"An Image Processing Using Deep learning"

DISSERTATION SUBMITTED TO

B. R. AMBEDKAR BIHAR UNIVERSITY

UNIVERSITY DEPARTMENT OF MATHEMATICS

FOR

PhD. COURSE WORK

(5 DECEMBER 2023 TO 4 JUNE 2024)

IN

Mathematics

UNDER THE SUPERVISION OF:

SUBMITTED BY:

Raman Kumar

RAMAN KUMAR

PAT, ROLL NO: 213030

CLASS, ROLL NO: 01

SESSION: PAT, 2021

"An Image Processing Using Wavelets & Machine Learning(ML)"

DISSERTATION SUBMITTED TO

B. R. AMBEDKAR BIHAR UNIVERSITY
UNIVERSITY DEPARTMENT OF MATHEMATICS

FOR

PhD. COURSE WORK

(5 DECEMBER 2023 TO 4 JUNE 2024)

IN

Mathematics

Sandeep Kr giri:

UNDER THE SUPERVISION OF:

SUBMITTED BY:

SANDEEP KUMAR GIRI

PAT, ROLL NO: 213047

CLASS, ROLL NO: 11

SESSION: PAT, 2021

A STUDY OF DIFFERENT TYPES OF IDEALS OVER A SEMIGROUP

BABASAHEB BHIMRAO AMBEDKAR BIHAR UNIVERSITY
बाबासाहेब भीमराव अम्बेदकर बिहार विश्वविद्यालय
NAAC Accredited With 'B' Grade

DISSERTATION

Submitted for the partial fulfillment of the requirement for Ph.D. course work in mathematics.

SUBMITTED BY

SHUBHAM KUMAR
Research scholar
PAT-213069

To

The HoD. of Department of mathematics,
BRABU, Muzaffarpur

A CRITICAL STUDY OF VARIOUS TYPES OF IDEALS OVER A SEMIGROUP

BABA SAHEB BHIMRAO AMBEDKAR BIHAR UNIVERSITY, MUZAFFARPUR

In

DEPARTMENT OF MATHEMATICS

(Faculty of Science)

Submitted by :

PURUSHOTTAM KUMAR

Roll No. - 213021

PAT–2021 (Ph.D. Research Scholar)

DISSERTATION

SUBMITTED FOR THE PARTIAL FULFILLMENT OF THE
REQUIREMENT FOR PH.D COURSE WORK IN MATHEMATICS

APPLICATION OF FUZZY SETS IN LATTICE THEORY

BABA SAHEB BHIMRAO AMBEDKAR BIHAR UNIVERSITY, MUZAFFARPUR

In

MATHEMATICS

(Faculty of Science)

Submitted by :

KHALID ALI

Pat – 2021 (Ph.D. Research Scholar)
Mathematics Department

BABA SAHEB BHIMRAO AMBEDKAR BIHAR UNIVERSITY, MUZAFFARPUR

A STUDY OF FRACTIONAL CALCULUS OPERATORS ASSOCIATED WITH UNIVALENT FUNCTIONS

B.R.A.Bihar University, Muzaffarpur, Bihar

SYNOPSIS

Submitted for admission in Ph.D.

in

Faculty of Science (Mathematics)

Submitted by :

.............P.O.O.1A....k.VMARI

PAT Roll - ..21.3.0.0.6............

