

# Scalars 2015

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## Flavon-induced Higgs lepton flavour violations

### Content :

The current experimental limit on Charge Lepton Flavour Violating (CLFV) processes allows the branching ratios of  $h \rightarrow \tau \mu$  and  $h \rightarrow \tau e$  processes to be of order 10%. Since such CLFV processes are forbidden in the Standard Model (SM), we aim to explain these processes by employing the Froggatt-Nielsen mechanism. This mechanism requires the addition of a scalar field called the flavon, singlet under SM gauge group which breaks spontaneously due to the flavon field acquiring a Vacuum Expectation Value (VEV). We show that the observed CLFV branching ratios can be explained due to the flavon field mixing with the Higgs boson passing all experimental bounds.

**Primary authors** : Dr. KEUS, Venus (University of Helsinki)

**Co-authors** : LEBEDEV, Oleg (Helsinki U.) ; Prof. HUITU, Katri (University of Helsinki) ; Mr. KOIVUNEN, Niko (University of Helsinki)

**Presenter** : Dr. KEUS, Venus (University of Helsinki)

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