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Preface

This book is a part of the five-volume proceedings of the 27th International Conference on Neural Information Processing (ICONIP 2020), held during November 18–22, 2020. The conference aims to provide a leading international forum for researchers, scientists, and industry professionals who are working in neuroscience, neural networks, deep learning, and related fields to share their new ideas, progresses, and achievements. Due to the outbreak of COVID-19, this year's conference, which was supposed to be held in Bangkok, Thailand, was organized as fully virtual conference.

The research program of this year's edition consists of four main categories, Theory and Algorithms, Computational and Cognitive Neurosciences, Human-Centered Computing, and Applications, for refereed research papers with nine special sessions and one workshop. The research tracks attracted submissions from 1,083 distinct authors from 44 countries. All the submissions were rigorously reviewed by the conference Program Committee (PC) comprising 84 senior PC members and 367 PC members. A total of 1,351 reviews were provided, with each submission receiving at least 2 reviews, and some papers receiving 3 or more reviews. This year, we also provided rebuttals for authors to address the errors that exist in the review comments. Meta-reviews were provided with consideration of both authors' rebuttal and reviewers' comments. Finally, we accepted 187 (30.25%) of the 618 full papers that were sent out for review in three volumes of Springer's series of *Lecture Notes in Computer Science* (LNCS) and 189 (30.58%) of the 618 in two volumes of Springer's series of *Communications in Computer and Information Science* (CCIS).

We would like to take this opportunity to thank all the authors for submitting their papers to our conference, and the senior PC members, PC members, as well as all the Organizing Committee members for their hard work. We hope you enjoyed the research program at the conference.

November 2020

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