A STUDY OF CERTAIN ECONOMIC PROBLEMS USING FUZZY MATHEMATICS

BABA SAHEB BHIMRAO AMBEDKAR BIHAR UNIVERSITY, MUZAFFARPUR

In

MATHEMATICS

(Faculty of Science)

Submitted by :

CHINTU KUMAR

PAT- 212950

Pat – 2021 (Ph.D. Research Scholar)
Mathematics Department

STUDY OF NON LINEAR FUZZY INTEGRAL EQUATION

BABA SAHEB BHIMRAO AMBEDKAR BIHAR UNIVERSITY, MUZAFFARPUR

In

MATHEMATICS

(Faculty of Science)

Submitted by :

PANKAJ KUMAR

Pankaj Kumar

Pat – 2021 (Ph.D. Research Scholar)
Mathematics Department

BABA SAHEB BHIMRAO AMBEDKAR BIHAR UNIVERSITY, MUZAFFARPUR

STUDY OF FRACTIONAL CALCULUS OPERATORS ASSOCIATED WITH ANALYTIC FUNCTIONS AND APPLICATIONS

B.R.A.Bihar University, Muzaffarpur, Bihar

PROJECT PROPOSAL

Submitted for admission in Ph.D.

in

Faculty of Science (Mathematics)

Submitted by :

RINKY YADAV

PAT Roll - 213039

Differential equations

PhD Scholar :- Deepak Kumar

Roll No   :- 212952

University Department of Mathematics

Babasaheb Bhimrao Ambedkar University Muzaffarpur

Deepak Kum

"An Image Processing Using Wavelets Transform"

DISSERTATION SUBMITTED TO

B. R. AMBEDKAR BIHAR UNIVERSITY

UNIVERSITY DEPARTMENT OF MATHEMATICS

FOR

PhD. COURSE WORK .

(5 DECEMBER 2023 TO 4 JUNE 2024)

IN

Mathematics

UNDER THE SUPERVISION OF:

SUBMITTED BY:

BHOLA MAHALI

PAT, ROLL NO: 212943

CLASS, ROLL NO: 21

SESSION: PAT, 2021

BRABU University Muzarffarpur
Department of Mathematics

Name:– Hitesh Kumar
Roll No:–212964
Ppt on Topology

Topic
DIFFERENT TOPOLOGICAL SPACES

Hitesh Kumar

DIFFERENTIAL EQUATION
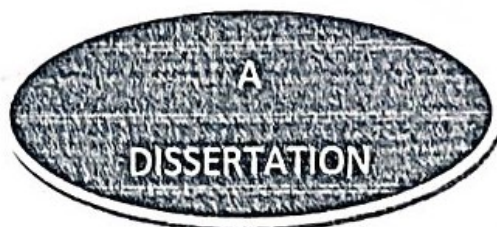

B.R. AMBEDKAR BIHAR UNIVERSITY

MUZAFFARPUR

IN

MATHEMATICS

FACULTY OF SCIENCE

SUBMITTED TO

UNIVERSITY DEPT.OF MATHEMATICS

B.R.A. BIHAR UNIVERSITY MUZAFFARPUR

SUBMITTED BY

ABHISHEK KUMAR

RESEARCH SCHOLAR

PAT-2021

B.R. AMBEDKAR BIHAR UNIVERSITY MUZAFFARPUR

"SOME CONTRIBUTION TO THE RECENT THEORY OF NUCLEAR MAPPINGS AND ITS APPLICATIONS"

FOR Ph.D. Course Work in Mathematics
(Faculty of Science)

UNIVERSITY DEPARTMENT OF MATHEMATICS
B.R.A. BIHAR UNIVERSITY, MUZAFFARPUR
(SESSION : DECEMBER TO JUNE 2024)

Submitted By

UNDER THE GUIDANCE OF

Umesh Kr. Srivastava 10.06.24

DR. UMESH KUMAR SRIVASTAVA
Ph.D. & D.Sc.
Assistant Professor of Mathematics
R.S.S. College, Chochahan, Muz.
(A Registered College of U.G.C. Under
2 "F" & 12 "B")
B.R.A. Bihar University, Muzaffarpur (Bihar)

Neha Priyadarshani

(NEHA PRIYADARSHANI)
Research Scholar
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PAT - 2021
ROLL NO. - 212996

"SOME CONTRIBUTION TO THE RECENT THEORY OF LINEAR OPERATORS AND ITS APPLICATIONS"

