# YITP Molecule-type workshop: "Dynamics in Strong Gravity Universe" Sep.1-14, 2018 at Yukawa Institute

# Program

Coffee time Everyday (Mon.- Fri.) 10:30 -- 11:00 and 15:00 -- 15:30

At "Salon" just outside Panasonic Auditorium, 1F Yukawa Hall

(On Sep.  $3^{rd}$  (Mon) from 11:00. On Sep.  $13^{th}$  (Thu.) at room K102)

Informal Seminars (Mon.-Fri.) 11:00-12:00 and/or 15:30-16:30
Panasonic Auditorium, 1F Yukawa Hall
(On Sep. 13th(Thu) at room Y306)

## Two-day-intensive workshop

Sep. 5(Wed), 6(Thu) at Panasonic Auditorium, 1F Yukawa Hall

	Sep. 5 (Wed.)	Sep. 6 (Thu.)
10:00-11:00	C. Herdeiro	U. Sperhake
(Talk+Discussion)		
	Coffee	Coffee
11:30-12:30	P. Cunha	C. Palenzuela
	Lunch	Lunch
14:00-15:00	H. Yoshino	P. Chesler
	Coffee	Coffee
15:30-16:30	M. Kimura	K. Nakao
16:40-17:40	B. Way	C-M. Yoo
18:30		Banquet

### 2-day-workshop speakers:

#### 5th

Carlos Herdeiro (Aveiro)

"Black hole scalarisation(s)"

Pedro Cunha (Aveiro)

"Shadows and strong gravitational lensing"

Hirotaka Yoshino (Osaka-city)

"Improved analysis of axion bosenova"

Masashi Kimura (Lisbon)

"Stability analysis of a black hole by S-deformation for coupled system"

Benson Way (British Columbia)

"Oscillators, Resonators, and the Instability of AdS"

#### 6th

Ulrich Sperhake (Cambridge)

"Orbiting black-hole binaries and apparent horizons in higher-dimensions" Carlos Palenzuela Luque (Balears)

"Modified gravity theories and their smoking guns"

Paul Chesler (Harvard)

"Numerical evolution of shocks in the interior of Kerr black holes"

Ken-ichi Nakao (Osaka-city)

"On gravastar formation"

Chul-Moon Yoo (Nagoya)

"Gravitational Collapse of a Massless Scalar Field in a Periodic Box"

#### Informal Seminars and other activities:

(There might be several slots for talks in informal seminars. Please email to: <a href="mailto:akihiro at phys.kindai.ac.jp">akihiro at phys.kindai.ac.jp</a> if you wish to give a talk and/or organize some other activities.)

Sep. 1<sup>st</sup>-2<sup>nd</sup> Research individually

**Sep. 3rd** 11:00- The first Coffee

Sep. 7th 15:30-16:30 Keiju Murata(Osaka)

"Imaging black holes through AdS/CFT"

**Sep. 10th** 11:00-12:00 Vitor Cardoso (Lisbon)

"TBA"

15:30-16:30 Akihiro Ishibashi (Kindai)

"On massive vector perturbations in extremal black holes"

Sep. 11th 11:00-12:00 Roxana Rosca (Cambridge)

"TBA"

15:30-16:30 Miren Radia (Cambridge)

"TBA"

Sep. 12th 11:00-12:00 Paul Chesler (Harvard)

"Nonlinear evolution of the AdS\_4 black hole bomb"

15:30-16:30 Tomohiro Harada (Rikkyo)

"Complete conformal classification of the FLRW

solutions with a linear equation of state"

16:30 Group Photo

18:00 Workshop dinner

Sep. 13th 11:00-12:00 Nathan Johnson-McDaniel (Cambridge)

"Constraining properties of black hole mimickers with gravitational wave observations of binary black holes"

15:30-16:30 Sousuke Noda (YITP, Kyoto)

"Analogue rotating compact objects in an MHD inflow"

**Sep. 14th** 10:30 - 11:00 The last Coffee

15:00-16:00 Discussions

Workshop closing

More (and updated) information:

https://www.yukawa.kyoto-u.ac.jp/seminar/s52387

# Organizers:

Vitor Cardoso (Lisbon)

Carlos Herdeiro (Aveiro)

Ulrich Sperhake(Cambridge)

Kunihito Ioka (YITP)

Akihiro Ishibashi(Kindai Univ.)

Hirotada Okawa(Waseda Univ.)

Hideo Kodama (YITP)

Masaru Shibata (YITP)

Hisa-aki Shinkai(OIT)

Takahiro Tanaka(Kyoto Univ.)

Ken-ichi Nakao (Osaka City Univ.)

Ryuichi Fujita (YITP)

Chulmoon Yoo (Nagoya Univ.)

Hirotaka Yoshino(Osaka City Univ.)