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Titolo	Advanced process engineering control // Paul Serban Agachi, Mircea Vasile Cristea, Alexandra Ana Csavdari, Botond Szilagyi
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ISBN	3-11-038816-2 3-11-030663-8
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Collana	De Gruyter textbook
Disciplina	660/.2815
Soggetti	Process control Systems engineering Chemical process control Chemical engineering
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Frontmatter -- Preface -- Contents -- Part I: Advanced Process Control -- 1. Complex and nonconventional control systems -- 2. Model predictive control -- 3. Fuzzy control -- 4. Optimal control systems -- 5. Multivariable control -- 6. Plantwide control -- 7. Linear discrete systems and Z transform -- Part II: Applied Process Engineering Control -- 8. Reaction unit control -- 9. Control of distillation processes -- 10. Control of absorption processes -- 11. Control of extraction processes -- 12. Control of evaporation processes -- 13. Control of drying processes -- 14. Control of crystallization processes -- 15. Problems and exercises -- Index
Sommario/riassunto	As a mature topic in chemical engineering, the book provides methods, problems and tools used in process control engineering. It discusses: process knowledge, sensor system technology, actuators, communication technology, and logistics, design and construction of control systems and their operation. The knowledge goes beyond the traditional process engineering field by applying the same principles, to biomedical processes, energy production and management of environmental issues. The book explains all the determinations in the

"chemical systems" or "process systems", starting from the beginning of the processes, going through the intricate interdependency of the process stages, analyzing the hardware components of a control system and ending with the design of an appropriate control system for a process parameter or a whole process. The book is first addressed to the students and graduates of the departments of Chemical or Process Engineering. Second, to the chemical or process engineers in all industries or research and development centers, because they will notice the resemblance in approach from the system and control point of view, between different fields which might seem far from each other, but share the same control philosophy.
