



Call for Book Chapters: **Artificial Intelligence Methods for Software Engineering**

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Editors

Prof. Meir Kalech, Ben-Gurion University of the Negev, Israel. Email: kalech@bgu.ac.il.

Prof. Mark Last, Ben-Gurion University of the Negev, Israel. Email: mlast@bgu.ac.il.

Prof. Rui Abreu, Instituto Superior Técnico of the University of Lisbon, Portugal. Email: rui.maranhao@tecnico.ulisboa.pt.

Important Dates

Chapter Proposal Submission: December 22, 2019

Notification of Proposal Acceptance: January 15, 2020

Full Chapter Submission: March 30, 2020

Notification for chapter acceptance: May 30, 2020

Submission of the camera-ready chapters: July 30, 2020

Anticipated book publication: By the end of 2020

Scope and Purpose

Software is an integral part of our lives today. It is in the heart of a wide range of systems, from large management systems for health care or electricity power stations to small and local systems as smart home or even coffee machines. Modern software systems are highly complex and often have multiple dependencies on external parts such as other processes or services. This poses new challenges and exacerbate existing challenges in different aspects of Software Engineering (SE) including design, testing, debugging, and software lifecycle management.

Artificial Intelligence (AI) is a growing field in computer science that has been proven effective in a variety of areas such as intelligent agents in the stock market, anomaly detection and diagnosis, and intelligent algorithms for smart cities design. In the last two decades there is a substantial interest in applying and developing AI techniques to address various SE challenges. The purpose of this volume is twofold: (1) to introduce the main research subjects in the field of AI methods for SE, and (2) to discuss the challenges and opportunities in this field, and present the state-of-the-art.

Submissions are solicited on the following topics, but not limited to:

- Requirements analysis
- Software design,
- Reverse engineering,
- Code reuse and reconfiguration,
- Automated code generation,
- Software maintenance
- Software fault prediction,
- Software testing,
- Automated debugging,

- Automated repair
- Intelligent User Interfaces

Submission Deadlines

PROPOSAL SUBMISSION: Prospective authors should submit a chapter proposal by December 22, 2019 including the following information:

- Title of the contribution/chapter
- Name, affiliation, and email address of each author
- Preliminary abstract of the proposed chapter (150 – 250 words)

PROPOSAL ACCEPTANCE NOTIFICATION: Authors will be notified by January 15, 2020 about the status of their proposals. In this process, we will consider whether the proposal fits the scope of the book and how well the subject of the proposal is integrated with the other book chapters.

FULL CHAPTER SUBMISSION: Chapters have to be 17-25 pages length and will be reviewed by two/three expert reviewers to ensure the quality of the volume. All contributions must be original work, which has not been published elsewhere nor is currently under review for any other publication. The deadline for submission is March 30, 2020.

CHAPTER ACCEPTANCE NOTIFICATION: Authors of submitted chapters will be notified by May 30, 2020 about the acceptance/rejection decisions and the reviewers' comments.

CAMERA-READY CHAPTER DUE: Camera-ready version of the accepted chapters incorporating revisions (if any) is expected to be submitted by July 30, 2020.

BOOK PUBLICATION: The book is anticipated to appear in print by the end of 2020.

Inquiries and submissions can be forwarded to Prof. Meir Kalech (kalech@bgu.ac.il). Please use the subject "AI for SE Book".