

49 Cracow School of Theoretical Physics

May 31 – June 10, 2009, Zakopane, Poland

Lectures:

1. Jan Ambjorn (NBI) - [ambjorn at nbi.dk](mailto:ambjorn@nbi.dk)
Quantum Gravity: The Self-Organizing Universe
2. Jean-Paul Blaizot (Saclay) - [Jean-Paul.Blaizot at cea.fr](mailto:Jean-Paul.Blaizot@cea.fr)
Large N_c Confinement, Universal Shocks and Random Matrices
3. Bergfinnur Durhuus (Copenhagen) - [durhuus at math.ku.dk](mailto:durhuus@math.ku.dk)
Selected Problems in Random Surface Theory
4. Domenec Espriu (Barcelona) - [espriu at ecm.ub.es](mailto:espriu@ecm.ub.es)
Gravity as an Effective Theory
5. Jeffrey Greensite (San Francisco) - [greensit at stars.sfsu.edu](mailto:greensit@stars.sfsu.edu)
Some Current Approaches to the Confinement Problem
6. Thordur Jonsson (Iceland) - [thjons at raunvis.hi.is](mailto:thjons@raunvis.hi.is)
Random Trees
7. Daniel Litim (Sussex) - [litim at mail.cern.ch](mailto:litim@mail.cern.ch)
Non-perturbative Gravitation and the Renormalisation Group
8. Renate Loll (Utrecht) - [R.Loll at uu.nl](mailto:R.Loll@uu.nl)
CDT and the Quest for Observables
9. Pawel O. Mazur (S.Carolina) - [mazur at mail.psc.sc.edu](mailto:mazur@mail.psc.sc.edu)
Black Holes and the Idea of Emergent Gravitation
10. Emil Mottola (Los Alamos) - [emil at lanl.gov](mailto:emil@lanl.gov)
Dark Energy & Condensate Stars
11. Rajamani Narayanan (Florida) - [rajamani.narayanan at fiu.edu](mailto:rajamani.narayanan@fiu.edu)
Continuum Reduction in Large N Gauge Theory
12. John Negele (MIT) - [negele at mit.edu](mailto:negele@mit.edu)
Using Lattice QCD to Understand the Structure of Hadrons
13. Herbert Neuberger (Rutgers) - [neuberger at physics.rutgers.edu](mailto:neuberger@physics.rutgers.edu)
Large N Phase Transitions under Scaling and Their Uses
14. Niels Obers (NBI) - [obers at nbi.dk](mailto:obers@nbi.dk)
Recent Developments for Higher-Dimensional Black Holes
15. Niall O'Murchadha (Cork) - [niall at ucc.ie](mailto:niall@ucc.ie)
Quasilocal Energy in General Relativity
16. Jan M. Pawłowski (Heidelberg) - [j.pawłowski at thphys.uni-heidelberg.de](mailto:j.pawłowski@thphys.uni-heidelberg.de)
Confinement & Chiral Symmetry Breaking from Functional Methods
17. Roberto Percacci (Trieste) - [percacci at sissa.it](mailto:percacci@sissa.it)
A Particle Physicist's Approach to Gravity
18. Mukund Rangamani (Durham) - [mukund.rangamani at durham.ac.uk](mailto:mukund.rangamani@durham.ac.uk)
Holography for Non-relativistic CFTs
19. Francesco Sannino (Univ. of South. Denmark) - [sannino at ifk.sdu.dk](mailto:sannino@ifk.sdu.dk)
Conformal Dynamics from LHC to Cosmology
20. Andrzej Staruszkiewicz (Krakow) - [staruszkiewicz at th.if.uj.edu.pl](mailto:staruszkiewicz@th.if.uj.edu.pl)
A Good Problem: the Only Way to Good Physics
21. Michael Teper (Oxford) - [m.teper at physics.oxford.ac.uk](mailto:m.teper@physics.oxford.ac.uk)
Large N Flux Tubes as Strings; Near-Conformality - Some Lattice Perspectives
22. Arkady Vainshtein (Minnesota) - [vainshte at umn.edu](mailto:vainshte@umn.edu)
Theory of the Muon Anomalous Magnetic Moment

Seminars:

