**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)

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**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.