

## *Final program*



# Shining from the heart of darkness: Black Hole Accretion and Jets

Kathmandu, Oct. 16-21, 2016

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**LOC:** B. Aryal, S. Colafrancesco, S. Komossa, E. Palazzi, A. Zdziarski (chair), J. Ziolkowski

**Venue:** Hotel Radisson,  
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# Final program

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**Sunday, Oct. 16** 17:00: Registration opens at hotel Radisson, 19:00-22:00: Welcome reception

## **Monday, Oct. 17**

### **AGN I, from large to small scales, GR** (chair: Andrzej Zdziarski)

09:00-09:10 Welcome & Opening

09:10-09:35 **Diana Worrall: Jet-gas interactions and feedback**

09:35-10:00 **Vladimir Karas: GR effects in accretion flows**

10:00-10:25 **Barbara de Marco: X-ray reverberation in accreting black hole systems**

10:25-10:40 Guglielmo Mastroserio: The effects of spectral hardness changes on reverberation lags

--- coffee break ---

### **AGN/reprocessing, cont'd** (chair: Martin Elvis)

11:10-11:25 Giulia Mantovani: The relativistic Fe K $\alpha$  line in Seyfert 1 galaxies

11:25-11:50 **Lance Miller: X-ray absorption and scattering by AGN circumnuclear material**

11:50-12:05 Misaki Mizumoto: Partial covering origin of X-ray spectral variations of Seyfert galaxies

12:05-12:40 *poster presentations; 3 minutes each*

--- lunch break ---

### **GWs from BH mergers, rates, e.m. counterparts** (chair: Neil Gehrels)

14:00-14:25 Piero Madau: From the earliest seeds to today's supermassive black holes

14:25-14:50 **Matthew Benacquista: Gravitational wave detection from stellar mass black hole binaries**

14:50-15:15 **Marica Branchesi: Electromagnetic counterparts to GW sources**

15:15-15:30 Krzysztof Belczynski: The effect of pair-instability mass loss on black hole mergers

15:30-15:45 Giuseppe Lodato: Electromagnetic counterparts to gravitational wave emission by supermassive black hole binaries

--- **group photo** & coffee break ---

### **GWs and e.m. counterparts – cont'd** (chair: Silvia Zane)

16:15-16:30 Dorota Gondek-Rosinska: Coalescing binary black holes originating from globular clusters

16:30-16:45 Michele Armano: *LISA* Pathfinder Results

16:45-17:00 Eliana Palazzi: GRAWITA: electromagnetic follow-up observations of gravitational wave events during the O1 period

17:00-18:00 *introduction of local participants*

## **Tuesday, Oct. 18**

### **Galactic BH binaries** (chair: Sasha Tchekhovskoy)

09:00-09:25 **Julien Malzac: Jet models for BH binaries**

09:25-09:40 Andrzej Zdziarski: What is the disc truncation radius in the hard state of black-hole binaries?

09:40-09:55 Alex Tetarenko: Extreme jet ejections from the black hole X-ray binary V404 Cygni: The

unique (sub-)millimetre perspective

09:55-10:10 Shuangliang Li: State transitions triggered by inversion of the magnetic field: application to high-mass X-ray binaries ?

10:10-10:25 Susmita Chakravorty: Magneto-centrifugal winds from accretion discs around black hole binaries

--- coffee break ---

### **Galactic BH binaries – cont'd** (chair: Barbara de Marco)

10:55-11:20 **Adam Ingram: Quasi-periodic oscillations in black hole binaries**

11:20-11:45 **Alexandra Veledina: Hybrid accretion flow models and observations of BH binaries**

11:45-12:00 Yi-Hao Su: Tracking X-ray spectral modulations of a 6-Hz type-B quasi-periodic oscillation in GX 339-4 using the Hilbert-Huang transform

12:00-12:15 Juri Poutanen: On the origin of infrared flares in accreting black holes

12:15-12:30 Federico Bernardini: On the optical-X-ray correlation from outburst to quiescence in low-mass X-ray binaries: The cases of V404 Cyg and Cen X-4

12:30-12:45 Bailey Tetarenko: WATCHDOG: A two-decade long all-sky study of accretion disc physics across the Galactic black hole X-ray binary population

--- lunch ---

**Afternoon: 13:30 Excursion to Patan and Pashupatinath**

## **Wednesday, Oct. 19**

### **Mission highlights, transients, TDEs** (chair: Michele Armano)

09:00-09:25 **Neil Gehrels: The transient high-energy sky: highlights from *Swift***

09:25-09:50 **Bevin Zauderer: Observations of jetted tidal disruption events**

09:50-10:05 Dheeraj Pasham: Optical, UV and X-ray echoes from a supermassive black hole feeding off a tidally disrupted star

10:05-10:20 Abe Falcone: *Swift* X-ray observations of new AGN, blazar jet emission variability, and periodicity from a tidal disruption event

10:20-10:35 Alessia Franchini: Lense-Thirring precession around black holes

--- coffee break ---

### **Mission highlights, transients, cont'd** (chair: Eliana Palazzi)

11:05-11:20 Agnieszka Janiuk: Black hole accretion in gamma-ray bursts

11:20-11:35 Giulia Migliori: Multi-band time lapse of the transient large-scale relativistic jet of XTE J1550-564