A DISSERTATION

FOR Ph. D. Course Work in Mathematics

(Faculty of Science)

UNIVERSITY DEPARTMENT OF MATHEMATICS

B.R.A. BIHAR UNIVERSITY, MUZAFFARPUR
(SESSION : DECEMBER TO JUNE 2024)
2023

Submitted By

UNDER THE GUIDANCE OF

10.06.2024

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(A Registered College of U.G.C. Under
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Research Scholar
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B.R.A.B.U. Muzaffarpur
PAT - 2021
ROLL NO. - 213001

"ADVANCEMENTS IN IMAGE PROCESSING TECHNIQUES : A COMPREHENSIVE STUDY"

DISSERTATION SUBMITTED TO

B. R. AMBEDKAR BIHAR UNIVERSITY

UNIVERSITY DEPARTMENT OF MATHEMATICS,

FOR

PhD. COURSE WORK

(5ᵗʰ DECEMBER 2023 TO 4ᵗʰ JUNE 2024)

IN

FACULTY OF SCIENCE

UNDER THE SUPERVISION OF: SUBMITTED BY:

PRASUNN KUMAR MISHRA

PAT ROLL NO:- 213010

CLASS ROLL NO:-05

PAT:- 2021

Prasunn Kr Mishra.

STABILITY OF THE EQUILIBRIUM POSITION OF THE CENTRE OF MASS OF A SYSTEM OF TWO SATELLITES CONNECTED BY EXTENSIBLE CABLE IN CIRCULAR ORBIT WITH THE SHADOW OF OBLATE EARTH DUE TO SOLAR PRESSURE

Disseration

DEPARTMENT OF MATHEMATICS

Session – 2021

Submitted By :

SANTOSH KUMAR

Roll No. 213053

Babasaheb Bhimrao Ambedkar Bihar University,

Muzaffarpur

"An Image Processing Using Deep learning"

DISSERTATION SUBMITTED TO

B. R. AMBEDKAR BIHAR UNIVERSITY

UNIVERSITY DEPARTMENT OF MATHEMATICS

FOR

PhD. COURSE WORK

(5 DECEMBER 2023 TO 4 JUNE 2024)

IN

Mathematics

UNDER THE SUPERVISION OF:

SUBMITTED BY:

ANJANI KUMAR

PAT ROLL NO – 212935

CLASS ROLL NO –

SESSION : PAT, 2021

B R A BIHAR UNIVERSITY MUZAFFARPUR

A STUDY ON SOME FLOW PROBLEMS THROUGH POROUS MEDIA.

Session - PAT - 2021

Roll No - 213089

Vikash Ce

THERMOELASTICITY

AVADH BIHARI SINGH

ROLL NO- 212940

Session — PAT-2021

PowerPoint

SOME ANALYTICAL AND NUMERICAL INVESTIGATION OF FRACTIONAL ORDER DIFFERENTIAL EQUATION AND INTEGRO DIFFERENTIAL EQUATION

A synopsis submitted

In partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

(Ph.D)

BY

MD FAUZAN SADRI

(Admission/registration No: - 203029)

Under the supervision of

DR. VIPUL KUMAR BARANWAL

(Assistant Professor)

Department of Mathematics

D C COLLEGE HAJIPUR

&

Co- Supervision of

DR. SAURABH KUMAR AGARWAL

(Assistant professor)

Department of Mathematics

BHARTI VIDYAPEETH COLLEGE OF ENGINEERING

Paschim Vihar A4, New Delhi-110063

TO

DEPARTMENT OF MATHEMATICS

(Faculty of Science)

BABA SAHEB BHIMRAO AMBEDKAR BIHAR UNIVERSITY

MUZAFFARPUR BIHAR

1. Name of the Project and Title of Thesis :-

"SOME CONTRIBUTION TO TOPOLOGICAL TENSOR PRODUCTS AND LOCALLY CONVEX NUCLEAR SPACES".

