FAKULTÄT für PHYSIK
LUDWIG-MAXIMILIANS-UNIVERSITÄT
MÜNCHEN/GARCHING

PHYSIK-DEPARTMENT
TECHNISCHE UNIVERSITÄT MÜNCHEN
MÜNCHEN/GARCHING

MLL-KOLLOQUIUM

Donnerstag, 13.07.2017, 16^{15} Uhr

Hörsaal der LMU in Garching, Am Coulombwall 1
Treffen zum gemeinsamen Kaffee 16 Uhr

Dr. Takashi Toma

(Physik Department, TU München)

Radiative Generation of Neutrino Masses and Dark Matter

Small non-zero neutrino masses and the existence of dark matter in the universe are required from experiments, but both are not explained in the Standard Model. The canonical seesaw mechanism is the simplest approach to generate the small neutrino masses. However, a dark matter candidate has to be introduced independently in order to explain some astronomical observations. The mechanism of generating neutrino masses through radiative corrections is an alternative possibility for solving the two different issues simultaneously. I will introduce some representative models and discuss their phenomenological implications. In addition, I will also point out some deficiencies of these models and consider further extensions to resolve them.

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