Computational Études

A Spectral Approach

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Preface

The purpose of this book is twofold: to explain to students why spectral methods work and why they are so efficient, and to teach them how to program these methods using modern tools.

This text is conceived as a collection of **Computational Études**. Just as a musical étude is designed to perfect a specific technique while creating something artistically whole, each chapter here presents a mathematical concept paired with its computational realization.

The code presented in this volume is available in the associated GitHub repository: https://github.com/dutykh/computational-etudes/

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Introduction