III WORKSHOP ON ACTIVE GALACTIC NUCLEI AND GRAVITATIONAL LENSING
October 7 - 11, 2014, Končarevo, Serbia
ABSTRACTS OF INVITED LECTURES AND PROGRAMME
Edited by Saša Simić, Luka Č. Popović and Milan S. Dimitrijević
Society of Astronomers of Serbia. Belgrade 2014

RESOLVING THE UNRESOLVABLE - POLARIMETRY OF ACTIVE GALACTIC NUCLEI AT MULTIPLE WAVE BANDS

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Optical and ultraviolet polarimetry has been vital to explore the inner geometry and the kinematics of Active Galactic Nuclei (AGN). The technique is complementary to mirco-lensing observations as it encodes geometry information of unresolvable sources. More recently, the wavelength range at which polarized light of AGN can give us an insight in the accretion and ejection flow around supermassive black holes has been extended to the infrared and the sub-mm bands. In the future, we hope to also have access to X-ray polarization measurements and thus to further narrow down the observational constraints on the inner parts of AGN. I am going to review the progress of AGN research made by polarimetry, both on the observational and on the modeling side, and I give prospects on future techniques and open questions that we hope to solve.