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Jörg Feldvoss · Lauren Grimley ·
Drew Lewis · Andrei Pavelescu ·
Cornelius Pillen
Editors

Advances in Algebra

SRAC 2017, Mobile, Alabama, USA,
March 17–19

 Springer

Editors

Jörg Feldvoss
Department of Mathematics and Statistics
University of South Alabama
Mobile, AL, USA

Lauren Grimley
Department of Mathematics
Spring Hill College
Mobile, AL, USA

Drew Lewis
Department of Mathematics and Statistics
University of South Alabama
Mobile, AL, USA

Andrei Pavelescu
Department of Mathematics and Statistics
University of South Alabama
Mobile, AL, USA

Cornelius Pillen
Department of Mathematics and Statistics
University of South Alabama
Mobile, AL, USA

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To Henry Heatherly and Temple Fay

Preface

The Southern Regional Algebra Conference (SRAC) is an annual weekend conference that has been in existence since 1988. It serves an important role for the research community in algebra in the Gulf Coast Region. The conference series helped to build a network of mathematicians that fosters collaboration and increases the visibility of research programs in the region at the national and international level.

SRAC 2017 was held March 17–19, 2017, on the campus of the University of South Alabama. A total of 89 participants from 37 different institutions attended. At the center of the program were two well-received plenary talks on *Computing with Matrix and Basic Algebras* by Jon Carlson and *Basic Algorithms in the Representation Theory of Groups and Algebras* by Klaus Lux, two leading experts on computational methods in algebra and representation theory. In addition, there were 48 shorter talks, organized in two parallel sessions, including 9 presentations by graduate students. With the help of NSF support, the number of participants increased significantly and, as a result, a broad range of topics was discussed at the conference. The presentations covered both theoretical as well as computational aspects in ring theory, group theory, Lie theory, commutative algebra, algebraic geometry, linear algebra, quantum groups, and other research areas in algebra. Conference abstracts, the program, and a list of participants can be found on the conference webpage at <http://www.southalabama.edu/colleges/artsandsci/mathstat/srac/index.html>.

The Southern Regional Algebra Conference has its origins at the University of Louisiana at Lafayette when, in 1970, algebraists such as Prof. Laszlo Fuchs from Tulane University and Prof. Gilbert Baumslag from Rice University, together with other algebraists from the region, primarily in Louisiana and Texas, first met in Lafayette for the Lloyd Roeling Mathematics Conferences. Henry Heatherly, who arrived at Lafayette in 1968, is one of the founding fathers of the conference series.

The name of the conference has at times varied. Referred to as the “Weekend Algebra Meeting” among other variations, it is now known as the Southern Regional Algebra Conference. Although the conference location has remained primarily in the southeastern United States, the event has attracted algebraists from

across the country and indeed the world. Over the years, SRAC has included participating algebraists from Africa, Asia, Europe, and South America.

The Southern Regional Algebra Conference has a rich tradition of embracing new mathematics from across all areas in algebra in an atmosphere of collegial discourse and collaboration. SRAC has always been well known for its friendly and supportive atmosphere that attracts many graduate students and researchers from different institutions, ranging from small undergraduate colleges to large comprehensive research institutions. The conference format is simple, which might account in part for its popularity. There has never been a registration fee and the host institution provides for conference dinners and picnics. The University of Southern Mississippi hosted the meeting regularly from the late 80s until the beginning of the new Millennium. These meetings included a crawfish boil, as well as volleyball and fierce soccer games at Temple “Buzz” Fay’s house in Hattiesburg.

The papers in this volume reflect the broad spectrum of topics covered at the conference. They include work on algebraic groups, combinatorial commutative algebra, computational methods for representations of groups and algebras, group theory, Hopf-Galois theory, hypergroups, Lie superalgebras, matrix analysis, ring theory, spherical and algebraic spaces, and tropical algebraic geometry.

We would like to thank the editorial staff at Springer for their initial interest and their help in producing this volume. A special thanks goes to the anonymous referees for their insightful reports. Finally, we would like to take this opportunity to express our appreciation to the participants for making the conference such a success, to the speakers for their interesting talks, and, especially, to the authors of this volume for their contributions.

