

Preface

This book stems from the author's own Ph.D. thesis, with the goal of providing a coherent and comprehensive view over a paradigm shift in computational information management systems, going toward self-organisation of information pieces, interpreted as living entities spontaneously adapting to users' needs according to their behaviour. The purpose is to provide graduate students, junior and senior researchers, information systems designers, and knowledge practitioners in general with a novel perspective over knowledge and information management, supported by practical reference guidelines, models, mechanisms, and technologies to exploit during design of their system.

The book is thus structured to gracefully introduce the reader to the coordination perspective over complex sociotechnical systems, by discussing a few examples of such a sort of systems, namely distributed first, self-organising then, finally pervasive ones. Once the reader is more familiar with the aforementioned approaches to coordination, she is presented a comprehensive model for self-organising coordination of knowledge-intensive sociotechnical systems, which is thoroughly described and discussed in both theoretical and technological aspects.

The research landscape that the contents of this book conceptually belong to is at the crossroads between multi-agent systems, nature-inspired self-organisation, situated coordination, and sociotechnical systems. Accordingly, the more technical contents take as a reference agent-oriented models, considering also human agents, where coordination occurs through environment mediation, thus in a setting where agents' actions are always situated in a virtual or physical environment, and where such an environment is able to spontaneously enact computational processes supporting and promoting self-organisation of the agents ensemble.

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Self-organisation of Knowledge in MoK

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