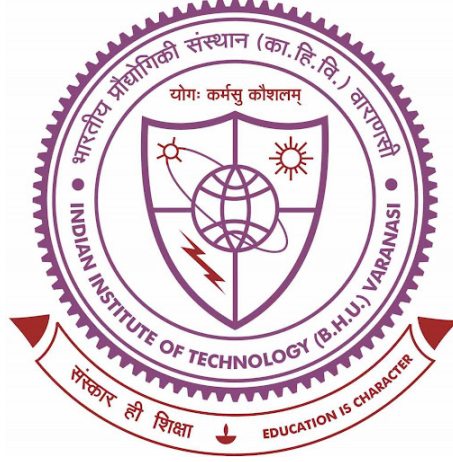

On Hermite Expansions



*Thesis submitted in partial fulfillment
for the award of the degree*
DOCTOR OF PHILOSOPHY

by

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May 2025



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It is certified that the work contained in this thesis titled “**On Hermite Expansions**” by **Manish Chaurasia** has been carried out under my supervision and that this work has not been submitted elsewhere for a degree.

It is further certified that the student has fulfilled all the requirements of Comprehensive Examination, Candidacy and SOTA for the award of the Ph.D. degree and the specifications for the thesis format provided by the institute have been followed.

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I, **Manish Chaurasia**, certify that the work contained in this thesis is my own bonafide work and carried out by me under the supervision of **Prof. M. K. Vemuri** from **July, 2018** to **April, 2024** at the **Department of Mathematical Sciences, Indian Institute of Technology (Banaras Hindu University), Varanasi**. The matter contained in this thesis has not been submitted for the award of any other degree/diploma. I declare that I have faithfully acknowledged and given credit to the research workers wherever their works have been cited in this thesis. I further declare that I have not willfully copied any other's work, paragraphs, text, data, results, *etc.*, reported in journals, books, magazines, reports, 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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DEDICATED
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MY BELOVED FAMILY

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Manish Chaurasia