Certificate

This is to certify that the thesis entitled "Existence and Uniqueness of Solution of Fractional Order Differential Equations". Submitted for the award of Ph. D. Degree in Mathematics by Prakashkuamr Hasmukhbhai Patel (Reg. No: FOS/2037, Date: 31-12-2016), incorporates the original research work carried out by him under my Guidance and no part of this work has been previously submitted by him to any other University or Institution for the same or any other degree. He has put into research for the requisite number of terms as required by the University.

03/12/2020

Prof. (Dr.) Haribhai. R. Kataria

Guide

Dean, Faculty of Science,

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Offg. Head

Department of Mathematics

Head Department of Mathematics Faculty of Science The M.S. University of Baroda Vadodara-390 002



Dean

Faculty of science

Dean Faculty of Science The M.S. University of Baroda Vadodara.

Certificate

This is to inform to all concerned that the following publications have arisen out of the research work carried out by my Ph. D. student Prakashkumar Hasmukhbhai Patel who wishes to submit the thesis entitled "Existence and Uniqueness of Solution of Fractional Order Differential Equations" to the Department of Mathematics, Faculty of Science, The Maharaja Sayajirao University of Baroda, Vadodara for the award of Ph. D. Degree in Mathematics.

- 1 H. R. Kataria, Prakashkumar H. Patel, Existence and Uniqueness of Non-Local Cauchy Problem for Fractional Differential Equation On Banach Space, International Journal of Pure and Applied Mathematics Volume 120, issue 7, No. 6, 2018, page 10237-10252 ,p- ISSN: 1311-8080 e- ISSN: 1314-3395 UGC Journal List Number: 23425.Scopus indexed journal.
- 2 H. R. Kataria and Prakashkumar H. Patel, Nonlinear Cauchy problem for abstract impulsive fractional quasilinear evolution equation with delay, The International journal of analytical and experimental modal analysis Volume 11, issue 7, July 2019, page 72-81,e- ISSN: 0886-9367, Scopus indexed journal.
- 3 H. R. Kataria and Prakashkumar H. Patel, Congruency between classical and mild solutions of Caputo fractional impulsive evolution equation on Banach Space, International Journal of Advanced Science and Technology Vol. 29, No. 3s, March 2020, page. 1923-1936, ISSN: 2005-4238, Scopus indexed journal.
- 4 H. R. Kataria and Prakashkumar H. Patel, Existence and Uniqueness of solutions of Fractional Order Hybrid Differential Equations with Nonlocal Conditions. International Journal of Scientific Research in Science, Engineering and

Technology Volume 4, Issue 5, March-April-2018, page 1-7, e-ISSN: 2394-4099 p-ISSN: 2395-1990, UGC Journal List Number: 47147

- 5 H. R. Kataria and Prakashkumar H. Patel, Jyotindra C. Prajapati, Congruence between Mild and Classical Solutions of Generalized Fractional Impulsive Evolution Equation, Communicated
- 6 H. R. Kataria and Prakashkumar H. Patel, Existence Results of Non-Instantaneous Impulsive Fractional Integro-differential Equation, Accepted to publication in Demonstratio Mathematica Journal of De Gruyter, ISSN: 2391-4661, Scopus indexed journal.

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