11:35-12:00 **A. Raghu Rao: First results from the *AstroSat* mission**

12:00-12:15 Silvia Zane: The XIPE mission

12:15-12:30 Binil Aryal: Astronomy research in Nepal

--- lunch ---

**Jets & blazars** (chair: Diana Worrall)

14:00-14:25 **Masanori Nakamura: Simulations of jet formation: from small to large scales**

14:25-14:50 **Jose L. Gomez: Probing the innermost regions of AGN jets and their magnetic fields with RadioAstron**

14:50-15:05 Paul Wiita: Variability from propagating turbulent relativistic jets

15:05-15:20 Bindu Rani: Testing the jet-launching scenario in BL Lac using GMVA

15:20-15:35 Minfeng Gu: The jet detections in radio-loud narrow-line Seyfert 1 galaxies

15:35-16:00 Patryk Pjanka: The power of extragalactic jets

--- coffee break ---

**Jets & blazars – cont'd** (chair: Juri Poutanen)

16:25-16:40 Andreas Zech: Exploring the lepto-hadronic parameter space for BL Lac objects seen at TeV energies

16:40-16:55 Stefan Larsson: The Fermi-LAT view of blazar variability

16:55-17:10 Richard Britto: Observations of Fermi-LAT blazars through optical spectroscopy and spectropolarimetry with South Africa-based telescopes

17:10-17:25 Tania Garrigoux: Modeling polarization from relativistic outflows

17:25-17:40 Yakov Istomin: Relativistic jets are sources of cosmic rays in galaxies

17:40-17:55 Yuto Teraki: Accreting black holes as PeVatrons

**19:30 Conference dinner**

**Thursday, Oct. 20**

**Jets, AGN cont'd, binary SMBHs** (chair: Piero Madau)

09:15-09:30 Gopal Bhatta: Probing the inner jet structures of blazar S5 0716+714 and OJ 287 using exceptionally dense optical observations

09:30-09:55 **Sasha Tchekhovskoy: Simulations of low-luminosity accretion in Active Galactic Nuclei**

09:55-10:20 **Martin Elvis: Winds and outflows in AGN: a consequence of the simple physics within the black hole sphere of influence**

10:20-10:35 Neven Caplar: Optical variability of quasars in the (i)PTF survey

10:35-10:50 Mark Birkinshaw: AGN-induced heating in the cores of low-redshift 3CRR galaxies

--- coffee break ---

**AGN - cont'd** (chair: S. Komossa)

11:20-11:35 Clare Kenyon: Demystifying the Broad Line Region with Cloudy

11:35-11:50 Tek Prasad Adhikari: The intermediate line region in AGN

11:50-12:05 Suvendu Rakshit: A catalogue of Narrow-line Seyfert 1 galaxies from SDSS DR12

12:05-12:20 Lorena Hernandez-Garcia: Multi-wavelength analysis of PBC J2333.9-2343

--- lunch break ---

**Afternoon: 13:30 Excursion to Bhaktapur**

**Friday, Oct. 21**

**IMBHs, LLAGN, Galactic Centre** (chair: Lance Miller)

09:00-09:25 **Michele Trenti: Multi-wavelength fingerprints of intermediate mass black holes in dense stellar systems**

09:25-09:40 Amy Reines: A ~9-hr X-ray periodicity in the nucleus of Henize 2-10

09:40-09:55 Fu-Guo Xie: Radio/X-ray correlation in AGNs

09:55-10:10 Chandra Singh: Magnetic reconnection in jet-accretion disk systems

10:10-10:25 Sanjaya Paudel: SDSS J085431.18+173730.5: The first compact elliptical galaxy hosting an active nucleus

--- coffee break ---

**cont'd** (chair: Matt Benacquista)

10:55-11:20 **Feng Yuan: Outflows from black hole accretion**

11:20-11:35 De-Fu Bu: Winds from hot accretion flows and observational applications

11:35-11:50 Yaping Li: Statistical and theoretical studies of flares in Sgr A\*

11:50-12:05 Nora Luetzgendorf: Stellar winds near massive black holes: The case of the S-stars

12:05-12:20 Janusz Ziolkowski: On the evolutionary status of the donors in the low mass X-ray binary systems containing black holes or neutron stars

12:20-12:35 Kailash Sahu: Detecting isolated, stellar-mass black holes through astrometric microlensing using HST

lunch & end of conference

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## Poster contributions

- (1) Federico Bernardini: **Events leading up to the 2015 June outburst of V404 Cyg**
- (2) Gopal Bhatta: **Multi-wavelength long term variability study of the giant radio source 4C+74.6**
- (3) Padam Ghimire: **Study of XMM-Newton spectra of galaxies in the Coma cluster: two new AGN candidates proposed**
- (4) Vladimir Karas, A. Trova, P. Slany, J. Kovar: **Equilibrium configurations of rotating magnetized self-gravitating tori**
- (5) Davide Lena: **Evidence for an outflow in the plane of the AGN torus in NGC 1386**
- (6) Jacob Noel-Storr: **Galaxies, jets, and the motivation to explore STEM knowledge**
- (7) Eliana Palazzi: **The THESEUS mission**
- (8) Ek Narayan Paudel, Binil Aryal: **Superclusters: galaxy orientation and evolution**
- (9) Eak Raj Paudel: **The energy spectrum of cosmic ray nuclei of different energy range**
- (10) Madhu Paudel: **A study of Jeans criteria of a new far infrared nebula at -37 degrees Galactic Latitude**
- (11) Silvia Zane: **The XIPE mission**