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**Fakultät für Mathematik**

## **Vorträge**

**Mittwoch, 4. Nov. 2015, ab 16:15 Uhr, Sky-Lounge (12 OG), Oskar-Morgenstern-Platz 1, 1090 Wien**

### **Mathematisches Kolloquium**

**Maurice De Gosson (Univ. Wien): “Born-Jordan Quantization and Pseudodifferential Operators”**

Abstract: Quantum mechanics is one of the most successful sciences ever. There are several possible mathematical formulations of this theory, one of the most effective being operator theory because it allows the calculation of spectral values corresponding to the energy levels of atoms. This however raises a basic question: given a classical "observable" (energy, angular momentum, etc.) what should the associated quantum operator be? This question has led indirectly to vast developments in operator theory, in particular pseudodifferential theory under the name of "quantization schemes". In this talk we explain the questions at issue, and compare the Weyl quantization with the less well-known Born Jordan quantization. The differences between Weyl and Born Jordan quantization are in fact of a rather subtle nature; for instance, observables (or "symbols" as they are called in mathematics) will not correspond in a one-to-one fashion to operators (quantum physicists would talk about the non-uniqueness of dequantization). Born - Jordan pseudodifferential calculus moreover leads to an alternative version of phase space quantum mechanics, where the usual Wigner distribution has to be replaced with a new generalized quasi-distribution which is being intensively studied in timefrequency analysis. In this talk we begin by giving some physical motivations, we thereafter give a user-friendly definition of pseudodifferential operators accessible to a large audience; we thereafter discuss the issue of invertibility of this quantization scheme following recent yet unpublished results obtained in collaboration with E. Cordero and F. Nicola. We finally briefly discuss the issue of continuity of Born- Jordan operators in Feichtinger's modulation spaces.

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

**Vinum cum pane nach dem Vortrag**

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

**Dienstag, 3. Nov. 2015, ab 9.30 Uhr – Freitag, 6. Nov. 2015, ab 10 Uhr,  
ESI, Boltzman Lecture Hall, Boltzmannngasse 9/2, 1090 Wien,**

### **Workshop on**

**“Several complex variables and CR geometry”**

**org. by S. Fu (Rutgers U, Camden), F. Haslinger (U Vienna), B. Lamel (U Vienna) u.  
E. Straube (Texas A & M U)  
(Details siehe Attachment)**

**Dienstag, 3. Nov. 2015, von 14:15 Uhr bis 15:00 Uhr, SR 12, 2. OG., Oskar-Morgenstern-Platz 1, 1090 Wien**

### **Mathematical Physics Seminar**

**Pietro Giavedoni (Univ. Vienna): „The d-bar steepest descent method for oscillatory Riemann-Hilbert factorization problems II”**

**Organized by G. Teschl, A. Kostenko**

**<http://www.mat.univie.ac.at/~gerald/mp-sem/index.html>**



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## Fakultät für Mathematik

Dienstag, 3. Nov. 2015, von 15:00 Uhr bis 17:00 Uhr, SR 8, 2. OG., Oskar-Morgenstern-Platz 1, 1090 Wien,

### Geometry and Analysis on Groups

Karl Auinger (Univ. Wien): "Profinite graphs and the Ribes-Zalesskii theorem."

Organized by G. Arzhantseva, Ch. Cashen

<http://www.mat.univie.ac.at/~gagt/abstracts/151103.html>

Dienstag, 3. Nov. 2015, von 15:00 Uhr bis 16:00 Uhr, SR Biomathematik, 9. OG., Oskar-Morgenstern-Platz 1, 1090 Wien

### AG Biomathematik

Swati Patel (UC Davis): "TBA"

organized by R. Bürger, J. Hermisson

Dienstag, 3. Nov. 2015, von 15:15 Uhr bis 16:45 Uhr, TU-Wien, Dissertantenraum, Freihaus, Turm A, 8. Stk. Wiedner Hauptstr. 8-10, 1040 Wien

### AG Diskrete Mathematik

Yvonne Kemper (Univ. Wien): "The Odd-Even Invariant and Hamiltonian Circuits in Tope Graphs"

<http://dmg.tuwien.ac.at/nfn/agdm.html>

organized by M. Drmota

Mittwoch, 4. Nov. 2015, von 11:30 Uhr bis 12:30 Uhr, SR 7, 2. OG., Oskar-Morgenstern-Platz 1, 1090 Wien

### NuHAG Seminar

Joachim Stöckler: „Construction of tight wavelet frames by methods of real algebraic geometry“

[http://www.univie.ac.at/nuhag-php/program/talks\\_details.php?id=3034](http://www.univie.ac.at/nuhag-php/program/talks_details.php?id=3034)

organized by H. G. Feichtinger

Donnerstag, 5. Nov. 2015, von 11:00 Uhr bis 12:00 Uhr, SR A, Währingerstr. 17, 2. OG., 1090 Wien

### GAP Seminar

Paul Klinger (Univ. Wien): "Generic spacelike singularities: The BKL conjecture"

Org. by B. Bauer, V. Branding, D. Fajman, J. Joudioux, B. Schörkhuber

(siehe Attachment)

Donnerstag, 5. Nov. 2015, von 16:00 Uhr bis 18:00 Uhr, Josephinum, SR 8 (Zi. 02.101), Währinger Str. 25, 1090 Wien,

### KGRC Research Seminar

Diego Alejandro Mejía Guzmán (TU Wien): "Separating the left side of Cichon's diagram"

[http://www.logic.univie.ac.at/2015/Talk\\_11-05\\_a.html](http://www.logic.univie.ac.at/2015/Talk_11-05_a.html)