

Institut Ruđer Bošković  
ZAVOD ZA TEORIJSKU FIZIKU  
Bijenička c. 54  
ZAGREB, HRVATSKA

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SEMINAR ZAVODA ZA TEORIJSKU FIZIKU

(Zajednički seminari Zavoda za teorijsku fiziku,  
Zavoda za eksperimentalnu fiziku i Zavoda za teorijsku fiziku PMF-a)

## The CKM matrix: from the Standard Model to New Physics

**Sebastien Descotes-Genon**  
LPT Orsay, CNRS/Univ. Paris-Sud 11

*Datum: srijeda 15. prosinca 2010.*

*Vrijeme: 11:00 sati c.t.*

*Mjesto: IRB, Seminar ZTF-a*

### Sažetak:

I present the current status of the Cabbibo-Kobayashi-Maskawa matrix describing mixing and CP violation in the quark sector within the Standard Model. I review the main ingredients of the standard global analysis performed by the CKMfitter group to determine the elements of the CKM matrix. I emphasize recent B-factory results and their theoretical interpretation, as well as the role of theoretical (mainly lattice) inputs. The presence of tensions in the fit to the Standard Model leads me to consider a scenario of New Physics affecting neutral meson mixing ( $\Delta F = 2$  processes).

Voditelj seminara: Dr. Hrvoje Nikolić  
<[hrvoje@thphys.irb.hr](mailto:hrvoje@thphys.irb.hr)>