

IMPRS EPP

**Block Course
of the
International Max Planck Research School
on Elementary Particle Physics**

Max Planck Institute for Physics, Freimann

April, 21st	11h-12:30h	main auditorium
April, 22nd	11h-12:30h	main auditorium
April, 24th	11h-12:30h	main auditorium
April, 28th	11h-12:30h	main auditorium
April, 29th	11h-12:30h	room 313
April, 30th	11h-12:30h	main auditorium

Dr. Alexander Merle

MPP

Neutrino physics crossing borders: a tale of theory, experiments, colliders, and cosmology

Abstract:

In this block course, I will aim to give a flavour of what neutrino physics is about, starting from the very basics and going up to cutting edge topics in today's research. We start with two introductory lectures providing an overview of the known properties of neutrinos (mass & mixings) and of how we gained this knowledge from neutrino oscillation experiments and attempts to measure their masses. This approach will set the stage to be able to follow the four remaining lectures dedicated to one specialised topic each: neutrinoless double beta decay, neutrino mass models, theory of lepton flavour, and sterile neutrinos. All these topics are currently considered to be "hot" in neutrino physics, and my course will enable you to start exploring them yourself in case you got hooked.

No registration is needed.