

Schedule of Long-Term Workshop "Holographic vistas on Gravity and Strings" (May.11th-July 18th)

Coffee time: Everyday (Mon.-Fri) 10:30-11:00

@ K102 in Kenkyu Building 1F (in front of Panasonic Hall)

Three day Intensive Workshop: May 26-28.

@Panasonic Auditorium (1F Yukawa Hall)

Informal Seminar Slots: (Mon.-Thu.) 11:00-12:00

(or 16:30-17:30 if necessary) @ Room. K102 (Kenkyu Building 2F)

The informal seminars will be held on demand, please see below for the informal seminar schedule. Please send an email to takayana_at_yukawa.kyoto-u.ac.jp if you want to organize or speak..

[Detailed Schedule] (Informal Seminars are normally @Y206, 2F Yukawa Hall)

May 12th 10:30-11:00 The first coffee time

May 19th 11:00-12:00 Sumit Das (Kentucky) @ Y206 (in Yukawa Hall 2F)

Holographic Quantum Quench and Scaling In Quantum Critical Dynamics

May 20th 11:00-12:00 Roberto Emparan (Barcelona) @ Y206 (in Yukawa Hall 2F)

Aspects of black holes in the large D expansion

May 20th 16:30-17:30 Helvi Witek (Cambridge) @ Y206 (in Yukawa Hall 2F)

Black holes as observatories for beyond-standard model physics

May 22th 11:00-12:00 Paolo Pani (Lisbon) @ Y206 (in Yukawa Hall 2F)

Spherically symmetric collapse in a confining geometry

May 23th 11:00-12:00 "Discussion on quasi-normal modes of black holes"

Moderator: Leonardo Gualtieri (Rome)

@ Y206 (in Yukawa Hall 2F)

May 26th-28th 3 day workshop @Panasonic Auditorium (1F Yukawa Hall)

May 29th 11:00-12:00 Sandip Trivedi (TIFR, Mumbai)

@Panasonic Auditorium (1F Yukawa Hall)

Strongly Coupled Anisotropic Fluids Via Holography

May 30th 11:00-12:00 Aninda Sinha (Indian Institute of Science, Bangalore)

@Panasonic Auditorium (1F Yukawa Hall)

Discussions on Higher Derivative Corrections to Holographic Entanglement Entropy

May 30th 16:30-17:30 Oscar Dias (Southampton)

@Panasonic Auditorium (1F Yukawa Hall)

Lumpy black holes: connecting black holes to black rings

June 2nd 11:00-12:00 Enrico Barausse (IAP Paris) @ Y206 (in Yukawa Hall 2F)

Observational constraints on Lorentz violations in gravity

June 2nd 15:00-15:30 YITP tea party (you are all welcome)

June 2nd 15:30-16:30 YITP Colloquium by Sumit Das (Kentucky)

@Panasonic Auditorium (1F Yukawa Hall)

Holography, Cosmology And Quantum Quench

June 3rd 11:00-12:00 Sergey Solodukhin (Tours) @ Y206 (in Yukawa Hall 2F)

Minkowski/conical defects correspondence

June 3rd 16:30-17:30 Sandip Trivedi (TIFR, Mumbai) @ Y206 (in Yukawa Hall 2F)

If BICEP is right ...

June 4th 11:00-12:00 Pallab Basu (ICTS, Bangalore) @ Y206 (in Yukawa Hall 2F)

Holographic thermalization

June 9th 11:00-12:00 Veronika Hubeny (Durham) @ Y206 (in Yukawa Hall 2F)

Covariant wedges in AdS/CFT

June 9th 16:30-17:30 Mukund Rangamani (Durham) @ Y206 (in Yukawa Hall 2F)

Adiabatic Fluids

June 12th 11:00-12:00 Moshe Rozali (UBC) @ Y206 (in Yukawa Hall 2F)

Holographic Edge States

June 12th 15:00-15:30 YITP tea party (you are all welcome)

June 12th 15:30-16:30 YITP Colloquium by Roberto Emparan (Barcelona)

@Panasonic Auditorium (1F Yukawa Hall)

The large D limit of General Relativity

June 16th 10:30- Coffee Break is moved to K102 (Kenkyu Building 1F)

The coffee break will be held every week day until July 18th @ K102.

July 8th 11:00-12:00 Marina Martinez (Barcelona) @ K102.

TBA

July 9th 11:00-12:00 Chanyong Park (Ewha Womans University) @ K102

Holographic mesons in the nuclear matter

July 11th 17:00-18:00 Sugumi Kanno (Univ of Cape Town) @ K102

Impact of quantum entanglement on spectrum of cosmological fluctuations

July 14th 11:00-12:00 Pau Fiqueras (DAMTP, Cambridge) @ K102

Localised plasma balls

July 15th 11:00-12:00 Vishnu Jejjala (Univ of Witwatersrand) @ K102

Hot Attractors

July 15th 16:30-17:30 Norihiro Tanahashi (Kavli IPMU, Tokyo) @ K102

Causality and Hyperbolicity of Lovelock Theories

July 16th 11:00-12:00 Stefan Hollands (Univ of Leipzig) @ K102

July 18th Workshop closing

[Abstracts of the informal seminars]

May 20th 16:30-17:30 Helvi Witek (Cambridge)

Title: Black holes as observatories for beyond-standard model physics

Abstract:

Despite the great success of black hole phenomenology in astrophysics as well as high energy physics many fundamental questions concerning their stability are still open.

I will discuss the superradiant effect of Kerr BHs which can yield the "BH-bomb" instability when surrounded by a "mirror". This setup arises naturally in the presence of massive fields around the BH, modelling, e.g., condensates of ultra-light bosonic fields such as axion-like particles or dark matter candidates.

Thus, exploring the superradiant instability of Kerr BHs opens up the exciting possibility to better understand fundamental fields by observing astrophysical BHs.

In this talk, I will present recent results concerning massive fields in BH backgrounds as well as first numerical simulations of the fully non-linear case. We have explored massive scalar fields surrounding Kerr BHs and we have found interesting signatures in the scalar and gravitational wave channel. The BH's response hints at superradiant effects at the non-linear level.

July 15th 16:30-17:30 Norihiro Tanahashi (Kavli IPMU, Tokyo)

Title:

Causality and Hyperbolicity of Lovelock Theories

Abstract:

We study gravitational wave propagation in Lovelock theories of gravity, which are extensions of Einstein's theory by higher-curvature corrections, to examine if it has good properties such as causality and hyperbolicity. We study the propagation on various background solutions, and find that the propagation on plane wave solutions obey the causality, while that on spherically-symmetric solutions may violate hyperbolicity. In the latter case, time evolution is not well-posed and the theories start to show pathological behaviors. We discuss implications of this phenomenon.