

PREFACE

The complexity in the world around us results, in many cases, from finely balanced systems in a state known as criticality. This is the case not only for substantial but also insubstantial structures such as networks not involving the concept of distance. In order to reveal the universal features and mechanisms in such a wide range of complex structures and dynamical processes, it is important to study their topological aspects. The International Symposium on “Topological Aspects of Critical Systems and Networks”, sponsored by The 21st Century COE Program “Topological Science and Technology”, which was held at Hokkaido University in Sapporo, Japan, February 13-14, 2006, provided an interdisciplinary forum on the topological aspects of general networks and critical systems for physicists, chemists, biologists, mathematicians, medical scientists, social scientists, and other related researchers. This book is the proceedings of this International Symposium. A total of 57 papers, including 23 invited papers, were presented at the Symposium, that was attended by 103 participants. Out of these this book records 37 papers from a wide area of science and technology related to “Topological Aspects of Critical Systems and Networks”, representing subjects as diverse as the general properties of complex networks, complexity in social science, patterns in biological objects, and criticality in pure and applied physics.

We hope that the proceedings will be useful to many researchers in related fields. Finally we would like to thank reviewers for their careful reading of the submitted papers and all participants in the Symposium for fruitful and exciting discussions throughout the Symposium.

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(Chief editor of the proceedings)

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