

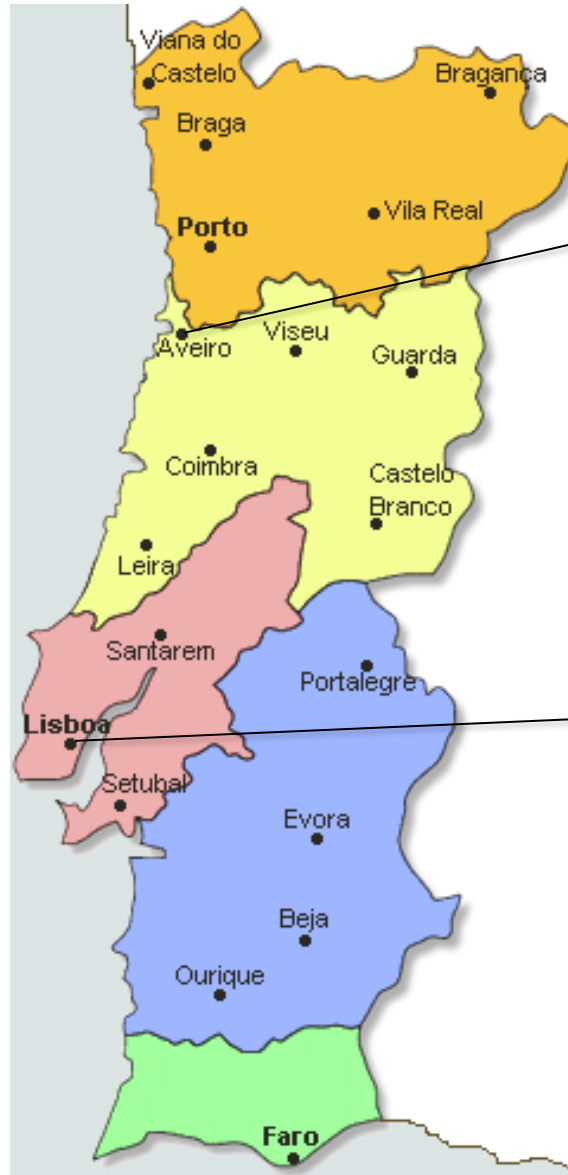
1st RISE Collaboration Meeting: Non-Minimal Higgs Lisbon Node

8 December 2015

Rui Santos

ISEL & CFTC (U. Lisboa)

Where?



UA – Universidade de Aveiro

ISEL – Instituto Superior de Engenharia de Lisboa

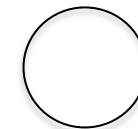
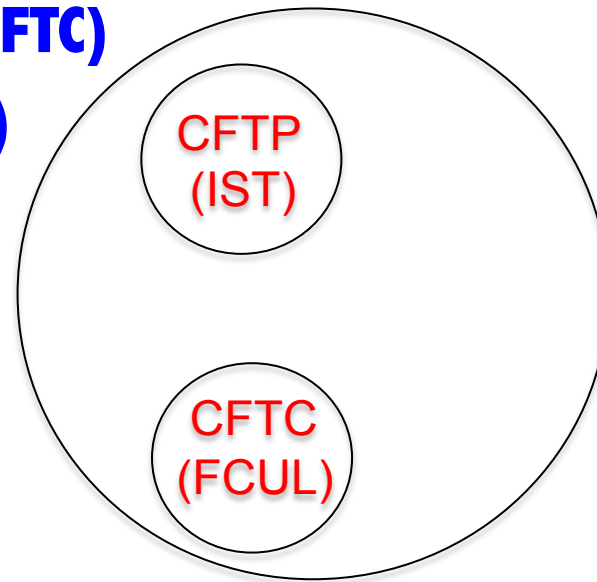
UL – Universidade de Lisboa



Who?

- **Raul Costa (Master Student) – UA and UL**
- **António Morais (Postdoc) – UA and UL**
- **Marco Sampaio (Postdoc) – UA**

- **Augusto Barroso – UL (CFTC)**
- **Pedro Ferreira – ISEL and UL (CFTC)**
- **Rui Santos – ISEL and UL (CFTC)**
- **João Silva – UL (CFTP)**



ISEL

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Research

- **CP-violation**
- **Multi-Higgs extensions**
- **Phenomenology**

Theory and phenomenology of two-Higgs-doublet models

G.C. Branco, P.M. Ferreira, L. Lavoura, M.N. Rebelo, M Sher, Joao P. Silva, Phys.Rept. 516 (2012) 1-102

CP Violation

G. C. Branco, L. Lavoura, J. P. Silva. Int.Ser.Monogr.Phys. 103 (1999) 1-536, Oxford University Press.

[47] D. Fontes, J.C. Romão, R. Santos, J.P. Silva, e-Print: arXiv:1502.01720 [hep-ph] *JHEP* 1506 (2015) 060,

Large pseudoscalar Yukawa couplings in the complex 2HDM.

