Matheus Hostert

Place and Date of Birth:	Blumenau, Brazil | 17 May 1993
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Education

Durham Univeristy, UK – Physics, PhD — Oct 2015 - Current
Four year position at the Institute for Particle Physics Phenomenology (IPPP), Durham University, with a Brazilian scholarship.
First class degree marks in first year exams.
Supervisors: Prof. Silvia Pascoli and Dr. Peter Ballett.

Federal University of Santa Catarina (UFSC), Brazil – BSc — Mar 2011 - Jun 2015
Third year at Durham University (Sep 2013 - Sep 2014) with first class marks.
Final GPA: 83/100.

Publications

Preprints:

[1] *"Leptophilic Z′s at DUNE ND"*, P. Ballett, M. Hostert, S. Pascoli, Y. F. Perez-Gonzalez, Z. Tabrizi, R. Z. Funchal, arXiv:1807.10973. *Submitted to JHEP.*

[2] *"Neutrino trident scattering at near detectors"*, P. Ballett, M. Hostert, S. Pascoli, Y. F. Perez-Gonzalez, Z. Tabrizi, R. Z. Funchal, arXiv:1807.10973. *Submitted to JHEP.*

Conference proceedings:

[1] *"Light Sterile Neutrinos at νSTORM: Decoherence and CP violation"*, P. Ballett, M. Hostert, S. Pascoli, arXiv:1705.09214. *Poster presented at NuPhys2016.*

Positions

InvisiblesPLUS (2018): secondment of 2 months at Fermilab, working with Dr. Pedro Machado.

UG researcher (2015): undergraduate researcher under the supervision of Prof. M.E.B. Pinto and D.P. Menezes studying symmetry non-restoration in scalar models in QFT.

IPPP summer student (2014): summer student for 3 months under the supervision of Prof. S. Pascoli.

Volunteer UG researcher (2013): volunteer undergraduate researcher under the supervision of D.P. Menezes studying equations of state for stellar remnants.

Invited seminars, talks and visits

Neutrino Oscillation Workshop 2018: *Neutrino trident production at near detectors,* parallel talk.

NuFact 2018: *Neutrino tridents at DUNE*, parallel talk.

CERN near detector workshop 2018: Near detector physics with neutrino experiments, see event page.

Perimeter Institute Seminar (2018): *Current status of short-baseline oscillations.* Talk given during research visit to Perimeter Institute, working mainly with Prof. Maxim Pospelov.

Phenomenology Symposium 2018: *Leptophilic Z's in neutrino scattering*, parallel talk.

Fermilab Theory Seminar (2018): *Neutrino trident production at near detectors.*

NuPhys2017: *Smiting new physics with neutrino tridents*, award-winning poster presentation.

UK High Energy Physics Forum 2017: *Searching for new physics with neutrino tridents*, poster presentation.

Invisibles Workshop 2017: *Not-so-light-sterile neutrinos at νSTORM*, plenary young researcher forum and a poster presentation.

NuPhys 2016: *Exploring Decoherence and CP violation at νSTORM with eV scale steriles*, poster presentation followed by a proceedings.

Scholarships and awards

Science without Borders PhD scholarship (Sept. 2015): excellence based scholarship for a full PhD in Durham University.
Science without Borders UG scholarship (Sept. 2013): excellence based scholarship for one year of undergraduate studies at Durham University.

Teaching

Durham level 2 tutor (2016-2018): workshop demonstrator for Theoretical Physics 2 at Durham University.

Physics tutor (2012-2013): invited to be a tutor for all level 1 students undertaking physics modules at UFSC.

Outreach and event organisation

Orkney Science Festival: volunteer in the International Orkney Science Festival.

Royal Society Summer Exhibition 2017 and 2018: national outreach event organiser at the Royal Society, in London, and volunteer (see modelling the invisible and ghosts in the universe).

Pint of Science 2017: event manager for local outreach event organisation.

Young Theorists Forum 9, 10 and 11: main organiser for local event for PhD students, YTF.

Other skills

Languages: Portuguese native speaker, fluent in English with basic knowledge of Spanish and French.

Coding: advanced knowledge of Python, C++, Mathematica, bash, Linux, LaTeX. Basic knowledge of ROOT.