Rings, Modules and Representations

International Conference on Rings and Things in Honor of Carl Faith and Barbara Osofsky
June 15–17, 2007
Ohio University-Zanesville
Zanesville, OH

Nguyen Viet Dung
Franco Guerriero
Lakhdar Hammoudi
Pramod Kanwar
Editors

American Mathematical Society
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Dedicated to
Carl Faith and Barbara Osofsky
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Preface

Continuing the tradition of algebra conferences hosted by Ohio University, the summer of 2007 saw the addition of yet another chapter - an international conference on rings and modules. The conference, attended by over seventy mathematicians of international repute from more than twenty countries, provided an excellent opportunity for the experts in Theory of Rings and Modules and other related topics to exchange ideas and discuss new developments in these rapidly growing areas of research. The conference also stimulated new exciting collaborations among the participants.

The conference, named *International Conference on Rings and Things*, is a reference to Carl Faith’s well-known book *Rings and Things*. The conference was hosted by the Zanesville campus of Ohio University and was held in honor of Carl Faith’s 80th birthday and Barbara Osofsky’s 70th birthday. It was a pleasure to host the conference and then present these Proceedings dedicated to such outstanding algebraists. Their work through the years speaks for itself and is certainly of the highest quality.

This volume represents some of the recent work of the invited speakers and other participants of the conference. It is our hope that the articles presented in this volume will be an important source of inspiration for the researchers interested in Theory of Rings and Modules, Representation Theory and applications.

We would like to thank all of the mathematicians who participated by either attending or presenting their work and generating new ideas for further research. We would especially like to thank those who graciously accepted our invitations and those who submitted their work for publication in these proceedings.

We would like to thank the National Security Agency, the Deans of the Chillicothe, Lancaster and Zanesville Campuses of Ohio University for their financial support. Thanks are also due to the Vice President for Regional Higher Education and the Office of Research at Ohio University for their continued support of scholarly activities at Ohio University and its regional campuses.

Of great assistance and inspiration for this conference and subsequent proceedings is the Center for Ring Theory and its Applications (CRA) at Ohio University. CRA has been a driving force that keeps the State of Ohio on the forefront of research in Algebra. The Director of CRA, S.K. Jain, not only offered financial support but also gave many helpful suggestions in the organization of the conference.

On a personal and professional level we would like to thank our colleagues Dinh V. Huynh and Sergio R. Lopez-Permouth at Ohio University for their assistance. We would also like to thank the staff of the American Mathematical Society for
their hard work and we are especially indebted to Ms. Christine Thivierge for her effort and professionalism in getting this project through.

Finally, we thank all of our colleagues who served as anonymous referees for the papers presented here. Their meticulous review and thoughtful suggestions were extremely helpful in the editing of this volume.

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This volume originated from talks given at the International Conference on Rings and Things held in June, 2007 at Ohio University–Zanesville.

The papers in this volume contain the latest results in current active research areas in the theory of rings and modules, including noncommutative and commutative ring theory, module theory, representation theory, and coding theory. In particular, papers in this volume deal with topics such as decomposition theory of modules, injectivity and generalizations, tilting theory, rings and modules with chain conditions, Leavitt path algebras, representations of finite dimensional algebras, and codes over rings. While most of these papers are original research articles, some are expository surveys.

This book is suitable for graduate students and researchers interested in noncommutative ring and module theory, representation theory, and applications.