

# Preface

## of

### Ischia Group Theory 2012

This volume contains the proceedings of the Conference “Ischia Group Theory 2012”, that was held in Ischia (Naples, Italy) in March 26-29th, 2012. The conference was the fifth in a series: the preceding conferences were held every other year since 2004. The interest that the mathematical community showed for these conferences has been growing through the years.

The scientific committee included Mariagrazia BIANCHI (Università di Milano), Patrizia LONGOBARDI (Università di Salerno), Mercede MAJ (Università di Salerno), Carlo Maria SCOPPOLA (Università dell’Aquila), while the local organizing committee, at Università di Salerno, consisted of Costantino DELIZIA, Maurizio MERIANO, Chiara NICOTERA, Carmela SICA, Antonio TORTORA, Maria TOTA.

Speakers and participants contributed the papers that form this volume: the variety of topics that are represented here is remarkable. They include locally finite groups, graphs of groups, groups with conditions on subgroups, profinite groups, representations of finite symmetric groups, matrix groups over fields, combinatorial topics in group theory, invariants of finite groups, metahamiltonian groups, coverings of groups, extensions of linear groups, transfer control, zeta functions.

These Proceedings also contain a list of all the talks, and a list of all the participants. A day of the conference (March 27th) was devoted to honor the memory of Narain D. Gupta, and another day (March 29th) was dedicated to the memory of James Wiegold.

A remarkable poster session was shown during each day of the conference.

The stay was, as always, made pleasant and smooth by the great effort of the team of the University of Salerno. We thank them all warmly. We thank all the speakers, for the very high quality of their talks, and all the participants, for contributing to create a concentrate and yet pleasant atmosphere. We also thank all the authors of the papers contained in this volume, for their remarkable work, and the referees, that contributed so effectively to guarantee the high level of these Proceedings.

Alireza Abdollahi and the International Journal of Group Theory should be thanked for publishing these Proceedings.

The staff of the NH Ischia Thermal Spa Resort should be acknowledged for their kindness and professionalism, and for their patience in providing participants with substantial support in a number of occasions.

Our Sponsors deserve a big thank, for their essential contribution to the realization of this occasion. They are all listed in the next page.

#### **The Editors**

**Mariagrazia BIANCHI, Patrizia LONGOBARDI, Mercede MAJ, Carlo Maria SCOPPOLA**

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dell’Università di Salerno

# Conference Program of Ischia Group Theory 2012

## **MONDAY, MARCH 26**

15.00 Registration

15.00 Opening permanent Poster Session

18.30 Welcome Cocktail

## **TUESDAY, MARCH 27**

**dedicated to the memory of Narain D. Gupta**

09.00 Welcome Greetings

Chairman: Martin L. Newell

09.15 - 10.05 K. C. GUPTA

On some different topics: automorphisms, test sets, polynilpotent series, equationally noetherian, partially commutative metabelian groups

10.10 - 10.50 A. MANN

Curiouser and curiouser (said Alice to Philip Hall)

10.55 - 11.10 D. LYTKINA

On groups with given properties of finite subgroups

Coffee break

Chairman: Karl Strambach

11.40 - 12.20 A. OL'SHANSKII

Embedding theorems for amenable groups

12.25 - 12.40 D. SHVED

Finitary automorphisms of groups

12.45 - 13.10 Y. BAHTURIN

Modules with maximal growth over free group algebras

13.15 Picture

13.30 Lunch break

Chairman: Wolfgang Herfort

15.30 - 16.10 P. SHUMYATSKY

On verbal subgroups in finite and profinite groups

16.15 - 16.30 M. SALIM

About the group of normalized units of integral group rings

16.35 - 17.10 A. GIAMBRUNO

Finite dimensional Lie superalgebras and codimension growth

Coffee break

Chairman: Andrea Caranti

17.35 - 18.10 G. TRAUSTASON

Symplectic alternating algebras

18.15 - 18.30 A. TORTORA

On groups admitting a word whose values are Engel

18.35 - 18.50 K. ERSOY

Finite groups with a splitting automorphism

18.55 - 19.10 C. ACCIARRI

Fixed points of coprime automorphisms of finite groups

19.15 - 19.30 T. TERRAGNI

The Coxeter complex and the Euler characteristics of a Hecke algebra

21.30 Recital of classical Neapolitan songs

## **WEDNESDAY, MARCH 28**

09.30 Social Trip to the Aragon Castle

13.30 Lunch break

Chairman: Daniela Nikolova-Popova

15.10 - 15.25 A. SMOLENSKY

Unitriangular factorisations of Chevalley groups

15.30 - 16.10 A. LUCCHINI

Some questions arising from the study of the generating graph

16.15 - 16.30 A. SHCHEGOLEV

Overgroups of subsystem subgroups in exceptional groups

16.35 - 16.50 C. P. MORRESI ZUCCARI

Fitting height and character degree graphs

16.55 - 17.10 A. AULETTA

Products of locally supersoluble groups

Coffee break

Chairman: Thomas Weigel

17.35 - 18.05 A. ZALESSKI

Steinberg-like reducible characters for Chevalley groups

18.10 - 18.25 C. SICA

On groups of odd order admitting an elementary 2-group of automorphisms

18.30 - 18.45 L. CENTRONE

Cocharacters of  $UT_2(E)$

18.50 - 19.15 C. METELLI

On Butler  $B(n)$ -groups

19.20 - 19.35 K. BATALKIN

Parabolic subgroups of Chevalley groups over a Dedekind rings of arithmetic type

**THURSDAY, MARCH 29**  
**dedicated to the memory of James Wiegold**

Chairman: Francesco de Giovanni

09.00 - 9.30 D. J. S. ROBINSON

Groups with few isomorphism types of derived subgroups

9.35 - 10.15 E. KHUKHRO

Automorphisms of finite  $p$ -groups with a partition

10.20 - 10.45 H. HEINEKEN

Solvable groups with subnormal normalizers of subnormal subgroups

10.50 - 11.05 L. SERENA

Supersoluble conditions and transfer control

Coffee break

Chairman: Bernd Stellmacher

11.30 - 12.10 M. HERZOG

Small doubling in ordered groups

12.15 - 12.55 M. DIXON

Groups with all subgroups permutable or of finite rank

13.00 - 13.15 U. DARDANO

Groups with many inert subgroups

13.30 Lunch break

Chairman: Bernhard Amberg

15.00 - 15.40 A. JAIKIN-ZAPIRAIN

Finite simple quotients of groups satisfying property  $(T)$

15.45 - 16.00 M. GARONZI

Covering monolithic groups with proper subgroups

16.05 - 16.20 D. MALININ

Some integral representations of finite groups

Chairman: Péter P. Pálffy

16.25 - 17.05 M. KUZUCUOĞLU

Centralizers in simple locally finite groups

17.10 - 17.50 L.-C. KAPPE

Finite coverings: a journey through groups, loops, rings and semigroups

21.00 Social Dinner at Sala Aragonese

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