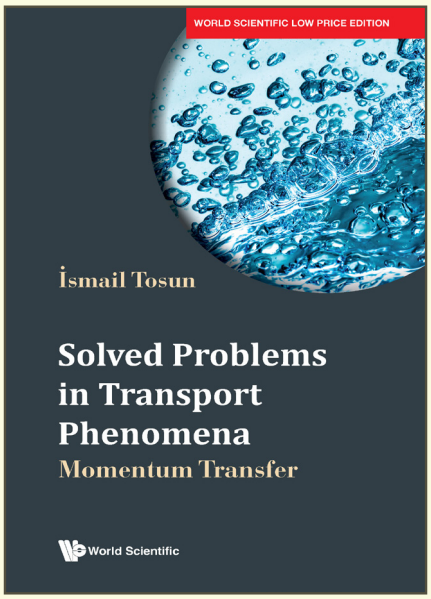
Solved Problems in Transport Phenomena

Momentum Transfer



By **İsmail Tosun**
(Middle East Technical University, Turkey)

ISBN	9798886130959
Extent	276pp
Binding	Paperback
Year	2024
Price	Rs. 1295

ABOUT THE BOOK

Transport Phenomena is an umbrella term to describe the fundamental processes of momentum, energy, and mass transfer.

This unique compendium covers momentum transfer at the microscopic and macroscopic levels in the three stages of problem-solving, namely formulation, simplification, and mathematical solution. The book does not overwhelm students with a large repertoire of problems. Instead, it highlights clear and easy presentation to help students grasp the methodology in problem-solving.

This useful reference text benefits upper undergraduate and graduate level students in the fields of chemical, mechanical, civil, and environmental engineering.

READERSHIP

Researchers, professionals, academics, and graduate students in chemical engineering, mechanical engineering, civil engineering and environmental engineering.

CONTENTS

- Introduction
- Fluid Statics
- Liquids in Rigid-Body Motion
- Flow Due to Motion of Boundaries and/or Gravity
- Flow Due to Pressure Gradient
- Flow Due to Pressure Gradient and Motion of Boundaries
- Flow of Non-Newtonian Fluids

- Creeping Flow
- Lubrication Approximation
- Flow in Microchannels
- Order of Magnitude Analysis
- Two-Dimensional Flow
- Macroscopic Balances
- Appendix A: Vector and Tensor Algebra
- Appendix B: Constants and Conversion Factors

ABOUT THE AUTHOR

İsmail Tosun received his BS and MS degrees from the Middle East Technical University (METU) and a PhD degree from the University of Akron, all in chemical engineering. His research interests are mathematical modeling, solid–liquid separation processes, and multiphase transport phenomena. Currently, he is an emeritus professor of chemical engineering at METU. Professor Tosun is the author of the following books:

1. *Modeling in Transport Phenomena — A Conceptual Approach*, 2nd ed., Elsevier, 2007.
2. *Fundamental Mass Transfer Concepts in Engineering Applications*, CRC Press, 2019.
3. *Thermodynamics — Principles and Applications*, 2nd ed., World Scientific, 2020.
4. *The Thermodynamics of Phase and Reaction Equilibria*, 2nd ed., Elsevier, 2021.

For orders and enquiries, please contact us:

FEEL Books

FEELBOOKS PVT. LTD.

DELHI	**4381/4 Ansari Road, Daryaganj, New Delhi 110002**		**Tel: +91-11-47472630**
	Pushpendra Kumar	**Mobile: +91 9015043442**	**Email: orders@feelbooks.in**
BENGALURU	**C-22, Brigade MM, KR Road, Jayanagar 7th Block, Bengaluru 560070**		**Tel: +91-80-26762129**
	Shekar Reddy	**Mobile: +91 9945234476**	**Email: bangalore@feelbooks.in**
MUMBAI	**Vijay Kumar**	**Mobile: +91 9871176434**	**Email: vkumar@feelbooks.in**
CHENNAI	**G Srinivasan**	**Mobile: +91 9003047502**	**Email: gsrinivasan@feelbooks.in**
KOLKATA	**Dhrubajyoti Bhattacharjee**	**Mobile: +91 9836160013**	**Email: dbhattacharjee@feelbooks.in**
HYDERABAD	**K.S.Vishwanath**	**Mobile: +91 9871745850**	**Email: kvishwanath@feelbooks.in**

***For Catalogues & title lists*: marketing@feelbooks.in**

FOLLOW US ON LinkedIn

www.feelbooks.in

FOLLOW US ON facebook

For any queries, please email us at marketing@feelbooks.in