

[Astronomska skupina na FMF](#) vabi v **četrtek, 21. decembra, ob 12. uri** na Astrodebato, ki jo bo imel **Vid Iršič**

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o absorpciji svetlobe v medgalaktičnem prostoru

ter pripadajočem modelu, ki opisuje razporeditev snovi v zgodnjem vesolju. Predavanje bo v predavalnici F7 na Jadranski 19,

[Fakulteta za matematiko in fiziko](#)

, Univerza v Ljubljani. Vljudno vabljeni!

The last two decades have seen tremendous progress in cosmological hydro-dynamical simulations and their uses to simulate the gaseous environment of the intergalactic medium. Primarily through the Lyman-alpha forest as the statistical tool of choice, the state-of-the-art simulations have ushered the intergalactic medium to an era of precision cosmology to rival large galaxy surveys.

While they have allowed us a much more precise estimation of cosmological parameters, deeper understanding of the interplay of physical processes involved in the intergalactic gas has been lagging behind. This can be attributed to lack of any successful analytic model that would in its final result preserve the inherent difference in the cosmological and astrophysical growth (or suppression) of structure.

I will present a new semi-analytic model of the Lyman-alpha forest clustering, where the transmitted flux is split into contributions from discrete absorbers, tracing the underlying matter fluctuations. The model conveys intuitive perspective into the building blocks of the absorption signal, offers a tool to construct new, optimally-weighted, statistics, and provides a unified framework in which many current systematic effects can be estimated (metal absorption, high-column density systems, etc.).