

Lectures in week 1:

Monday May 20

- 10:00 Opening remarks
- 10:45 Klaus Fredenhagen: Quantum field theory on curved space time
- 15:00 Hans Peter Nilles Axions: Alignment and Clockworks

Tuesday May 21

- 10:00 Christian Wiesendanger:
Local Lorentz invariance and a new theory of gravitation equivalent to General Relativity
- 14:30 Rainer Verch:
Local covariant QFT, renormalized stress energy tensor and the Chaplygin gas

Wednesday May 22

- 10:00 John Donoghue:
A) Lessons from quantum general relativity, and B) Microcausality uncertainties
- 14:30 Christoph Wetterich: Quantum Scale Symmetry and Cosmology

Thursday May 23

- 10:00 Andrew Tolley: Positivity Bounds and Gravitational Theories
- 14:30 Chiara Caprini: Gravitational Waves from Phase Transitions

Friday May 24

- 10:00 Wilfried Buchmüller: High Scale Supersymmetry in Field Theory and String Theory
- 14:30 Kohei Kamada: Baryon asymmetry from cosmological (hyper)magnetic fields

Lectures in week 2:

Monday May 27

- 10:00 Jennifer Schober: (Chiral) MHD dynamos and the evolution of cosmic magnetic fields
- 14:30 Ema Dimastrogiovanni: Gravitational Waves from Inflation

Tuesday May 28

- 10:00 Robert Brandenberger:
Cosmological Perturbations and Applications to Dark Matter and Dark Energy Models
- 11:30 Ugo Moschella: Recent results in de Sitter QFT
- 15:00 Nemanja Kaloper: Λ

Wednesday May 29

- 10:00 Enrico Morgante: Baryogenesis with chiral magnetic fields from axion Inflation
- 14:30 Roberto Vega Morales: Vector dark matter fields from the end of inflation

Thursday May 30 10`-22

- 10:00 Ayuki Kamada: Composite asymmetric dark matter and galactic rotation curves
11:30 Slava Mukhanov: Dark Energy, Dark Matter and the Quanta of Geometry

Friday May 31

- 10:00 Claudio Dappiaggi: Hadamard states on cosmological spacetimes
11:30 Laura Covi: Sommerfeld effect at finite temperature
14:30 Lavinia Heisenberg: White knuckle ride for gravity

Lectures in week 3:

Monday June 3

- 10:00 Antonio Masiero: DM and g-2 as promising windows on BSM physics
11:30 Kasia Rejzner:
Observables in perturbative quantum gravity and perturbative quantum cosmology
15:00 Ruth Durrer: Testing General Relativity with Cosmological Observations

Tuesday June 4

- 10:00 Nicola Pinamonti:
Semiclassical Einstein Equation and its Fluctuations for cosmological Spacetimes
14:30 Bernard Kay:
Remarks on (A) an approximate notion of 'particle' for curved spacetime (B) entropy, information loss and events

Wednesday June 5

- 10:00 Ayres Freitas: Flavorful light dark Matter Mediators
11:30 Markus Fröb: Quantum gravitational backreaction in the case of the local Hubble rate
15:00 Benjamin Stefanek: Ricci Reheating

Thursday June 6

- 10:00 Martin Reuter:
Background Independent Quantum Field Theory and Gravitating Vacuum Fluctuations
14:30 Oded Zilberberg:
Dynamical realization of 4D-like quantized bulk responses using 2D topological Pumps

Friday June 7

- 10:00 Walter Tangarife: Dissipative Dark Matter and Active Galactic Nuclei
11:00 Concluding remarks