

Invitation

to the seminar of Division of Elementary Particle Physics of the
Institute of Physics of the Czech Academy of Sciences



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From Beauty to Charm, from ATLAS to LHCb

Abstract: This talk will trace the evolution of my work in heavy-flavour physics, from B-meson studies at the ATLAS experiment to new opportunities in charm physics with LHCb. Flavour physics provides a sensitive probe of the Standard Model and possible extensions beyond it. Through precise studies of CP violation, decay dynamics, and oscillations, it allows us to test fundamental symmetries and search for signs of new phenomena. ATLAS, although a general-purpose detector, hosts a strong B-physics programme that in key measurements can rival those of dedicated flavour experiments. My research there centered on precision measurements of CP violation in $B_s \rightarrow J/\psi \varphi$ decays and on tests of lepton universality in rare B-meson processes. This experience provided a solid foundation for more specialised studies with the LHCb experiment - a detector designed specifically for flavour physics and offering superior reconstruction and statistical precision. My current work concentrates on charm decays - a sector much less explored than beauty physics, yet highly complementary in its potential to reveal new effects. Earlier this year, our group officially joined the LHCb collaboration, establishing the basis for an extended research programme, which I will briefly outline in the talk.

When: Thursday, November 6, 2025 at **2PM**

Where: Dvořák hall, FZU, Pod Vodárenskou věží 1, Prague

For more information, please see <https://indico.fzu.cz/event/316/>