BREAKING THE LIMITS

Super-Eddington accretion onto compact objects
Arbatax (OG), Italy, September 19-23, 2016

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Monday, September 19th 2016

8:30-9:30 Registration
Chair: Andrew King

9:30-10:00 Alexander Sadowski: Simulating accretion flows - from the lowest to the highest accretion rates

10:00-10:15 Matteo Bugli: Non-ideal GRMHD simulations of thick accretion disks around black holes: connecting small and large scales

10:15-10:30 Bhupendra Mishra: Thermal instability (or not?) in three-dimensional, global, radiative GRMHD simulations of geometrically thin discs

10:30-11:00 Coffee break

11:00-11:15 Kohei Inayoshi: Hyper-Eddington accretion flows onto massive black holes

11:15-11:30 Salvatore Cielo: Bursty AGN jets in compact galaxies, from 3D simulations


11:45-12:00 Benny Trakhtenbrot: New Constraints on the Radiative Efficiencies of the Highest-Redshift Quasars

12:00-12:30 Discussion - Alexander Sadowski

12:30-15:00 Lunch break
Chair: James Reeves

15:00-15:30 Andrew King: Theory of black hole growth and galaxy evolution

15:30-16:00 Marcella Brusa: Observations of black hole growth and galaxy evolution

16:00-16:25 Felix Mirabel: Stellar Black Holes Formed in the Dark

16:25-16:40 Hannalore Gerling-Dunsmore: Small Seed Black Hole Growth in Various Accretion Regimes

16:40-17:10 Coffee break

17:10-17:25 Yuya Sakurai: Hyper-Eddington accretion onto a black hole with super-Eddington luminosity

17:25-17:40 Alessandro Lupi: Growing massive black holes via super-critical accretion of stellar mass seeds

17:40-17:55 Stergios Amarantidis: The earliest accreting supermassive black holes: indications from models for future observations

17:55-18:10 Laura Blecha: Uncovering the Signatures of Obscured AGN in Mergers

18:10-18:40 Discussion - Laura Blecha
Tuesday, September 20th 2016

Chair: Tracey Jane Turner

09:30-10:00  **Chris Reynolds** - Supercritical accretion in AGN and Quasars

10:00-10:15  Francesco Tombesi: Evidence for a super-Eddington wind in the ultraluminous infrared galaxy IRAS F11119+3257?

10:15-10:30  James Reeves: Broad Soft X-ray Absorption Lines from the Quasar Wind in PDS 456.

10:30-10:45  Valentina Braito: Revealing the nature of AGN winds; from the fast to the slow components

10:45-11:00  Kouichi Hagino: Ultra-fast disk wind from a high accretion rate black hole 1H 0707-495

11:00-11:30  Coffee break

11:30-11:45  Francesca Panessa: AGN from low to high Eddington ratios: the X-ray and radio perspective

11:45-12:00  Martin Ward: New evidence that some of the gamma-ray detected Narrow Line Seyfert 1s are Super Eddington Sources

12:00-12:15  Manuela Bischetti: Revealing the heaviest, highly-accreting SMBHs at the heart of hyper-luminous quasars

12:15-12:30  Mary Loli Martínez-Aldama: Exploring the spectral properties of highly accreting quasars at high redshift

12:30-15:00  Lunch break

15:00-15:15  Ken Ebisawa: Origin of spectral variations of Seyfert 1 galaxies

15:15-15:30  Misaki Mizumoto: Characteristic X-ray spectral variations in the iron L-band of IRAS 13224-3089, 1H 0707-495 and NGC 4051

15:30-15:45  Tracey Jane Turner: Measuring Light Echos in NGC 4051

15:45-16:00  Emanuele Nardini: Discovery of transient iron fluorescence in the bare Seyfert Ark 120

16:00-16:15  Yoshiyuki Inoue: Discovery of the millimeter excess in a nearby Seyfert nucleus: Toward unveiling the magnetic field in the vicinity of a supermassive black hole

16:15-16:30  Filippos Koliopanos: In search of the missing population of intermediate mass black holes

16:30-17:00  Coffee break

17:00-17:30  Discussion - Andrew King

18:45-23:30  SOCIAL DINNER
Wednesday, September 21st 2016

Chair: Francesco Tombesi

9:15-09:45 Mar Mezcua: Multiwavelength observations of ULXs
09:45-10:00 Matteo Bachetti: M82 X-2: an ultraluminous pulsar
10:00-10:15 Gianluca Israel: Mining the beat of ULXs
10:15-10:30 Kristhell López: Near Infrared Counterparts of ULXs
10:30-10:45 Marianne Heida: NIR spectroscopy of ULXs
10:45-11:00 Hannah Earnshaw: Soft ULXs at the Eddington Threshold
11:00-11:30 Coffee break

Chair: Matteo Bachetti

11:30-12:00 Didier Barret: Athena
12:00-12:30 Nicolò D’Amico: INAF missions and future prospects
12:30-13:00 Discussion - Chris Reynolds
13:00-14:00 Lunch break

14:00-20:00 SOCIAL TRIP to the Sardinia Radio Telescope
Thursday, September 22nd 2016

Chair: Marta Burgay

9:30-10:00 Rob Fender: Review talk

10:00-10:15 Katja Pottschmidt: Broad band continuum spectra of accreting pulsars around / above the critical luminosity

10:15-10:30 Rebecca Nealon: QPOs from misaligned accretion discs

10:30-11:00 Coffee break

11:00-11:15 Valery Suleimanov: Super-Eddington accretion luminosity of highly magnetized neutron stars

11:15-11:30 Jamie Court: Exotic Variability in IGR J17091-3624; A Comparison with GRS 1915+105

11:30-12:00 Discussion - Felix Mirabel

12:00-15:00 Lunch break

Chair: Katja Pottschmidt

15:00-15:30 Ken Ohsuga: Theory of ULXs

15:30-16:00 Matthew Middleton: Observations of ULXs

16:00-16:15 Tim Roberts: At the extremes of super-Eddington accretion

16:15-16:30 Andrew Sutton: Crossing the Eddington limit: investigating accretion disc spectra in ultraluminous X-ray sources and sub-Eddington binaries

16:30-17:00 Coffee break

17:00-17:15 Ciro Pinto: Discovery of powerful winds in ultraluminous X-ray sources

17:15-17:30 Michal Bursa: Effects of geometry and mass accretion rate on thermal spectra of ULX sources

17:30-17:45 Shogo Kobayashi: Comparing ULXs with the other High-Eddington Sources

17:45-18:00 Takumi Ogawa: A unified model for ULXs and ULSs; radiation hydrodynamics simulations of super-Eddington accretion flows

18:00-18:30 Discussion - Tim Roberts
Chair: Luigi Piro

9:30-10:00 **Stefanie Komossa**: Jetted and non-jetted tidal disruption events

10:00-10:30 **Andrei Beloborodov**: Review of GRBs

10:30-11:00 Coffee break

11:00-11:15 Lixin Jane Dai: Tidal disruption events as a probe of super-Eddington accretion

11:15-11:30 Erin Kara: Relativistic reverberation in a tidal disruption event

11:30-11:45 Ayako Ishii: Coupled Computation of Radiative Transfer with Relativistic Hydrodynamics Relevant to GRB Emission Process

11:45-12:15 **Discussion** - Luigi Piro

12:15-12:30 **Conclusions**

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