2. IMPORTANCE OF THE PROJECT AND JUSTIFICATION FOR STUDY :-

It is proposed to study Topological Tensor products and Locally Convex Nuclear Spaces. In this regards, we shall study, the theorem of Locally Convex Nuclear Spaces as an application of the theory of Topological Tensor Products.

Our study will include Topological Tensor Products of Banach Space on the duality and the injective tensor product on the dual of Locally Convex algebras and on Metrizable Locally Convex algebras.

Our study will also include Nuclear Spaces, generalized Hilbert Spaces and Co-nuclear Spaces.

Lastly, Our aim is also to find some ·new results on hereditary Properties of Topological Tensor products and their completion.

Hence, in this regards, we shall be dealt with the following mathematical definitions, symbols and notations as well –

1.   **Tensor Products :**

Let V_1 , ... , V_r and W be vector spaces over F. A mapping

$f : V_1 \times \ldots\ldots \times V_r \to W$ is called multilinear if

$f(x_1,\ldots, x_i + y_i ,\ldots, x_r) = f(x_1,\ldots, x_i , \ldots x_n) + f (x_1,\ldots, x_i ,\ldots x_r)$
and $f (x_1, \ldots, cx_i,\ldots, x_r) = cf (x_1,\ldots, x_i,\ldots, x_r)$
for all $x_i, y_i \in V_i$, and $c \in F$, $i = 1,2, \ldots\ldots\ldots$ r.

if $r = i$, f is a usual linear mapping of V_1 to W.

If $r = 2$, f is called bilinear.

4. Approach to the Problem explaining the methodology and techniques to be employed :-

It is a theoretical work and the usual mathematical logic with reason and methodology will be followed.

I testify that I am in a position to devote time for Research work and undertake to complete it within the 6 years maximum time limit.

Prashant Kr. Shrivastava
30/05/2023

(Prashant Kumar Shrivastava)
Signature of the Candidate

The Candidate has undertaken to complete the Research work under my supervision within the time limit.

Umesh Kr. Srivastava
02.06.2023.

(Dr. Umesh Kumar Srivastava)
Signature of the Guide

Dr. U. K. Srivastava
Ph.D., D.Sc.
Assistant Professor of Mathematics
R.S.S. College, Chochahan, Muzaffarpur

STUDY OF OPTIMIZATION TECHNIQUES IN QUEUEING THEORY AND ITS APPLICATIONS

A Synopsis Submitted as Research Proposal for

DOCTOR OF PHILOSOPHY

UNIVERSITY DEPARTMENT OF MATHEMATICS

Faculty of Science

B. R. AMBEDKAR BIHAR UNIVERSITY, MUZAFFARPUR

Under the Supervision of

Dr. Mala
Asst. Professor
Dept. of Mathematics
M.D.D.M College, Muzaffarpur

Submitted by

Tripti Kumari
Research Scholar
Roll No.-203089

OPTIMIZATION OF ROAD TRAFFIC SYSTEM USING FUZZY LOGIC

A Synopsis Submitted

In Partial Fulfilment of the Requirements for the Degree of

DOCTOR OF PHILOSOPHY

(Ph.D.)

By

BITU SAH

(Admission/Registration No.: - 202995)

Under the Supervision of

Dr. VIPUL KUMAR BARANWAL

Department of Mathematics

D.C. COLLEGE, HAJIPUR

&

Co-Supervision of

Dr. J. P. TRIPATHI

P.G. Department of Mathematics

R. N. COLLEGE, HAJIPUR

to the University Department of Mathematic

Faculty of Science

B.R.A. BIHAR UNIVERSITY, MUZAFFARPUR

Month: March

Year: 2023

A MATHEMATICAL STUDY OF SOME PROBLEMS OF FLOW THROUGH POROUS MEDIA

A Synopsis Submitted
In Partial Fulfilment of the Requirements for the Degree of

DOCTOR OF PHILOSOPHY

By

Mithilesh Kumar Mishra

(Admission/Registration No. ....)

