

## **Seminarium Astrofizyczne**

wtorek 03.11.2020 godz. 12:00

<https://www.gotomeet.me/NCBJmeetings/seminarium-astrofizyczne>

Password: AstroSemi

### **Krzysztof Nalewajko**

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### **Magnetic reconnection in application to relativistic jets of active galaxies.**

Certain active galaxies produce powerful jets with relativistic velocities, which emit highly anisotropic non-thermal radiation. In case that a jet is directed towards an observer, the observed luminosity of its radiation exceeds significantly the luminosity of the host galaxy; such objects are called blazars. Observations of blazars indicate very efficient mechanisms of energy dissipation and non-thermal particle acceleration. The inner sections of jets are most likely relativistically magnetised, i.e., the magnetic energy density exceeds the rest-mass energy density of the matter. Under such conditions, the most promising mechanism of dissipation and particle acceleration is relativistic magnetic reconnection. This mechanism can be studied in great detail by means of kinetic numerical simulations, using the particle-in-cell algorithm. I will present recent developments in numerical studies of the relativistic magnetic reconnection and its non-thermal radiative signatures in the context of the observational characteristics of blazars.

Serdecznie zapraszam,

Agnieszka Majczyna