Preface

The 40-th Finsler Symposium on Finsler Geometry was held in the period 2005.09.06 – 2005.09.10 at Hokkaido Tokai University, Sapporo, Japan. The Symposium's purpose was not only the usual annual meeting of the Finsler geometers from Japan and abroad, but also to commemorate the memory of the late Professor Makoto Matsumoto.

This volume contains surveys and original articles based on the talks given at the Symposium by some of the participants as well as contributions from authors that for different reasons were not able to attend the Symposium in Japan, but agreed to contribute to this memorial volume. The editors would like to express here their gratitude to everybody who contributed in one way or another to the publishing of this volume. Especially, we thank to D. Bao for many advices and useful suggestions.

The authors were invited based on their past joint research with Professor Matsumoto, or for researching important subjects in Finsler geometry influenced by Professor Matsumoto's work.

We have organized the scientific papers into three parts from the point of view of their contents. Namely, Part II concerns topics on Finsler geometry more or less directly related to the work of Professor Matsumoto. We would like to emphasize here especially one of the most famous open problems in Finsler Geometry: to determine a concrete example of a Finsler metric that is Landsberg but not Berwald. The search for this kind of metric, which everybody wanted to see but no one could actually get, makes D. Bao to call these metrics Unicorns in Finsler Geometry. The first two papers in the present volume bring a new light to the Unicorn problem in Finsler Geometry. Part III encompasses articles concerning topics inspired by, or adjacent to, classical Finsler geometry as the Geometry of Paths, Dynamical Systems, or the Geometry of Sprays on Finsler manifolds. The last part contains two comprehensive surveys in Complex Finsler geometry. We consider that the papers containing fundamental topics of Finsler geometry are interesting not only for specialists in Finsler geometry, but for specialists in Riemannian geometry or other fields of differential geometry also.

The editors would like to express their gratitude to the ASPM Editorial Board and especially to Professor Y. Giga who suggested that we edit this volume.

We are going to give in the following a synopsis of the papers in this volume.