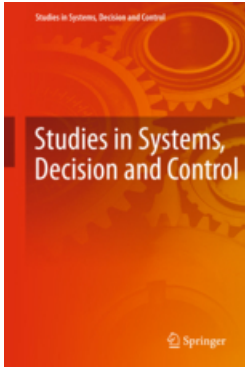


# Call for Book Chapters



**Title: Shaping Cognitive Cities**

*Theory and practice for human-centric cities*

**Publisher:** To be published by Springer as part of [\*Studies in Systems, Decision and Control - Book Series by Springer\*](#).

**Editors:** Edy Portmann, Luis Terán, Carmen Vaca, and Jaime Meza

## 1. Introduction

In the age of Artificial Intelligence, decision-making processes for the economy and society have to deal with uncertainty, vagueness, and imprecision. This book expects to explore conceptual considerations for the design of cognitive cities and concrete applications. It illustrates various aspects and dimensions of cognitive cities. The contributions will provide an overview of the wide diversity of cognitive city conceptualizations to better understand why it is important to think about the design of our human-centered cities. The book intends to adopt a transdisciplinary approach since the cognitive city concept can only be achieved through cooperation across different academic disciplines (e.g., economics, computer science, mathematics, urban planning) and between research and practice. More and more people live in a growing number of ever-larger cities. As such, it is important to reflect on how cities need to be designed to provide their inhabitants with the means and resources for a good life. The cognitive city is an emerging, innovative approach to address this need.

## 2. Recommended Topics (but are not limited to the followings)

The chapters specifically based on empirical and case-based works are welcome. Further, all application and keywords that describe this book are listed as **(but are not limited to the followings)**:

1. Cognitive city
2. Cognitive perception of urban space
3. Data mining with fuzzy reasoning
4. Decision support system
5. Decision-making
6. E-governance and E-participation
7. Explainable computational intelligence
8. Fuzzy analytical hierarchy process
9. Fuzzy classification
10. Fuzzy cognitive maps
11. Fuzzy cognitive maps for knowledge management

12. Fuzzy decision-making and fuzzy voting
13. Fuzzy modeling
14. Fuzzy neural network
15. Fuzzy predicative analytics
16. Fuzzy times series
17. Granular computing
18. Interpretable fuzzy systems
19. Learning algorithms
20. Natural language generation
21. Neural network vs linear Models
22. Optimization
23. Political participation and fuzzy voting
24. Smart city
25. Soft computing
26. Sustainable cities
27. Urban computing and planning
28. Web analytics with fuzzy measures
29. Geographic Information Systems

### **3. Submission Procedure**

Interested researchers are invited to submit a brief summary of their proposal including:

- Tentative title of the chapter
- List of authors with affiliation
- Short abstract
- Table of content
- Short list of literature

The chapter proposal should be submitted to [edy.portmann@unifr.ch](mailto:edy.portmann@unifr.ch), [lfteran1@espe.edu.ec](mailto:lfteran1@espe.edu.ec), [luis.teran@unifr.ch](mailto:luis.teran@unifr.ch), [cvaca@fiec.espol.edu.ec](mailto:cvaca@fiec.espol.edu.ec), and [jaime.meza@fci.edu.ec](mailto:jaime.meza@fci.edu.ec) not later than January 15, 2019. The editors of the book will inform the authors about their proposal by mid of February 2020. After acceptance, the chapters have to be submitted until March 30, 2020. After a review (April 30), the final chapters should be submitted by the end of May 2020. The book is expected to be published in August 2020 by Springer, Heidelberg.

### **4. Full Book Chapter**

Complete chapters are must be submitted to [edy.portmann@unifr.ch](mailto:edy.portmann@unifr.ch), [lfteran1@espe.edu.ec](mailto:lfteran1@espe.edu.ec), [luis.teran@unifr.ch](mailto:luis.teran@unifr.ch), [cvaca@fiec.espol.edu.ec](mailto:cvaca@fiec.espol.edu.ec), and [jaime.meza@fci.edu.ec](mailto:jaime.meza@fci.edu.ec) not later than March 31, 2020.

- A book chapter can have up to 25 pages (up to 8000 words total) in Springer book format only (it is highly recommended to use LaTeX template). More details about the template are available in the following link <https://www.springer.com/gp/authors-editors/book-authors-editors/resources-guidelines/rights-permissions-licensing/manuscript-preparation/5636>.
- Guidelines on how to prepare the full book chapter will be provided on time.
- All submitted chapters will be reviewed on a double-blind review basis.
- Contributors may also be requested to provide three reviewers for this project, up to two manuscripts.

## 6. Important Dates

The following timeline is anticipated:

- January 15, 2020: Proposal Submission Deadline
- February 15, 2020: Notification of Acceptance
- March 31, 2020: Full Chapter Submission
- April 30, 2020: Review Results Returned
- May 31, 2020: Revised Chapter Submission

### Editor's details for any Inquiries:

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