DESCRIPTION

Fundamentals of Momentum, Heat and Mass Transfer, Revised, 6th Edition provides a unified treatment of momentum transfer (fluid mechanics), heat transfer and mass transfer. The new edition has been updated to include more modern examples, problems, and illustrations with real world applications. The treatment of the three areas of transport phenomena is done sequentially. The subjects of momentum, heat, and mass transfer are introduced, in that order, and appropriate analysis tools are developed.

ABOUT THE AUTHOR

James R. Welty arrived at Oregon State University as a freshman in mechanical engineering in 1950 and has been associated with OSU ever since. He earned his B.S. in 1954, and began teaching at OSU in 1958, receiving his Ph.D. in 1962 and becoming a full professor in 1967. He served as head of the Department of Mechanical Engineering from 1970 to 1985, at which time he returned to full-time teaching until his retirement in 1996.

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• Additional pedagogy, in the form of more examples, new problems and updated illustrations

• Updated chapters on mass transfer and molecular diffusion

• Applications of engineering science fundamentals have changed in many ways since the first edition was published. The text now covers devices such as inkjet printers, macro- and micro-scale chemical reactors, and a myriad of biological and physical processes that were once unheard of. These and other applications are considered in the sixth edition however the fundamentals of momentum, heat, and mass transport used in analyzing these processes remain unchanged.

FEATURES

• Consistent approach to transport processes.

• Easy-to-understand descriptions of basic principles.

• A clear methodology for solving fundamentally based problems.

• Extensive tables of physical properties of solids, liquids, and gases.

• This text is intended for use by sophomore- or junior-level engineering students whose technical interests require an understanding of transport phenomena.

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