



## Vorträge

**Mittwoch, 18. Juni 2014, Sky-Lounge (12 OG),  
Oskar-Morgenstern-Platz 1, 1090 Wien**

### **Mathematisches Kolloquium**

**Prof. Dr. Xavier Viennot (Université Bordeaux 1): “At the crossroad of algebra,  
combinatorics, physics and probabilities: tableaux and exclusion model”**

*Abstract: The PASEP (partially asymmetric exclusion process) is a toy model in the physics of dynamical systems. It is defined with a Markov chain on sets of particles moving on a strip. Explicit expressions for the stationary probabilities of the most general model (with 5 parameters) has been given by physicists, using the (orthogonal) Askey-Wilson polynomials. The resolution is based on a certain "matrix Ansatz" related to a quadratic algebra defined by generators and the unique relation  $DE = qED + E + D$ . Many works have been done by combinatorists interpreting these stationary probabilities with certain families of weighted "tableaux". Deep combinatorics appears, related to the symmetric group and moment of orthogonal polynomials (in particular some  $q$ -Laguerre polynomials). A bijection between these tableaux and permutations play a key role and can be constructed from a combinatorial representation of the above quadratic "PASEP algebra". This representation is inspired from operators coming from computer science in the study of dynamical data structures and has the same flavor as the construction of the classical Robinson-Schenck correspondence from a representation of the most simple Heisenberg-Weyl algebra (defined by  $DU = UD + Id$ ).*

**15:45 Uhr – 16:15 Uhr K & K (Sky Lounge)**

**Univ.-Prof. Dr. Christian Krattenthaler**

**Dekan Univ.-Prof. Dr. Harald Rindler**

**Montag, 16. Juni 2014 bis Freitag, 20. Juni 2014, Erwin Schrödinger Lecture Hall,  
Boltzmannngasse 9, 1090 Wien**

### **ESI Workshop “Combinatorics, Geometry, and Physics”**

**organized by**

**A. Abdesselam (U of Virginia), Ch. Krattenthaler (U Vienna),**

**A. Tanasă (Paris North U), F. Vignes-Tourneret (CNRS - U Lyon 1)**

**(Details siehe Attachment)**

**Montag, 16. Juni 2014, ab 15:15 Uhr, TU Institut für Diskrete Mathematik und  
Geometrie, Freihaus, grüner Turm (A), 5. Stock, Prüfungs- und Besprechungszimmer,  
Wiedner Hauptstraße 8-10, 1040 Wien**

### **Algebra Seminar**

**Wilfried Meidl: „A construction of bent functions and their duals”**

**Montag, 16. Juni 2014, ab 13:30 Uhr, Besprechungsraum, 9. Stock,  
Oskar-Morgenstern-Platz 1, 1090 Wien**

### **Öffentliche Defensio**

**Dipl.-Math. Henri Mühle BSc: „Combinatorics of Fuß-Catalan Posets Associated with  
Reflection Groups“**



Dienstag, 17. Juni 2014, von 15:00 Uhr bis 17:00 Uhr, Seminarraum 8, 2. Stock,  
Oskar-Morgenstern-Platz 1, 1090 Wien

**Geometry and Analysis on Groups – Research Seminar**

Dominika Pawlik (Uniwersytet Warszawski): "Automaticity of hyperbolic groups and analogous properties of their Gromov boundaries."

<http://www.mat.univie.ac.at/~dosaj/GGTWien/Seminar.html>

Dienstag, 17. Juni 2014, von 11:15 Uhr bis 12:45 Uhr, Seminarraum 12, 2. Stock,  
Oskar-Morgenstern-Platz 1, 1090 Wien

**Complex Analysis Seminar**

Damir Ferizovic: "Pointwise estimates of the Bergman kernel on the weighted Fock space"

<http://www.univie.ac.at/complexanalysis/Activities/Seminar2014.html>

Dienstag, 17. Juni 2014, von 15:15 bis 16:45 Uhr, TU Dissertantenraum, Freihaus,  
Turm A, 8. Stock, Wiedner Hauptstraße 8-10, 1040 Wien

**AG Diskrete Mathematik**

Darij Grinberg (Ludwig Maximilians Universitaet Muenchen): "Birational motion on finite posets"

Dienstag, 17. Juni 2014, ab 19.00 Uhr, Institut Français, Währingerstraße 30, 1090 Wien

**Mathematik – Cycle 2014**

Xavier Viennot: „Bäume in den Sternen, Bäume in den Lichtkörnern“ (Französisch)

Mittwoch, 18. Juni 2014, von 11:15 Uhr bis 12:45 Uhr, Besprechungszimmer, 3. Stock  
Oskar-Morgenstern-Platz 1, 1090 Wien

**Vortrag**

Johanna Michor: „The Toda Shock problem“

Mittwoch, 18 Juni 2014, 10:30 Uhr bis 12:00 Uhr, Besprechungszimmer, 3 Stock, Oskar-Morgenstern-Platz 1, 1090 Wien

**Geometry, Analysis and Physics (GAP)**

Philipp Harms (ETH Zürich): "Sobolev metrics on shape space of surfaces"

[http://www.mat.univie.ac.at/~gap\\_seminar/](http://www.mat.univie.ac.at/~gap_seminar/)

Organized by M. Bauer, V. Branding, A. Burtscher, D. Fajman, F. Genoud, J. Joudioux

Freitag, 20. Juni 2014, von 15:00 Uhr bis 17:00 Uhr, Seminarraum 10, 2. Stock,  
Oskar-Morgenstern-Platz 1, 1090 Wien

**Vortrag**

Wolfgang Alexander Moens (University of California San Diego):

"Constructing faithful representations of Lie algebras and gradings"