1. Łukasz Bratek (Kraków/IFJ-PAN) [lukasz.bratek at ifj.edu.pl](mailto:lukasz.bratek@ifj.edu.pl)
Modified Fundamental Rotator
2. Krzysztof Cichy (Poznań Uni.) [krzysztof.cichy at gmail.com](mailto:krzysztof.cichy@gmail.com)
Mixed Action Approach to Lattice QCD: Valence Fermions on a Twisted Mass Sea
3. Andrzej Goerlich (Kraków/UJ) [atg at th.if.uj.edu.pl](mailto:atg@th.if.uj.edu.pl)
Geometry of the Universe in Causal Dynamical Triangulations
4. Michał Heller (Kraków/UJ) [michal.p.heller at gmail.com](mailto:michal.p.heller@gmail.com)
Boost-invariant Early Times Dynamics - Far from Equilibrium Physics and AdS/CFT
5. Marcin Kaźmierczak (Warszawa Uni.) [makazm at fuw.edu.pl](mailto:makazm@fuw.edu.pl)
Coupling procedure for the Poincaré Gauge Theory of Gravity with Matter Fields
6. Piotr Korcyl (Kraków/UJ) [korcyl at th.if.uj.edu.pl](mailto:korcyl@th.if.uj.edu.pl)
Exact Solutions in D=2 Supersymmetric Yang-Mills QM with SU(3) Gauge Group
7. Mateusz Koreń (Kraków/UJ) [mateusz.koren at uj.edu.pl](mailto:mateusz.koren@uj.edu.pl)
Phase structure of large N lattice QCD on an L^3 torus
8. Mikołaj Korzyński (MPI Golm) [maskonur2 at gmail.com](mailto:maskonur2@gmail.com)
Quasilocal Quantities Characterizing the Fluid Flow in General Relativity and the Backreaction Problem
9. Piotr Kotko (Kraków/UJ) [kotko at h.if.uj.edu.pl](mailto:kotko@h.if.uj.edu.pl)
Nonperturbative Low Energy Amplitudes in Non-Local Chiral Quark Model
10. Robert Lohmayer (Regensburg Uni.) [robert.lohmayer at gmx.net](mailto:robert.lohmayer@gmx.net)
Infinite-N Limit of the Eigenvalue Density of Wilson Loops in 2D SU(N)YM
11. Rachel Maitra (Utrecht Uni.) [R.L.Maitra at uu.nl](mailto:R.L.Maitra@uu.nl)
Can CDT Probe Factor-Ordering Issues?
12. Patryk Mach (Kraków/UJ) [mach at th.if.uj.edu.pl](mailto:mach@th.if.uj.edu.pl)
An Exact Solution of the Relativistic Hydrodynamical Riemann Problem and its Numerical Applications
13. Noppadol Mekareeya (Imperial College) [n.mekareeya07 at imperial.ac.uk](mailto:n.mekareeya07@imperial.ac.uk)
Brane Tilings, M2-Branes and Chern-Simons Theories
14. Włodzimierz Natorf (Warszawa Uni.) [nat at fuw.edu.pl](mailto:nat@fuw.edu.pl)
Trapped Surfaces in Exact Generalizations of Kerr Space-Time
15. Tomasz Romańczukiewicz (Kraków/UJ) [trom at th.if.uj.edu.pl](mailto:trom@th.if.uj.edu.pl)
Long Lived Oscillons
16. Andrzej Rostworowski (Kraków/UJ) [arostwor at th.if.uj.edu.pl](mailto:arostwor@th.if.uj.edu.pl)
Non-linear Effects in Late-Time Asymptotics for Self-Gravitating Massless Fields
17. Alexander Schenkel (Würzburg Uni.) aschenkel@physik.uni-wuerzburg.de
Symmetry Reduction and Exact Solutions in Twisted Noncommutative Gravity
18. Michael Scherer (Jena Uni.) [michael.scherer at uni-jena.de](mailto:michael.scherer@uni-jena.de)
Asymptotic Safety of Simple Yukawa Systems
19. Sigurdur Stefansson (Iceland Uni.) siguste@hi.is
Random Tree Growth by Vertex Splitting
20. Sebastian Szybka (Kraków/UJ) [szybka at ifj.edu.pl](mailto:szybka@ifj.edu.pl)
Luminosity Distance and Clustering in Swiss Cheese Cosmology
21. Willem Westra (Iceland Uni.) [willemwestra at hotmail.com](mailto:willemwestra@hotmail.com)
Towards Solvable Matter Models in Causal Quantum Gravity
22. Piotr Żenczykowski (Kraków/IFJ-PAN) [piotr.zenczykowski at ifj.edu.pl](mailto:piotr.zenczykowski@ifj.edu.pl)
Quantization of Nonrelativistic Phase Space and the Standard Model