Heather Logan (Prof.)
Carleton University, Ottawa, Canada

Work related to RISE project:

Theory & Phenomenology:

- multi-Higgs models (without SUSY): particularly triplets model

Tools & Database:

- GMCALC model calculator (public code)
- MadGraph model file (for event simulation)

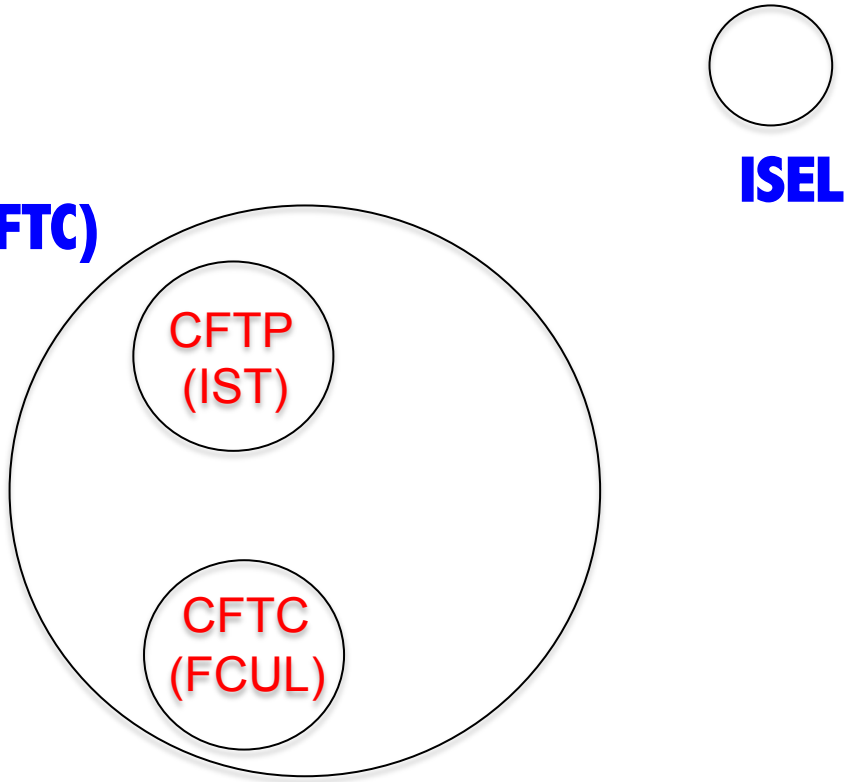
Others at Carleton node (RISE-related):

- 2 other ERs
- 4 ECRs

Lisbon Group

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

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



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 [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

SCIPP Theory Group (UC Santa Cruz)

Senior Staff

- Howard Haber, Professor of Physics
- Stefano Profumo, Professor of Physics

Post Doctoral Research Fellows

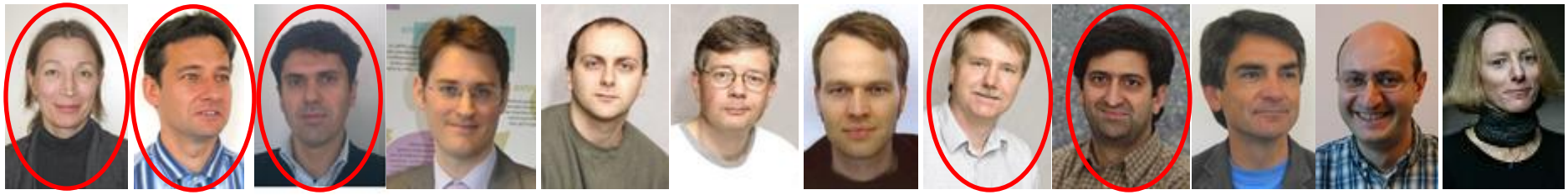
- Tim Stefaniak
- Francesco D'Eramo

Activities

- Theory/Pheno of Non-minimal Scalar Sectors (2HDM,…)
- Theory/Pheno of Higgs bosons of SUSY models (MSSM/NMSSM)
- Implications of Higgs physics for dark matter and baryogenesis
- Development and maintenance of HiggsBounds/HiggsSignals tools

SHEP Southampton High Energy Physics

FRS



- 17 staff members (8 Profs)
- 10 postdoctoral researchers
- 50 students
- 20 affiliates (visiting staff)

Circled (NExT people involved with RISE activities):

Elena Accomando, Sasha Belyaev, Pasquale Di Bari, Doug Ross, Steve King, SM,

Andy Akeroyd & Francesco Hautmann (plus a dozen PDRAs & PhDs)

UNIVERSITY OF Southampton

Non-Minimal Higgs Expertise

SUSY

MSSM
NMSSM/nMSSM
(B-L)SSM
ESSM
TESSM

(Includes CPV, both spontaneous & explicit)

Non-SUSY

2HDM
3HDM
6HDM
HTM

Compositeness
(4DCHM, C2HDM)

Tools development:
http://hepmdb.soton.ac.uk/, CalcHEP, HERWIG

Analysis deployment in CMS (NExT Institute, http://www.next-institute.ac.uk/)

UNIVERSITY OF Southampton

Uppsala THEP group

People:

- Rikard Enberg, assoc. prof. *(Higgs, BSM, astro, QCD, …)*
- Gunnar Ingelman, prof. *(QCD, Monte Carlo, …)*
- Tanumoy Mandal, postdoc *(BSM)*
- Andreas Ekstedt, Johan Löfgren, PhD students *(BSM, QCD)*

Activities:

- Higgs phenomenology, BSM, collider physics
- Neutrino/astroparticle physics
- QCD
- Historically: Monte Carlo & software dev. (e.g. LEPTO, 2HDMC)

Lund is associated to Uppsala

Lund senior staff most close to NonMinimalHiggs:

- Johan Rathsman, prof.
- Roman Pasechnik, assoc. prof.
- (Hans Bijnens, Gösta Gustafson, Leif Lönnblad, Malin Sjödahl, Torbjörn Sjöstrand)

Postdocs & PhD students:

- Eliel Camargo-Molina, (Antonio Morais), Hugo Serodio
- Jonas Wessén, Astrid Ordell, Joel Oredsson

Tool:

2HDMC is being developed in Lund