

# Unveiling the Secrets of Rivers: A Review of Computational River Dynamics by Weiming Wu

Rivers are essential to life on Earth. They provide water for drinking, irrigation, and transportation. They also support a wide variety of plant and animal life. However, rivers can also be dangerous, causing flooding and erosion. To better understand and manage rivers, scientists have developed computational models that can simulate their behaviour.

*Computational River Dynamics: A Practical Guide to Modelling Flows in Rivers and Streams* by Weiming Wu is a comprehensive and practical guide to modelling flows in rivers and streams. The book covers a wide range of topics, including the governing equations, boundary conditions, numerical methods, and model calibration and validation. It also includes a wealth of case studies and applications.



## Computational River Dynamics by Weiming Wu

★★★★☆ 4 out of 5

Language : English

File size : 9046 KB

Screen Reader : Supported

Print length : 508 pages

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Wu's book is written in a clear and concise style. The book is also well-organized and easy to navigate. The book is divided into three parts:

- Part 1:
- Part 2: Governing Equations and Numerical Methods
- Part 3: Case Studies and Applications

Part 1 provides an overview of computational river dynamics. It discusses the history of river modelling, the different types of river models, and the advantages and disadvantages of each type of model.

Part 2 covers the governing equations and numerical methods used in river modelling. The governing equations are the mathematical equations that describe the flow of water in rivers. The numerical methods are the algorithms that are used to solve the governing equations.

Part 3 presents a number of case studies and applications of river modelling. The case studies demonstrate the use of river models to solve a variety of problems, such as predicting flooding, designing bridges, and managing water resources.

*Computational River Dynamics: A Practical Guide to Modelling Flows in Rivers and Streams* is a valuable resource for anyone who is interested in river modelling. The book is a comprehensive and practical guide to the subject. It is also well-written and easy to understand.

## **Key Features**

- Comprehensive coverage of computational river dynamics
- Clear and concise writing style
- Well-organized and easy to navigate

- Includes a wealth of case studies and applications

## **Who Should Read This Book**

- Students and researchers in hydraulics, hydrology, and fluid mechanics
- Engineers and practitioners who design and manage rivers
- Anyone who is interested in river modelling

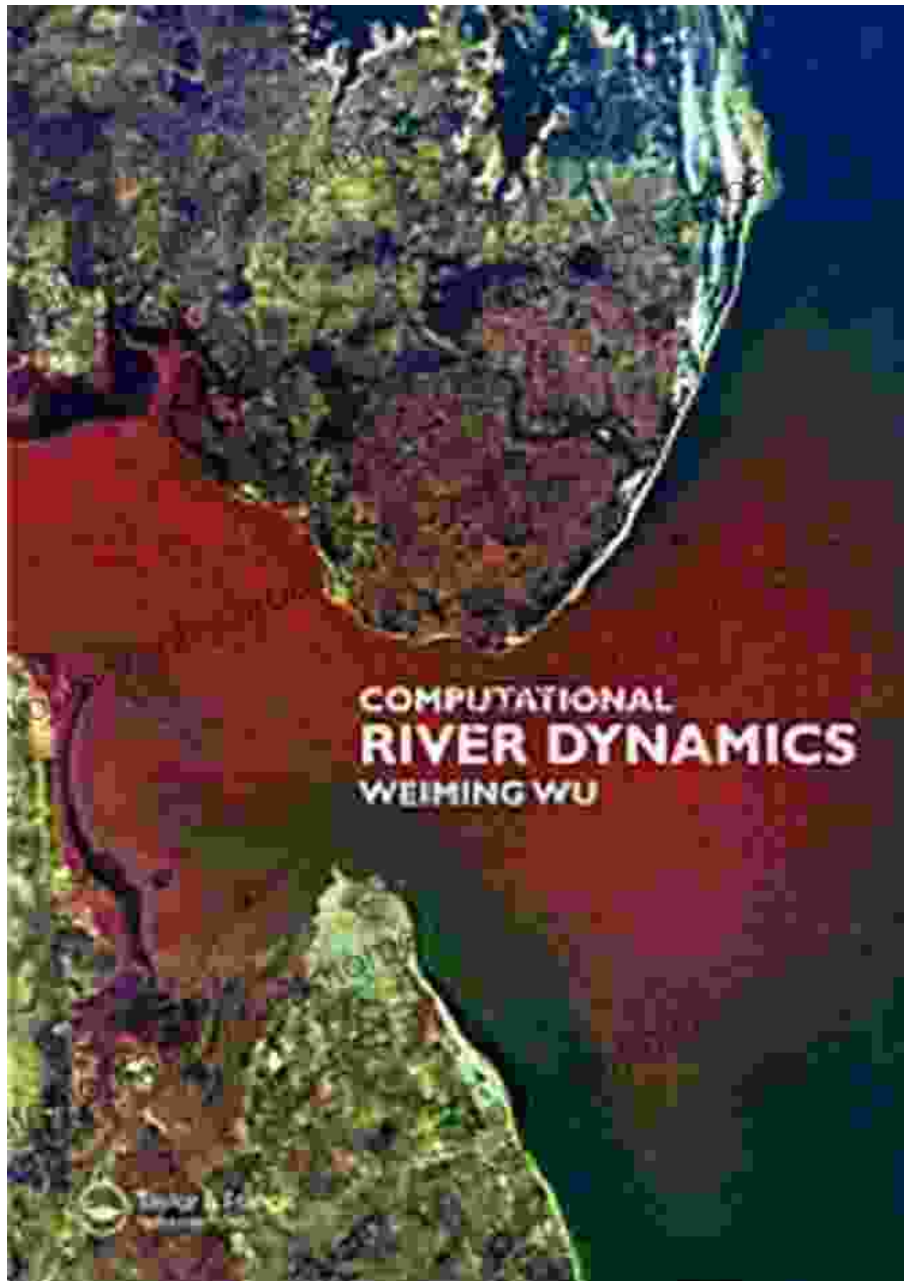
## **About the Author**

Weiming Wu is a professor of hydraulic engineering at Tsinghua University in Beijing, China. He is a leading expert in computational river dynamics. He has published over 100 papers in refereed journals and is the author of several books on river modelling.

*Computational River Dynamics: A Practical Guide to Modelling Flows in Rivers and Streams* by Weiming Wu is a valuable resource for anyone who is interested in river modelling. The book is a comprehensive and practical guide to the subject. It is also well-written and easy to understand. I highly recommend this book to anyone who is interested in learning more about river modelling.

To learn more about *Computational River Dynamics: A Practical Guide to Modelling Flows in Rivers and Streams*, please visit the following website:

<https://www.Our Book Library.com/Computational-River-Dynamics-Practical-Modelling/dp/1107033178>



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