This book provides an introduction, discussion, and formal-based modelling of trust theory and its applications in agent-based systems.

This book gives an accessible explanation of the importance of trust in human interaction and, in general, in autonomous cognitive agents including autonomous technologies. The authors explain the concepts of trust, and describe a principled, general theory of trust grounded on cognitive, cultural, institutional, technical, and normative solutions. This provides a strong base for the author’s discussion of role of trust in agent-based systems supporting human-computer interaction and distributed and virtual organizations or markets (multi-agent systems).

Key Features:

• Provides an accessible introduction to trust, and its importance and applications in agent-based systems

• Proposes a principled, general theory of trust grounding on cognitive, cultural, institutional, technical, and normative solutions.

• Offers a clear, intuitive approach, and systematic integration of relevant issues

• Explains the dynamics of trust, and the relationship between trust and security

• Offers operational definitions and models directly applicable both in technical and experimental domains

• Includes a critical examination of trust models in economics, philosophy, psychology, sociology, and AI
This book will be a valuable reference for researchers and advanced students focused on information and communication technologies (computer science, artificial intelligence, organizational sciences, and knowledge management etc.), as well as Web-site and robotics designers, and for scholars working on human, social, and cultural aspects of technology. Professionals of ecommerce systems and peer-to-peer systems will also find this text of interest.

About the Author

Cristiano Castelfranchi is full professor of Cognitive Sciences at the University of Siena, Italy, and Director of the Institute of the Cognitive Sciences and Technologies (ISTC) of the Italian National Research Council (CNR). Cristiano has a background in linguistics and psychology, and is active in the Multi-Agent Systems, Social Simulation, and Cognitive Science communities. He was program chair of AAMAS 2002, and is chair of several international workshops. He has published 11 books (3 in English), and more than 150 conference and journal articles.

Rino Falcone is Leader Researcher for the T3 (Trust Theory and Technology) group at the Institute of the Cognitive Sciences and Technologies (ISTC) of the Italian National Research Council (CNR). His scientific interests include Natural Language Processing, Plan Recognition, Multi-agent Systems and Agent Theory. Rino has published more than 100 conference and journal articles, organized several international conferences, and edited several special issues of international journal on these topics.

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