



Directed Algebraic Topology and Concurrency (Springerbriefs in Applied Sciences and Technology / Springer)

Lisbeth Fajstrup, Eric Goubault, Emmanuel Haucourt, Samuel Mimram, Martin Raussen

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This monograph presents an application of concepts and methods from algebraic topology to models of *concurrent processes* in computer science and their analysis.

Taking well-known discrete models for concurrent processes in resource management as a point of departure, the book goes on to refine combinatorial and topological models. In the process, it develops tools and invariants for the new discipline *directed algebraic topology*, which is driven by fundamental research interests as well as by applications, primarily in the static analysis of concurrent programs.

The state space of a concurrent program is described as a higher-dimensional space, the topology of which encodes the essential properties of the system. In order to analyse all possible executions in the state space, more than “just” the topological properties have to be considered: Execution paths need to respect a partial order given by the time flow. As a result, tools and concepts from topology have to be extended to take privileged *directions* into account.

The target audience for this book consists of graduate students, researchers and practitioners in the field, mathematicians and computer scientists alike.

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Directed Algebraic Topology and Concurrency (Springerbriefs in Applied Sciences and Technology / Springer) can be one of your beginning books that are good idea. Many of us recommend that straight away because this reserve has good vocabulary that may increase your knowledge in vocab, easy to understand, bit entertaining however delivering the information. The writer giving his/her effort that will put every word into pleasure arrangement in writing Directed Algebraic Topology and Concurrency (Springerbriefs in Applied Sciences and Technology / Springer) although doesn't forget the main level, giving the reader the hottest along with based confirm resource information that maybe you can be one of it. This great information can certainly drawn you into brand-new stage of crucial thinking.

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