

**Summer School on “Combinatorics, Geometry, and Physics”**

organized by

**Abdelmalek Abdesselam (U of Virginia),  
Christian Krattenthaler (U Vienna),  
Adrian Tanasă (Paris North U),  
Fabien Vignes-Tourneret (CNRS - U Lyon 1)****June 2 - 13, 2014****Schedule, Week 2: June 9 - 13, 2014**

- **Monday, June 9, 2014 - All lectures at the Campus AKH, Alserstrasse 4/Hof 1, Seminar Rm. 1.6.2**  
[http://campus.univie.ac.at/fileadmin/user\\_upload/campus/plan/2012-04-18\\_uniw\\_campus\\_planhandout\\_A3q.pdf](http://campus.univie.ac.at/fileadmin/user_upload/campus/plan/2012-04-18_uniw_campus_planhandout_A3q.pdf)  
09:30 – 10:30 **Alice Guionnet**  
Loop Equations, Topological Expansions, and Universality in Random Matrix Models  
10:30 – 11:00 *break*  
11:00 – 12:30 **Exercise Session**  
12:30 – 14:00 *lunch break*  
14:00 – 15:00 **Razvan Gurau**  
Introduction to Random Tensors  
15:00 – 15:30 *break*  
15:30 – 16:30 **Razvan Gurau**  
Introduction to Random Tensors  
16:30 – 18:00 **Exercise Session**
- **Tuesday, June 10, 2014 - All lectures at the ESI, Boltzmann Lecture Hall**  
09:00 – 10:30 **Razvan Gurau**  
Introduction to Random Tensors  
10:30 – 11:00 *coffee/tea break*  
11:00 – 12:30 **Exercise Session**  
12:30 – 14:00 *lunch break*  
14:00 – 15:00 **Alice Guionnet**  
Loop Equations, Topological Expansions, and Universality in Random Matrix Models  
15:00 – 15:30 *break*  
15:30 – 16:30 **Alice Guionnet**  
Loop Equations, Topological Expansions, and Universality in Random Matrix Models  
16:30 – 18:00 **Exercise Session**

- **Wednesday, June 11, 2014 - All lectures at the ESI, Boltzmann Lecture Hall**

09:00 – 10:30 **Alice Guionnet**

Loop Equations, Topological Expansions, and Universality in Random Matrix Models

10:30 – 11:00 *coffee/tea break*

11:00 – 12:30 **Exercise Session**

12:30 – 14:00 *lunch break*

**14:00 – 16:00 Students' presentations:**

14:00 – 14:25 **Fedor Popov**

*Secularly growing loop corrections in strong electric field*

14:30 – 14:55 **Konstantin Matveev**

*A short introduction to the Macdonald processes*

15:00 – 15:25 **Reiko Turiomi**

*Parametric Representation toward Dimensional Regularization for Rank  $d$  Tensor Models*

15:30 – 15:55 **Stéphane Dartois**

*A Givental-like decomposition formula and bilinear identities for melonic  $T^4$  tensor models*

- **Thursday, June 12, 2014 - All lectures at the ESI, Boltzmann Lecture Hall**

09:00 – 10:30 **Razvan Gurau**

Introduction to Random Tensors

10:30 – 11:00 *coffee/tea break*

11:00 – 12:30 **Exercise Session**

12:30 – 14:00 *lunch break*

14:00 – 15:00 **Alice Guionnet**

Loop Equations, Topological Expansions, and Universality in Random Matrix Models

15:00 – 15:30 *break*

15:30 – 16:30 **Alice Guionnet**

Loop Equations, Topological Expansions, and Universality in Random Matrix Models

16:30 – 18:00 **Exercise Session**

20:00 **Social “Heurigen” Evening**

- **Friday, June 13, 2014 - All lectures at the ESI, Boltzmann Lecture Hall**

09:00 – 10:30 **Razvan Gurau**

Introduction to Random Tensors

10:30 – 11:00 *coffee/tea break*

11:00 – 12:30 **Exercise Session**

12:30 – 14:00 *lunch break*

14:00 – 15:00 **Discussion of problems**

15:00 – 15:30 *break*

15:30 – 16:30 – 18:00 **Discussion of problems**