# Invited review speakers

#### (1) SMBH masses and growth at high redshift

Brad Peterson: Black holes in Active Galactic Nuclei

Yosuke Mizuno: The Shadow of the supermassive black hole in M87

Xue-Bing Wu: SMBH growth at high redshift

Martin Elvis: Adolescent black holes may be hard to find

#### (2) Physics of accretion and jets:

- Accretion & coronae:

Ramesh Narayan: Accretion Disk Theory: Overview

Matthew Liska: GRMHD simulations of thin and tilted accretion disks and jets:

How precessing disks and jets form

Barbara De Marco: Timing properties of hot coronae in accreting sources

- Jets:

Krzysztof Nalewajko: Physical processes in jets Christian Fromm: Relativistic Jets in AGN, theory

- AGN:

Paola Marziani: The quasar main sequence

Andy Lawrence: Crisis caused by changing-look AGN

Marco Berton: NLS1 galaxies and their rapidly growing black holes

#### (3) Black hole binaries & compact object mergers

- (Galactic) stellar mass binaries:

James Miller-Jones: Radio observations of jets & the case of V404 Cyg Megumi Shidatsu: Galactic BH binaries: MAXI highlights

- NS-BH, BH-BH mergers: GW detection & implications, merger rates

Krzysztof Belczynski: Gravitational-wave astrophysics: LIGO/Virgo BH-BH/BH-NS/NS-NS mergers Michela Mapelli: Cosmic merger rate of (stellar-mass) BHs

- Simulations (including gas):

Diego Munoz: Hydrodynamic simulations of binary mergers

Alexander Tchekhovskoy: Accretion-disk evolution in NS-NS mergers (after merging)

- SMBH binaries & coalescence, observations and simulations

Maria Charisi: Searching for supermassive binary black holes

A. Gopakumar: The blazar OJ287 and its nano-Hertz GW emitting massive BH binary central engine

Fazeel Khan: From dwarfs to giants: Dynamics and mergers of massive BH pairs in galaxies

Philipp Moesta: Dynamics of binary BH mergers

## (4) Tidal disruption of stars by SMBHs (TDEs)

Tsvi Piran: TDE Theory

Fukun Liu: TDEs in binary supermassive black holes

#### (5) IMBHs, ULXs, circum-nuclear X-rays

Pepi Fabbiano: Circum-nuclear X-ray emission from galaxies Amy Reines: Intermediate-mass black holes (IMBHs) in dwarf galaxies

#### (6) SMBH growth, Kpc-scale feeding & feedback, jets and out(in)flows

Thaisa Storchi-Bergmann: Feeding and feedback of AGN Raffaella Morganti: The impact of jets on the multi-phase gas

Jessie Runnoe: Kpc-scale outflows in AGN (optical) Alex Wagner: Simulations of jet-ISM interactions

#### (7) Scaling relations between SMBHs and their host galaxies

Alister Graham: Galaxy-BH scaling relations

#### (8) Collapsars: black hole formation and GRBs

Jonathan Granot: Binary NS mergers

Om Sharan Salafia: GRBs from binary mergers

### (9) Multi-messenger astrophysics

Eleonora Troja: Electromagnetic follow-ups of GW sources

Adithan Kathirgamaraju: Off-axis short GRBs in the gravitational wave era Massimo della Valle: SN-GRB connection & Memories of Sergio Colafrancesco

Jillian Bellovary: Multi-messenger signatures of IMBHs

### (10) Mission highlights and future missions:

Shuang-Nan Zhang: Science highlights from Insight-HXMT

Gulab Dewangan: Science highlights of AstroSat

Isabella Prandoni: SKA and its precursors

Brad Peterson: The Large UV Optical Infrared Surveyor (LUVOIR) mission concept

Silvia Zane: Polarimetry with IXPE & eXTP

Lorenzo Amati: The Transient High-Energy Sky and Early Universe Surveyor (THESEUS)

last updates: Sept. 2019

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Jan. 14, 2020