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Nota di contenuto	Part I: Fundamentals -- Introduction -- The Modelling and Simulation Process -- Part II: DEDS Modelling and Simulation -- DEDS Stochastic Behaviour and Modelling -- A Conceptual Modelling Framework for DEDS -- DEDS Simulation Model Development -- The Activity-Object World View for DEDS -- Experimentation and Output Analysis -- Part III: CTDS Modelling and Simulation -- Modelling of Continuous Time Dynamic Systems -- Simulation with CTDS Models -- Optimization -- Probability Primer -- GPSS Primer -- MATLAB Primer.
Sommario/riassunto	Modelling and simulation provides invaluable support for the design and evaluation of dynamic systems, offering multi-faceted tools that are unconstrained by discipline boundaries. This fully updated and expanded new edition of Modelling and Simulation presents a practical introduction to the fundamental aspects of modelling and simulation. It

provides the necessary foundations both for those wishing to learn about this methodology and also for those who have a need to apply it in their work. Illustrative examples are drawn from projects formulated within the domains of both discrete-event dynamic systems and continuous-time dynamic systems. Topics and features: Presents a project-oriented (i.e., goal-based) perspective on modelling and simulation Describes an updated novel activity based conceptual modelling framework (the ABCmod framework) for discrete-event dynamic systems Includes a new chapter that presents a novel world view, the Activity-Object world view, which eases the translation of a conceptual model specification in the ABCmod framework into a simulation program Contains numerous illustrative examples and useful algorithms, in addition to exercises and projects at the end of most chapters Includes a primer on probability, a concise guide to the GPSS programming environment and an overview of relevant MATLAB features in the appendices Provides supplementary software and teaching support material at an associated website, including lecture slides and a methodology for organizing student projects Students at the senior undergraduate or junior graduate level will find this hands-on textbook/reference to be an essential guide to the fundamentals of modelling and simulation. It is also ideally suited for self-study by professionals seeking insight into the vast potential of this rapidly evolving problem-solving paradigm.