**Seminarium Studium Doktoranckiego NCBJ  
Thursday, 18 March, 9:00**[https://www.gotomeet.me/NCBJmeetings/phd-seminar](https://vmail.ncbj.gov.pl/owa/redir.aspx?C=6Kfh8e0ollbF7usM_NcqQv5pEE7swO1b5HURDVhIbD8ufsBAEOnYCA..&URL=https%3a%2f%2fwww.gotomeet.me%2fNCBJmeetings%2fphd-seminar)  
  
**Speaker:**Francesco PISTIS (Szkoła Doktorska NCBJ)  
  
**Title:**VIPERS: analysis of the FMR and its projections at z~0.7. Can observational biases affect their shapes?

**Abstract:**Galaxy metallicity, a result of the integrated star  
formation history and evolution of the interstellar medium, is an  
important property describing galaxy evolution. As such it has  
been widely studied in the local Universe with the data from the SDSS,  
as well as its relations with galaxy stellar mass and SFR. The  
relation between these three galaxy physical properties, known as  
Fundamental Metallicity Relation (FMR), was shown not to undergo any  
significant evolution at least up to z~2. In spite of that, different  
studies find some differences in 2D projections of this relation.  
However, these studies are based on very different samples, with  
different data selection at different redshift ranges.  
In our work we aim at finding FMR evolution from z~0.6 to z~0, making  
use of the unprecedented statistics of the VIMOS Public Extragalactic  
Survey (VIPERS) and comparing it to the local SDSS sample. Having that  
goal in mind, we study the effect of different selection biases  
introduced into the SDSS sample on both the FMR and its 2D  
projections. We find significant differences occurring when different  
data selection, mimicking the selection of higher redshift samples, is  
applied. Then, we compare these results with the data from the VIPERS  
sample at z~0.6. We conclude that both FMR and its projection at z~0.6  
to z~0 are not in agreement even when the data selection effects are  
carefully applied. This implies a small but statistically significant  
evolution of the FMR between z~0.6 to z~0 which needs to be taken into  
account in future studies.