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	Titolo	Network-Oriented Modeling : Addressing Complexity of Cognitive, Affective and Social Interactions / / by Jan Treur
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	ISBN	3-319-45213-4
	Edizione	[1st ed. 2016.]
	Descrizione fisica	1 online resource (XVI, 499 p. 134 illus., 52 illus. in color.)
	Collana	Understanding Complex Systems, , 1860-0840
	Disciplina	511.8
	Soggetti	System theory
		Neural networks (Computer science)
		Graph theory
		Dynamics
		Nonlinear theories
		Social sciences - Data processing
		Complex Systems
		Mathematical Models of Cognitive Processes and Neural Networks
		Graph Theory
		Applied Dynamical Systems
		Computer Application in Social and Behavioral Sciences
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Includes index.
	Nota di contenuto	Preface -- Part I Network-Oriented Modeling: Introduction -- Network-Oriented Modelling and its Conceptual Foundations -- A Temporal-Causal Network Modeling Approach -- Part II Emotions all the Way -- How Emotions Come in between Everything -- How do you Feel Dreaming -- Dreaming your Fear away -- Emotions as a Vehicle for Rationality in Decision Making -- Part III Yourself and the Others -- From Mirroring to the Emergence of Shared Understanding and Collective Power -- Am I going to do this? Is it me who did this -- How Empathical are you -- Are you with me. Am I with you -- Changing yourself, Changing the Other, or Changing your Connection -- Part IV Analysis Methods for Temporal-Causal Network Models -- Where is this going -- What is Happening -- Who are you -- Part V

Sommario/riassunto	This book presents a new approach that can be applied to complex, integrated individual and social human processes. It provides an alternative means of addressing complexity, better suited for its purpose than and effectively complementing traditional strategies involving isolation and separation assumptions. Network-oriented modeling allows high-level cognitive, affective and social models in the form of (cyclic) graphs to be constructed, which can be automatically transformed into executable simulation models. The modeling format used makes it easy to take into account theories and findings about complex cognitive and social processes, which often involve dynamics based on interrelating cycles. Accordingly, it makes it possible to address complex phenomena such as the integration of emotions within cognitive processes of all kinds, of internal simulations of the mental processes of others, and of social phenomena such as shared understandings and collective actions. A variety of sample models – including those for ownership of actions, fear and dreaming, the integration of emotions in joint decision-making based on empathic understanding, and evolving social networks – illustrate the potential of the approach. Dedicated software is available to support building models in a conceptual or graphical manner, transforming them into an executable format and performing simulation experiments. The majority of the material presented has been used and positively evaluated by undergraduate and graduate students and researchers in the cognitive, social and AI domains. Given its detailed coverage, the book is ideally suited as an introduction for graduate and undergraduate students in many different multidisciplinary fields involving cognitive, affective, social, biological, and neuroscience domains.