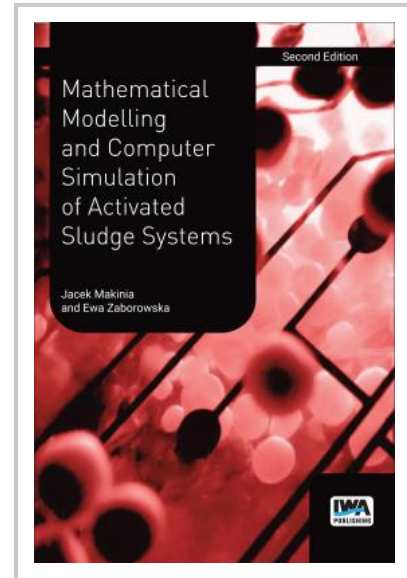


Mathematical Modelling and Computer Simulation of Activated Sludge Systems - Second Edition

Mathematical Modelling and Computer Simulation of Activated Sludge Systems – Second Edition, provides, from the process engineering perspective, a comprehensive and up-to-date overview regarding various aspects of the mechanistic (“white box”) modeling and simulation of advanced activated sludge systems performing biological nutrient removal. In the new edition of the book, a special focus is given to nitrogen removal and an overview of the latest developments in modeling the innovative nitrogen removal processes is provided. Furthermore, a new section on micropollutant removal has been added.

The focus of modeling has been shifting in the last years to models that can describe the performance of a whole plant (plant-wide modeling). The expanded part of this new edition introduces models describing the most important processes interrelated with the mainstream activated sludge systems as well as models describing the energy balance, operating costs and environmental impact. The complex process evaluation, including minimization of energy consumption and carbon footprint, is in line with the present and future wastewater treatment goals.

By combining a general introduction and a textbook, this book serves both intermediate and more experienced model users, both researchers and practitioners, as a comprehensive guide to modeling and simulation studies. The book can be used as a supplemental material at graduate and post-graduate levels of wastewater engineering/modeling courses.



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