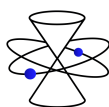


Workshop on  
“Matrix Models for Noncommutative Geometry and String Theory”

July 9 – 13, 2018

organized by

Denjoe O’Connor (Dublin Inst. for Advanced Studies), Jun Nishimura (KEK, Tsukuba), Harold Steinacker (U Vienna), Asato Tsuchiya (Shizuoka U)



**COST** Action MP 1405  
Quantum Structure of Spacetime

• **Monday, July 9, 2018**

08:45 – 09:00 **Registration**

09:00 – 09:10 **Welcome**

09:10 – 10:00 **Hikaru Kawai**

*Problems and prospects of the IIB matrix model*

10:10 – 11:00 **Jun Nishimura**

*Space-time structure in the Lorentzian type IIB matrix model*

11:10 – 11:30 *coffee / tea break*

11:30 – 12:20 **Asato Tsuchiya**

*Emergence of chiral zero modes in the Lorentzian type IIB matrix model*

12:30 – 14:20 *lunch break*

14:20 – 15:10 **Masafumi Fukuma**

*Distance between configurations in MCMC simulations and the emergence of AdS geometry in the simulated tempering algorithm*

15:10 – 15:30 *coffee / tea break*

15:30 – 16:20 **Jens Hoppe**

*Fundamental Structures of M Theory*

16:30 – 16:45 **Timon Salar Gutleb**

*BProbe: a tool to measure matrix geometries*

• **Tuesday, June 10, 2018**

09:00 – 09:50 **Allen Stern**

*Signature change in matrix model solutions*

10:00 – 10:50 **Harold Steinacker**

*Quantized cosmological spacetimes and higher spin in the IKKT model*

11:00 – 11:20 *coffee / tea break*

11:20 – 12:10 **Goro Ishiki**

*Diffeomorphism for fuzzy spaces*

12:20 – 14:10 *lunch break*

14:10 – 15:00 **Maja Buric**

*Fuzzy geometry via noncommutative frame formalism: fuzzy de Sitter space*

15:10 – 15:30 *coffee / tea break*

15:30 – 16:20 **Joanna Karczmarek**

*Entanglement entropy on the noncommutative sphere*

16:30 – 16:45 **George Manolakos**

*Three-dimensional gravity as a gauge theory on noncommutative spaces*

• **Wednesday, June 11, 2018**

09:00 – 09:50 **Frank Ferrari**

*On Melonic Matrix Models and SYK-like Black Holes*

10:00 – 10:50 **Tim Koslowski**

*The continuum limit of matrix models with the FRGE*

11:00 – 11:20 *coffee / tea break*

11:20 – 12:10 **Hidehiko Shimada**

*Towards tensionless string field theory for six-dimensional (2,1) CFT*

12:20 – 12:40 **Lisa Glaser**

*Simulating the 'Quanta of geometry'*

**Free afternoon**

18:30 **"Heuriger"**(conference dinner)

• **Thursday, July 12, 2018**

09:00 – 09:50 **David Berenstein**

*Partial deconfinement phases in gauged multi-matrix quantum mechanics*

10:00 – 10:50 **Masanori Hanada**

*Some real-time aspects of quantum black hole*

11:00 – 11:20 *coffee / tea break*

11:20 – 12:10 **Denjoe O'Connor**

*Phase transitions in the BMN matrix model*

12:20 – 14:20 *lunch break*

14:20 – 15:10 **Veselin Filev**

*Phase structure of a holographic defect field theory with a domain wall*

15:20 – 15:40 *coffee / tea break*

15:40 – 16:30 **Fumihiko Sugino**

*Highly entangled quantum spin chains and their extensions by semigroups*

• **Friday, July 13, 2018**

09:00 – 09:50 **Sanjaye Ramgoolam**

*Branes, Dominoes and Words.*

10:00 – 10:50 **Athanasios Chatzistavrakidis**

*T-Duality, fluxes and noncommutativity in closed string theory*

11:00 – 11:20 *coffee / tea break*

11:20 – 12:10 **Satoshi Watamura**

*Contravariant gravity and twisted Poisson structure*

12:20 – 14:20 *lunch break*

14:20 – 15:10 **Dimitra Karabali**

*Quantum Hall effect: An effective action for all dimensions*

15:20 – 15:40 *coffee / tea break*

15:40 – 16:30 **V. Parameswaran Nair**

*Coherent States, Thermofield Dynamics and Gravity*

**All talks take place at the ESI, Boltzmann Lecture Hall!**