
Hopf Algebras and Noncommutative Algebra

Sde-Boker, Israel, 24-27 May, 2010



RESEARCH WORKSHOP OF THE ISRAEL SCIENCE FOUNDATION



The workshop is partially funded by the Center for Advanced Studies in Mathematics at Ben-Gurion University, the President and the Rector of Ben-Gurion University, the Dean of Natural Sciences and the Department of Mathematics

Scientific Committee:

Ami Braun (Haifa U.)
Shlomo Gelaki (Technion)
Susan Montgomery (U. of Southern California)
Louis Rowen (Bar-Ilan U.)
Hans-Juergen Schneider (U. of Munich)
Lance Small (U. of California, San-Diego)

Organizing Committee:

Daniel Berend (BGU)
Ido Efrat (BGU)
Michael Lin (BGU)
Uri Onn (BGU)
Sara Westreich (Bar-Ilan U.)

CONFERENCE PROGRAM

Monday, 24 May 2010

10:00 - 10:40: Lance Small (University of California, San Diego)

Affine Algebras and Infinite Dimensional Division Algebras

10:45 - 11:25: Serban Raianu (California State University, Dominguez Hills)

Integrals and the Antipode

11:25 - 11:40: *Coffee Break*

11:40 - 12:15: Uri Onn (Ben-Gurion University, Be'er-Sheva)

p-adic, real and quantum Grassmannians

12:20 - 13:00: Earl Taft (Rutgers University)

Recursive Sequences and Hopf Algebras

Afternoon Sessions

15:00 - 15:40: Daniel Sternheimer (Keio University and University of Bourgogne)

From Lie groups to Hopf algebras, their deformations and physical applications

15:45 - 16:25: Burkhard Kuelshammer (Friedrich Schiller University, Jena)

The depth of subgroups and subalgebras

16:25 - 16:40: *Coffee Break*

16:40 - 17:20: Nicolas Andruskiewitsch (National University of Cordoba, Argentina)

On the classification of finite-dimensional Hopf algebras

17:25 - 18:05 Shlomo Gelaki (Technion)

Semisimplicity in symmetric tensor categories

Evening Sessions

20:00 - 20:20 Claudia Mennini (University of Ferrara)

Hopf algebras with the dual Chevalley property are gauge deformations

20:25 - 20:45 Yinhuo Zhang (Hasselt University)

Derived H-module endomorphism rings

20:50 - 21:10 Bill Chin (DePaul University)

Galois coverings of pointed coalgebras

Tuesday, 25 May 2010

09:00 - 09:40: Stefaan Caenepeel (Vrije University, Brussels)

Cohomology with values in restricted Picard groupoids, with applications to Galois coobjects, monoidal categories and Azumaya algebras

09:45 - 10:25: Vladislav Kharchenko (National University of Mexico)

Coideal subalgebras in quantum groups

10:25 - 10:50: *Coffee Break*

10:50 - 11:30: Akira Masuoka (University of Tsukuba)

On affine supergroups

11:35 - 12:15: Hans-Juergen Schneider (University of Munich)

Root systems and Weyl groupoids of Nichols algebras

12:20 - 12:50: Istvan Heckenberger (University of Marburg)

Old and new finite-dimensional Nichols algebras over non-abelian groups

Afternoon Sessions

14:50 - 15:30: Eli Aljadeff (Technion)

Polynomial identities, graded algebras and codimension growth

15:35 - 16:15: Margaret Beattie (Mount Allison University)

Twistings of Hopf algebras with a coalgebra projection

16:15 – 16:30: *Coffee Break*

16:30 – 17:10: Marcelo Aguiar (Texas A&M University)

Coxeter Hopf monoids

17:15 – 17:55: David Radford (University of Illinois)

Some generalizations of quasitriangular and co-quasitriangular Hopf algebras and where the theory of their resulting invariants of knots and links stands at this

Wednesday, 26 May 2010

09:00 – 09:40: Donald Passman (University of Wisconsin-Madison)

The Semiprimitivity Problem for Group Algebras

09:45 – 10:25: Louis Rowen (Bar-Ilan University)

Full quivers of representations of algebras

10:25 – 10:50: *Coffee Break*

10:50 – 11:30: Gabriella Böhm (Research Institute for Particle and Nuclear Physics, Budapest)

The weak theory of monads

11:35 – 12:15: Sara Westreich (Bar-Ilan University)

Structure constants related to symmetric Hopf algebras

12:20 – 13:00: Martin Lorenz (Temple University)

Ring theoretic methods in the representation theory of Hopf algebras

Afternoon: Excursion to Ein-Ovdat and Mitzpe Ramon

Thursday, 27 May 2010

09:00 – 09:40: Susan Montgomery (University of Southern California)

Frobenius-Schur indicators and the trace of the antipode

09:45 – 10:25: Sonia Natale (National University of Cordoba, Argentina)

Hopf algebra deformations of binary polyhedral groups

10:25 – 10:50: *Coffee Break*

10:50 – 11:30: Zhu Shenglin (Fudan University, Shanghai)

On Smash Products of Transitive Module Algebras

11:35 – 12:15: Richard Ng (Iowa State University)

On gauge invariants of finite-dimensional Hopf algebras

12:20 – 13:00: Avinoam Mann (Hebrew University of Jerusalem)

Partition formulae connected with non-abelian groups

Afternoon Sessions

15:00 – 15:25: Nir Ben-David (Technion)

On groups of central type and Involutive Yang-Baxter groups: a cohomological approach

15:30 – 15:50: Walter J. Michaelis (University of New Orleans)

Commuting exponentials in a Lie group

15:55 – 16:15: Leonard Krop (DePaul University)

On the trace of the antipode

16:15 – 16:35: *Coffee Break*

16:35 – 17:15: Christian Kassel (Universite de Strasbourg)

Flatness properties of the generic Hopf Galois extension

17:20 – 18:00: Ami Braun (Haifa University)

Toral p -Lie algebra polynomial invariants