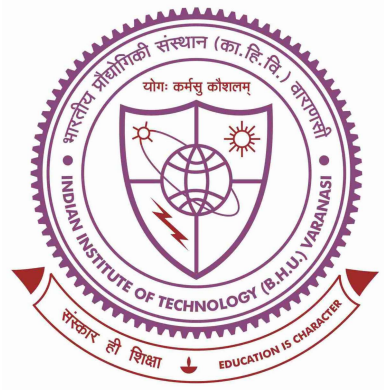
Development of Scattering Algorithm Through Polarimetric Decomposition Technique for Surface and Biophysical Parameters Estimation Using Machine Learning



THESIS SUBMITTED IN PARTIAL FULFILLMENT FOR THE AWARD OF DEGREE

DOCTOR OF PHILOSOPHY

in

PHYSICS

by

SHUBHAM KUMAR SINGH

Supervisor

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BANARAS HINDU UNIVERSITY

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I would like to dedicate this thesis to my loving parents …

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I, **Shubham Kumar Singh**, certify that the work embodied in this thesis is my own bonafide work and carried out by me under the supervision of **Prof. Rajendra Prasad** from July 2018 to July 2023 at the **Department of Physics**, Indian Institute of Technology (BHU), Varanasi. The matter embodied in this thesis has not been submitted for the award of any other degree/diploma. I declare that I have faithfully acknowledged and given credits to the research workers whenever and wherever their works have been cited in my work in this thesis. I further declare that I have not wilfully copied any others' work, paragraphs, text, data, results, etc., reported in journals, books, magazines, dissertations, theses, etc., or available at websites and have not included them in this thesis and have not cited as my own work.

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Acknowledgements

I would like to express my special gratitude to those people for the constant support, love, and affection I got throughout this journey. Here, I have made a mere attempt to name a few.

First of all, I would like to express my sincere thanks to my respected supervisor, ***Prof. Rajendra Prasad, Department of Physics, IIT(BHU), Varanasi***, for his excellent guidance, continuous encouragement, patience, advice, and moral support during the whole span of my Ph.D. I feel fortunate to have such a supervisor who cared so much about my work, shaped my understanding of the subject, and gave me the confidence to work independently.

I express my cordial thanks to ***Dr. Prashant K. Srivastava, IESD(BHU), Dr. Gulab Singh, IIT(Bombay), and RPEC members Dr. Sunil Kumar Singh, Department of Physics, IIT(BHU), Dr. Shishir Gaur, Department of Civil Engineering, IIT(BHU)*** for their continuous encouragement and support throughout my research work. I express my thanks to all teaching and non-teaching staff members of the Department for their kind support. I wish to thank my fellow lab mates (*Bhagyashree Verma, Sumana Khamrai, Bharat Kumar Prajapati*) of the Remote Sensing Group in the Department for their help and support.

Further, I would like to extend my thanks to my seniors *Dr. Ajeet K. Vishwakarma, Dr. Ruchi Bala, and Dr. Vijay P. Yadav, Dr. Suraj A. Yadav* for providing me with a productive environment for carrying out my research work. I would also like to express my sincere appreciation to my colleagues *Srishti Dixit, Prince Kumar Maurya, Vishal Srivastava* for their lively friendship and continuous support. I gratefully acknowledge the Department of Science and Technology, Government of India, for providing the ***INSPIRE***

fellowship in the form of a Junior Research Fellowship and Senior Research fellowship through IIT(BHU).

I express my sincere and cordial gratitude to my father ***Vijay Kumar Singh***, my mother ***Nirmala Devi***, my elder sister ***Priyanka Verma***, and my younger brother ***Atul Kumar Singh*** who always stood by my decisions and provided all kinds of support, moral as well as financial. It was their love, care, and patience that encouraged me to move on.

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