Under the Supervision of

Dr. Deepak Kumar

T. P. Varma College Narkatiyaganj

to the Department of

Mathematics

Faculty of Science

B.R.A. BIHAR UNIVERSITY, MUZAFFARPUR

July, 2023

ON SOME PROBLEMS RELATED TO VARIOUS GENERALIZATIONS

OF FUZZY SETS

A Synopsis Submitted
In Partial Fulfilment of the Requirements for the Degree of
DOCTOR OF PHILOSOPHY

By
ANUPAM KUMAR
(Admission/Registration No.)

Under the Supervision of

DR. S. K. SHUKLA
Department of Mathematics
Ramdayalu Singh College, Muzaffarpur-842002, INDIA

to the Department of

Mathematics

Faculty of Science

B.R.A. BIHAR UNIVERSITY, MUZAFFARPUR

Month, Year

July 2023

ANALYSIS OF THE THERMO-MECHANICAL PROBLEMS IN GENERALIZED THERMOELASTICITY

A Synopsis Submitted as Research Proposal for

DOCTOR OF PHILOSOPHY

UNIVERSITY DEPARTMENT OF MATHEMATICS

Faculty of Science

B. R. AMBEDKAR BIHAR UNIVERSITY, MUZAFFARPUR

Under the Supervision of

Dr. Rakhi Tiwari
Assistant Professor
Dept. of Mathematics
Nitishwar College, Muzaffarpur

Submitted by

Shobha
Research Scholar

A STUDY ON SOME FLOW PROBLEMS THROUGH POROUS MEDIA

A Synopsis Submitted
In Partial Fulfilment of the Requirements for the Degree of

DOCTOR OF PHILOSOPHY

By

Raju Pathak

(Admission/Registration No. 20300-14.)

Under the Supervision of

Dr. Deepak Kumar

T. P. Varma College Narkatiyaganj

to the Department of

Mathematics

Faculty of Science

B.R.A. BIHAR UNIVERSITY, MUZAFFARPUR

July, 2023

THERMAL CONVECTION IN OLDROYD-B NANOFLUID:
A LINEAR STABILITY ANALYSIS

A Synopsis Submitted as Research Proposal for

DOCTOR OF PHILOSOPHY

UNIVERSITY DEPARTMENT OF MATHEMATICS

Faculty of Science

B. R. AMBEDKAR BIHAR UNIVERSITY, MUZAFFARPUR

Under the Supervision of	**Submitted by**
Dr. Mala	Abhishek Kumar
Asst. Professor	Research Scholar
M.D.D.M College, Muzaffarpur	

WAVE PACKET AND WAVELETS FRAMES IN HILBERT SPACES

A Synopsis Submitted

In Partial Fulfilment of the Requirements for the Degree of

Doctor of Philosophy

By

CHANDAN KUMAR
(Admission/Registration No.)

Under the Supervision of
DR. ASHOK KUMAR SAH
Assistant Professor
Department of Mathematics
Dr. R.M.L.S. College, Muzaffarpur-842002, INDIA

To the Department of Mathematics

Faculty of Science

B.R.A.Bihar University, Muzaffarpur

"STUDY OF SOME CONTRIBUTIONS IN OPERATIONS RESEARCH"

A Synopsis Submitted
In Partial Fulfillment of the Requirements for the Degree of

DOCTOR OF PHILOSOPHY

By

SANJEEV KUMAR

(Admission/Registration No.........)
Under the Supervision of

Dr. Alok Ranjan Tripathy
Associate Professor & Head,
Department of Mathematics,
M. P. S. Science College, Muzaffarpur, Bihar.

to the

Department of Mathematics

Faculty of Science

B.R.A. BIHAR UNIVERSITY, MUZAFFARPUR

2023