

Conference Program

“Astrophysical Black Holes: A Rapidly Moving Field”

June 23-26, 2023

CPD 3.04, Centennial Campus, The University of Hong Kong

June 23 Friday

Registration Opens at 9:00am

Morning Session (Chair: Mustafa Amin)

10-10:40 **Opening Talk by Roger Blandford:** Astrophysical Black Holes — Some Attractive, Powerful, Illuminating and Exciting Questions (invited)

Detection and Measurements of Black Holes

10:40-11:15 **Kirpal Nandra:** New Results on Astrophysical Black Holes from eROSITA (invited)

11:15-11:33 **Jong-Hak Woo:** Black hole mass and the reverberation size-luminosity relation based on the 6-year Seoul National University Monitoring Project (SAMP)

11:33-11:51 **Jian-Min Wang:** Signatures of binary supermassive black holes in AGNs from reverberation mapping and GRAVITY/interferometer

11:51-12:09 **Chirag Chawla:** Hunting down stellar-mass black-holes with Gaia

Afternoon Session (Chair: Sera Markoff)

SMBHs: Growth and Feedback

1:30-2:05 **Luis Ho:** The Gas Content and Star Formation in Quasars (invited)

2:05-2:40 **Prajval Shastri:** Different Angles on Accreting Supermassive Black Holes (invited)

2:40- 2:58 **Andy Fabian:** Hidden Cooling Flows in Clusters and Groups of Galaxies

Conference Photo & Coffee Break

3:45-4:03 **Tao Wang:** Black holes regulate cold gas accretion in massive galaxies

4:03-4:21 **Rudrani Kar Chowdhury:** Active Galactic Nuclei Feedback: From Cosmological Simulation to Observation

4:21-4:39 **Wenxiu Li:** Pathway to high-z SMBHs: seed formation and growth in the statistical perspective

4:39-4:57 **Haojie Hu:** Supercritical growth of seed BHs at cosmic dawn and co-evolution with host galaxies

4:57-5:15 **Yijun Wang:** Density profile of the ambient circumnuclear medium in Seyfert 1 radio-quiet galaxies

June 24 Saturday

Morning Session (Chair: Erin Kara)

Simulations of Accretion and Outflow Near Black Holes

9:30-10:05 **Ken Ohsuga**: Radiation MHD simulations of super-/near-Eddington accretion flows and outflows (invited)

10:05-10:40 **Feng Yuan**: Numerical study of AGN feedback at galactic scale (invited)

Coffee Break

11:10-11:28 **Yosuke Mizuno**: Relativistic Jet Simulations and Modelling on Horizon Scale

11:28-11:46 **Tom Kwan**: Simulating Bondi-Like Accretion Flow Around Black Holes

11:46-12:04 **Leon Salas**: Can two-temperature treatments in GRMHD simulations reduce the predicted variability compared to historical observations of Sgr A*?

12:04-12:22 **Erika Ogata**: Evolution of wandering intermediate-mass black holes in high- z galaxies with 3D radiation hydrodynamics simulations

Afternoon Session (Chair: Luis Ho)

Black Hole Physics in the EHT Era

2-2:35 **Sera Markoff**: Connecting the branches to the roots: confronting long-standing questions about jet physics in the global VLBI/EHT era (invited)

2:35-3:10 **Richard Anantua**: A Closer Look: Modeling Emission in M87 Down to the Horizon-Scale with Positrons (invited)

3:10-3:45 **Paul Tiede**: A Black Hole Closeup: Enhancing Black Hole Science with the ngEHT and Space (invited)

3:45-4:03 **Wanga Mulaudzi**: Investigating jet physics via the joint modelling of Event Horizon Telescope images and multi-wavelength observations

5:30-6:50 **Shaw Laureate Public Talk by Roger Blandford**: The Active Social Lives of Black Holes (at the Hong Kong Space Museum)

June 25 Sunday

Morning Session (Chair: Andy Fabian)

Relativistic jets and particle acceleration

9:30-10:05 **Paolo Coppi**: Looking for Physics in the Weather: 30 Years of Gamma-Ray Blazar Observations (invited)

10:05-10:40 **Zhen Cao**: The Observation of the Brightest GRB 221009A by LHAASO (invited)

Coffee Break

11:10-11:45 **Noemie Globus**: Black holes as cosmic accelerators (invited)

11:45-12:03 **Jieshuang Wang**: Particle acceleration in AGN jets

12:03-12:21 **Gwenael Giacinti**: Extreme particle acceleration at AGN jet termination shocks

Afternoon Session (Chair: Sherry Suyu)

Nuclear transients: TDEs, QPEs, and Changing-look AGNs

2:00-2:35 **Erin Kara**: X-raying extreme nuclear transients (invited)

2:35-2:53 **Dongyue Li**: Tidal Disruption Events in XMM-Newton slew survey and some preliminary results of LEIA

2:53-3:11 **Lars Thomsen**: Dynamical Unification of Tidal Disruption Events

3:11-3:29 **Weihua Lei**: Jetted Tidal disruption events: black hole spin, jet components and circumnuclear medium

Coffee Break

4:00-4:18 **Jialun Zhuang**: Explanation for the late-time radio flares in tidal disruption event

4:18-4:36 **Jin-Hong Chen**: Tidal Stripping of a White Dwarf by an Intermediate-Mass Black Hole

4:36-4:54 **Fayin Wang**: Compact objects around SMBHs: QPEs, FRBs and EMRIs

4:54-5:12 **Ruancun Li**: The Transient Slim Disk of the Changing-look Active Galactic Nucleus 1ES 1927+654

5:12-5:45 **Flash Talks for e-Posters**

6:30 **Conference Banquet (at Victoria Harbour Restaurant)**

June 26 Monday

Morning Session (Chair: Paolo Coppi)

Gravitational Waves & Black Hole Spin

9:30-9:48 **Xian Chen:** Why are LIGO/Virgo black holes so massive?

9:48-10:06 **Shmuel Gilbaum:** Accretion flows in AGN dominated by feedback from embedded black holes

10:06-10:24 **Peng Peng:** The susceptible GW sources in the AGN accretion disk

Coffee Break

11:00-11:18 **Xinmiao Zhao:** Constraining the acceleration of moving binary black holes using gravitational wave

11:18-11:36 **Alejandro Torres Orjuela:** SgrA* spin and mass estimates through the detection of an extremely large mass-ratio inspiral

11:36-11:54 **Mikiya Takahashi:** Possibility of black hole spin estimation with time-variable “crescent-shaped” shadow in M87

Closing Remarks