Preface

The workshop "Algebraic Varieties and Automorphism Groups" was held at the Research Institute of Mathematical Sciences (RIMS), Kyoto University during July 7–11, 2014. There were over eighty participants including twenty people from overseas – Canada, France, Germany, India, Korea, Poland, Russia, Singapore, Switzerland, and USA.

Recently, there have been remarkable developments in algebraic geometry and related fields, especially, in the area of (birational) automorphism groups and algebraic group actions.

The purpose of this workshop was to provide the experts and young researchers with the opportunities to interact in the fields of affine and complete algebraic geometry, group actions and commutative algebra related to the topics listed below as well as to publicize the new results. We are confident that these purposes were achieved by the endeavors of the participants.

The main topics of the workshop were the following:

(1) Algebraic varieties containing $\mathbf{A}^n$-cylinders;
(2) Algebraic varieties with fibrations;
(3) Algebraic group actions and orbit stratifications on algebraic varieties;
(4) Automorphism groups and birational automorphism groups of algebraic varieties.

There were 19 talks on the above and related topics by experts from the viewpoints of (affine) algebraic geometry, transformation groups, and commutative algebra. Inspired by the talks, there were active discussions and communication among participants during and after the workshop.

The present volume is the proceedings of the workshop and contains 15 articles on the workshop topics. We hope that this volume will contribute to the progress in the theories of algebraic varieties and their automorphism groups.

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All papers in this volume have been refereed and are in final form. No version of any of them will be submitted for publication elsewhere.