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Fakultät für Mathematik

## Vorträge

**Mittwoch, 21. Oktober 2015, ab 16.15 Uhr, Sky-Lounge (12 OG), Oskar-Morgenstern-Platz 1, 1090 Wien**

### Mathematisches Kolloquium

**Prof. Dr. Constantin Teleman (University of Berkeley): “Introduction to quadratic topology”**

Abstract:

A symmetric bilinear form  $B: \mathbb{Q} \times \mathbb{Q} \rightarrow \mathbb{Q}$  has a unique **quadratic refinement**, a homogeneous quadratic function  $q: \mathbb{Q} \rightarrow \mathbb{Q}$  such that  $B(x, y) = q(x+y) - q(x) - q(y)$ . It is given by the formula  $q(x) = \frac{1}{2}B(x, x)$ . When division by 2 is problematic, the relation between quadratic and symmetric bilinear forms becomes more complicated. We will review this relation on abelian groups, and several appearances of these notions in topology. In particular, we will see why the problem, though connected with the number 2, is not one of division by 2.

**Nils Carqueville und Harald Rindler**

**Montag, 19. Oktober 2015, ab 9.00 Uhr – Freitag, 23. Oktober 2015, ab 10 Uhr, ESI, Boltzman Lecture Hall, Boltzmannngasse 9/2, 1090 Wien,**

### Workshop on

**“Higher topological quantum field theory and categorical quantum mechanics”**

**Organized by Nils Carqueville (U Vienna), Daniel Murfet (U Melbourne), Ingo Runkel (Hamburg U).**

**(Details siehe Attachment)**

**Dienstag, 20. Oktober 2015, ab 14.15 Uhr, Seminarraum 12, Oskar-Morgenstern-Platz 1, 1090 Wien,**

### Mathematical Physics Seminar

**Pietro Giavedoni (University Vienna): “The  $\bar{d}$ -steepest method for oscillator Riemann-Hilbert factorization problems”**

**Organized by Gerald Teschl**

**Dienstag, 20. Oktober 2015, ab 15. 15 Uhr, Dissertantenraum, Freihaus, Turm A, 8. Stock, Wiedner Hauptstr. 8-10, 1040 Wien,**

### Seminar AG Diskrete Mathematik

**Yi Zhang (RISC): "An Algorithm for Contraction of an Ore Ideal"**

Abstract.

We study the contraction problem of an Ore ideal in one variable which is generated by an operator. We give an algorithm to solve it based on desingularization. Desingularization is the problem of finding a left multiple of a given Ore operator in which some factor of the leading coefficient of the original operator is removed. We propose a new algorithm for desingularization and use it to handle the contraction problem.

**Michael Drmota**

**Dienstag, 20. Oktober 2015, ab 15. 00 Uhr, Seminarraum 8, Oskar-Morgenstern-Platz 1, 2. Stock, 1090 Wien,**



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## Fakultät für Mathematik

### Geometric Analysis and Physics (GAP) Research Seminar:

Tracy Payne (Idaho State University):

“Introduction to uniqueness problems in general relativity and the reconstruction of linear waves from radiative properties”

<http://www.mat.univie.ac.at/~gagt/abstracts/151020.html>

Organized by: M.Bauer (UV), V. Branding (TU), D. Fajman (UV), J. Joudioux (UV)

Mittwoch, 21. Oktober 2015, ab 11.30 Uhr, Seminarraum 7, Oskar-Morgenstern-Platz 1, 2. Stock, 1090 Wien,

### NuHAG Seminar:

Hartmut Fuehr (RWTH Aachen): „Biunimodular vectors for unitary matrices”

[http://www.univie.ac.at/nuhag-php/program/talks\\_details.php?id=3030](http://www.univie.ac.at/nuhag-php/program/talks_details.php?id=3030)

Donnerstag, 22. Oktober 2015, ab 16.00 Uhr, Kurt Gödel Research Center for Mathematical Logic, Lecture room, Währinger Str. 25, 1090 Wien,

### KGRC Research Seminar

Hubie Chen (University of the Basque Country, Spain): “The Parameterized Complexity Classification of – and the Logic of – Counting Answers to Existential Positive Queries”

[http://www.logic.univie.ac.at/2015/Talk\\_10-22\\_a.html](http://www.logic.univie.ac.at/2015/Talk_10-22_a.html)

Donnerstg, 22. Oktober 2015, ab 11.00 Uhr, Technische Universität Wien, Arbeitsgruppe Gravitation, Seminarraum A, Währinger Str. 17, 2. Stock, 1090 Wien,

### GAP Seminar

Volker Schlue (Laboratoire Jacques-Louis Lions, Université Paris 6 – Pierre et Marie Curie Sorbonne Universités): „Introduction to uniqueness problems in general relativity and the reconstruction of linear waves from radiative properties“

Organized by M. Bauer (Fak. Math, T.U.), V. Branding (Fak. Math, T.U.), D. Fajman (Fak. Phys, U.V.), J. Joudioux (Fak. Phys, U.V.)

(Details siehe Attachment)

Freitag, 23. Oktober 2015, ab 10.00 Uhr, Fakultät für Mathematik, Besprechungsraum 9. Stock, Oskar-Morgenstern-Platz 1,

### öffentliche Defensio:

Jose Alberto Iglesias Martinez, MSc: “Shape and Image Matching with Nonconvex Regularization“

Dekan Univ.-Prof. Dr. Harald Rindler

(Details siehe Attachment)