Mobile, AL, USA
July 2018

Jörg Feldvoss
Lauren Grimley
Drew Lewis
Andrei Pavelescu
Cornelius Pillen

The following is a list of SRAC's host institutions:

- 1988 University of Southern Mississippi
- 1989 University of Houston
- 1990 University of Louisiana, Lafayette
- 1992 University of Southern Mississippi
- 1993 Baylor University
- 1994 University of Louisiana, Lafayette
- 1995 University of Southern Mississippi
- 1996 Texas A&M University
- 1996 University of Louisiana, Lafayette
- 1998 University of Southern Mississippi
- 1999 University of Louisiana, Lafayette
- 2000 University of Louisiana, Lafayette (Special Session, AMS Sectional Meeting)
- 2001 University of Southern Mississippi
- 2002 Loyola University, New Orleans
- 2003 Florida Atlantic University
- 2003 University of Louisiana, Lafayette
- 2004 Southeastern Louisiana University
- 2006 Auburn University
- 2007 University of Louisiana, Lafayette
- 2008 University of Colorado, Colorado Springs
- 2009 University of South Alabama
- 2010 Auburn University, Montgomery
- 2010 University of Louisiana, Lafayette
- 2012 Clayton State University and Georgia College and State University
- 2013 Southeastern Louisiana University
- 2014 Auburn University, Montgomery
- 2015 University of Louisiana, Lafayette
- 2016 Auburn University
- 2017 University of South Alabama
- 2018 Auburn University, Montgomery
- 2019 University of Louisiana, Lafayette



Southern Regional Algebra Conference, University of South Alabama, Mobile, Alabama, March 17–19, 2017

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Contributors

Ulrich Albrecht Department of Mathematics and Statistics, Auburn University, Auburn, AL, USA

Arindam Banerjee Ramakrishna Mission Vivekananda University, Belur, West Bengal, India

Selvi Kara Beyarslan Department of Mathematics and Statistics, University of South Alabama, Mobile, AL, USA

Gary F. Birkenmeier Department of Mathematics, University of Louisiana at Lafayette, Lafayette, LA, USA

Mahir Bilen Can Mathematics Department, Tulane University, New Orleans, LA, USA

Jon F. Carlson Department of Mathematics, University of Georgia, Athens, GA, USA

Tianran Chen Department of Mathematics and Computer Science, Auburn University Montgomery, Montgomery, AL, USA

Robert Davis Department of Mathematics, Michigan State University, East Lansing, MI, USA

Christopher M. Drupieski Department of Mathematical Sciences, DePaul University, Chicago, IL, USA

Huajun Huang Department of Mathematics and Statistics, Auburn University, Auburn, AL, USA

Hà Huy Tài Department of Mathematics, Tulane University, New Orleans, LA, USA

Michael Joyce Mathematics Department, Tulane University, New Orleans, LA, USA

Yeliz Kara Department of Mathematics, Bursa Uludağ University, Bursa, Turkey

Alan Koch Department of Mathematics, Agnes Scott College, Decatur, GA, USA

Timothy Kohl Department of Mathematics and Statistics, Boston University, Boston, MA, USA

Jonathan R. Kujawa Department of Mathematics, University of Oklahoma, Norman, OK, USA

Mark L. Lewis Department of Mathematical Sciences, Kent State University, Kent, OH, USA

Klaus Lux Department of Mathematics, University of Arizona, Tucson, AZ, USA

Bradley McQuaig Department of Mathematics and Statistics, Auburn University, Auburn, AL, USA

Nham V. Ngo University of North Georgia–Gainesville, Oakwood, GA, USA

Elena Poletaeva School of Mathematical and Statistical Sciences, University of Texas Rio Grande Valley, Edinburg, TX, USA

Matthew F. Ragland Auburn University at Montgomery, Montgomery, USA

Alexander Ryba Department of Computer Science, Queens College/CUNY, Queens, NY, USA

Leonard L. Scott Department of Mathematics, University of Virginia, Charlottesville, VA, USA

Adnan Tercan Department of Mathematics, Hacettepe University, Ankara, Turkey

Paul J. Truman School of Computing and Mathematics, Keele University, Staffordshire, UK

Robert Underwood Department of Mathematics and Computer Science, Auburn University at Montgomery, Montgomery, AL, USA

Ethan C. Zell Department of Mathematics, University of Virginia, Charlottesville, VA, USA

Paul-Hermann Zieschang School of Mathematical and Statistical Sciences, University of Texas Rio Grande Valley, Edinburg, TX, USA