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)

- 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*

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**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)*

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**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!