and Sciences, Prince Sattam Bin Abdulaziz University, WadiAldawasir, Saudi Arabia.                                       | fractional derivative, Alexandria Engineering Journal, 59(5), 2020, 2891-2899.   |          |
| 27. | Dr. C. Ravichandran<br>Assistant Professor<br>Department of Mathematics | Professor<br><b>Dr. Kottakkaran Sooppy Nisar,</b>                                  | Department of Mathematics, College of Arts and Sciences, Prince Sattam Bin Abdulaziz University, WadiAldawasir, Saudi Arabia. | Solutions to fractional neutral delay differential nonlocal systems, Chaos, Solitons & Fractals, 138, 2020.  | 6 Months |
| 28. | Dr. C. Ravichandran<br>Assistant Professor<br>Department of Mathematics | Professor<br><b>Dr. Kottakkaran Sooppy Nisar,</b>                                  | Department of Mathematics, College of Arts and Sciences, Prince Sattam Bin Abdulaziz University, WadiAldawasir, Saudi Arabia. | On new approach of fractional derivative by Mittag-Leffler kernel to neutral integro-differential systems with impulsive conditions, Chaos, Solitons & Fractals, 139, 2020.                      | 6 Months |
| 29. | Dr. C. Ravichandran<br>Assistant Professor<br>Department of Mathematics | Professor<br><b>Dr. Kottakkaran Sooppy Nisar,</b><br>Professor<br><b>Dr.Sumati</b> | Department of Mathematics, College of Arts and Sciences, Prince Sattam Bin Abdulaziz University, WadiAldawasir, Saudi         | Existence of solutions of non-autonomous fractional differential equations with integral impulse condition, Advances in Difference Equations, 2020(1), 2020, 1-14.<br>Department of Mathematics, | 6 Months |

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|  |  | <b>Kumari Panda</b><br><b>Mr. Ashish</b><br><b>Kumar</b><br>Professor <b>Dr.</b><br><b>Harsh</b><br><b>Vardhan</b><br><b>Singh</b><br><b>Chauhan,</b> | Arabia<br>Department of<br>Mathematics,<br>GMR Institute<br>of Technology,<br>Rajam 532 127, Andhra<br>Pradesh, India.<br>Department of<br>Mathematics, University of<br>Delhi, Delhi, 110007, India | Government PG College, Bina, Sagar,<br>470113, Madhya Pradesh, India |  |
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