ACTIVE GALACTIC NUCLEI

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(A monograph course in the fall term of 2017)

Lives of galaxies are known to be enriched by episodic energetic events taking place in their nuclei. They last for 10^5 – 10^8 years and are powered by accretion of matter onto super-massive black holes. Such events are observed in all electromagnetic spectral bands, from radio up to gamma-rays. My course is intended to provide basic observational and theoretical knowledge on these "Active Galactic Nuclei" and is divided for the following themes:

1. History
2. The AGN zoo
3. Orbits around black holes
4. Accretion disks
5. X-ray coronae
6. Infrared emitting tori
7. The broad and narrow emission line regions
8. Absorption lines; winds
9. Jets
10. Cosmic history of accretion and of supermassive BHs

The lectures will be given on Tuesdays, at 10:15am in the small seminar room at Nicolaus Copernicus Astronomical Center in Warsaw and transmitted to the seminar room in CAMK/Toruń. There will be 12 two-hours lectures provided in the following Tuesdays:
3, 17 and 24 in October; 7, 14, 21 and 28 in November; 5, 12 and 19 in December; 16 and 23 in January.