[48] R. Costa, A.P. Morais, M.O.P. Sampaio, R. Santos, e-Print: arXiv:1411.4048 [hep-ph], *Phys.Rev. D92* (2015) 2, 025024,

Two-loop stability of a complex singlet extended Standard Model.

One-loop contributions to neutral minima in the inert doublet model

P.M. Ferreira, Bogumila Swiezewska. Nov 9, 2015. 24 pp.

e-Print: [arXiv:1511.02879](https://arxiv.org/abs/1511.02879) [hep-ph] | [PDF](#)

Flavour symmetries in a renormalizable SO(10) model

P.M. Ferreira (Lisbon U., CFTC & Lisbon, ISEL), W. Grimus (Vienna U.), D. Jurčiukonis (Vilnius, Inst. Theor. Phys. Astron.), L. Lavoura (Lisbon, CFTP & Lisbon, IST). Oct 9, 2015. 26 pp.
UWTHPH-2015-23, CFTP-15-010

Research

TOOLS

- **Scanners**

- **Metop**

ScannerS: Constraining the phase diagram of a complex scalar singlet at the LHC, R. Coimbra, M.O.P. Sampaio, R. Santos, Eur. Phys. J. C73 (2013) 2428.

<https://scanners.hepforge.org/>

MEtop - a generator for single top production via FCNC interactions, R. Coimbra, A. Onofre, R. Santos, M. Won, Eur. Phys. J. C72 (2012) 2222.

FCNC generator used in the ATLAS analysis

Angular distributions in $t\bar{t}H(H \rightarrow b\bar{b})$ reconstructed events at the LHC

S. P. Amor dos Santos (LIP, Coimbra) *et al.*, Mar 26, 2015. 10 pp.

Published in **Phys.Rev. D92 (2015) 3, 034021**

Secondments

Staff Member		Sending Organisation				Seconded to Organisation				Work Package Number	Secondment Starting Month	Duration of Secondment (Researcher-Months)
ID	Profile	Short Name	Country	Region	Academic Sector	Short Name	Country	Region	Academic Sector			
1	ER	ISEL	PT	EU/AC	yes	UT	JP	TC	no	1	2	1
1	ER	ISEL	PT	EU/AC	yes	CARLETON UNIVERSITY	CA	TC	yes	1	7	1
2	ER	CARLETON UNIVERSITY	CA	TC	yes	ISEL	PT	EU/AC	yes	3	9	1
6	ER	ISEL	PT	EU/AC	yes	UC	US	TC	yes	2	2	1
7	ER	ISEL	PT	EU/AC	yes	CARLETON UNIVERSITY	CA	TC	yes	1	7	1
1	ER	ISEL	PT	EU/AC	yes	UAE	MA	TC	yes	2	19	1
7	ER	ISEL	PT	EU/AC	yes	UAE	MA	TC	yes	2	19	1
6	ER	ISEL	PT	EU/AC	yes	UC	US	TC	yes	1	26	1
1	ER	ISEL	PT	EU/AC	yes	UC	US	TC	yes	2	39	1
8	ESR	ISEL	PT	EU/AC	yes	UAE	MA	TC	yes	2	4	1
9	ESR	ISEL	PT	EU/AC	yes	UT	JP	TC	no	2	16	1
8	ESR	ISEL	PT	EU/AC	yes	UC	US	TC	yes	2	28	1
8	ESR	ISEL	PT	EU/AC	yes	UC	US	TC	yes	2	40	1
10	ER	UAE	MA	TC	yes	ISEL	PT	EU/AC	yes	2	9	1
28	ER	Zewail City of Science & Technolog	EG	TC	yes	ISEL	PT	EU/AC	yes	1	18	1
4	ER	UC	US	TC	yes	ISEL	PT	EU/AC	yes	3	9	1

Workshop on Multi-Higgs Models

6-9 September 2016

Lisbon - Portugal

This Workshop brings together those interested in the theory and phenomenology of Multi-Higgs models. The program is designed to include talks given by some of the leading experts in the field, and also ample time for discussions and collaboration between researchers. A particular emphasis will be placed on identifying those features of the models which are testable at the LHC.

For registration and/or to propose a talk, send an email to:

2hdmwork@cftp.tecnico.ulisboa.pt

Web Page : <http://cftp.tecnico.ulisboa.pt/~2hdmwork/>

See you all in Lisbon!



Organizing Committee:

- Augusto Barroso, CFTC
- Jorge Romão, CFTP
- Rui Santos, ISEL and CFTC
- João P. Silva, CFTP
- Pedro Ferreira, ISEL and CFTC
- Luís Lavoura, CFTP

International Advisory Committee:

- F.J. Botella
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- H. Haber
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