

Gilvan Augusto Alves

Curriculum Vitae

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Academic degrees

1987 - 1992 PhD in Physics.
Centro Brasileiro de Pesquisas Físicas, CBPF, Rio De Janeiro, Brasil
with field work at Fermi National Accelerator Laboratory (Advisor : Jeffrey Appel)
Title: A Dependence for Charm Meson production, 1992
Advisor: Alberto Franco de Sá Santoro
Fellowship: Conselho Nacional de Desenvolvimento Científico e Tecnológico

Professional career

1986 Assistant Professor, UERJ, Rio de Janeiro
1992 - 1993 Postdoctoral research, Fermi National Accelerator Laboratory, FERMILAB, USA
1997 - 1998 Postdoctoral research, Fermi National Accelerator Laboratory, FERMILAB, USA
1998 - 2006 Associate Professor, CBPF, Rio de Janeiro
2007 - Full professor, CBPF, Rio de Janeiro

Research Fields

1986 - 1992 Charm production, E769 Experiment, FERMILAB
1992 - 2002 Beauty production, Dzero Experiment, FERMILAB
2002 - 2006 Diffractive Physics, Dzero Experiment, FERMILAB
2006 - 2012 Diffractive Physics, CMS Experiment, CERN
2012 - BSM Physics, CMS Experiment, CERN

Main Scientific Contributions

- Electronics development and integration for Silicon Microstrip Detectors
- Measurement of Charm production properties at E769
- Level 1 trigger development for Dzero muon system
- First measurement of b-quark production at Dzero
- First observation of the top quark at Dzero
- Scintillating fiber detector development for Dzero Forward Detector
- First observation of diffractive production at Dzero
- Development of Monte Carlo simulation program for Dzero
- First measurement of total cross section at Dzero
- Data Quality Monitor development for CMS
- Level 1 trigger development for CMS Diffractive group
- First observation of exclusive dimuon production at CMS
- First measurement of inelastic cross section at CMS
- First observation of diffractive dijet production at CMS
- First observation of Higgs boson production at CMS
- Development of new electronics for CMS Hadron Calorimeter
- Development of trigger strategies for SUSY searches at CMS
- Evidence for exclusive WW production at CMS

- Double parton scattering measurements at CMS

Scientific Coordination

- Level 1 muon trigger coordination at Dzero
- Project coordinator for the Forward Proton Detector at Dzero
- Convener of the Forward Physics group at Dzero
- Coordinator of the CBPF research group at Dzero
- Head of the HEP department at CBPF
- Coordinator of the CBPF research group at CMS
- Convener of the phase1 upgrade project for the CMS HF calorimeter
- Supervision of 5 PhD, 4 MSc and 19 undergraduate students

Scientific Advising

- Member of ICFA and ILCSC (2011-2013)
- Advisor of CONICYT, Chile (since 2011)
- Advisor of FAPESP, Brazil (since 2008)
- Advisor of FAPERJ, Brazil (since 2014)
- Advisor of CNPq, Brazil (since 2002)
- Member of CMS Collaboration Board (since 2008)

Awards

- Cientista do Nosso Estado (Honorable Scientist of Rio de Janeiro), 2014
- Honorable Mention CNEN National Prize, 1980

Selected Publications

- Atomic mass dependence of D^\pm and D^0, D^{*-} production in 250 GeV π^\pm -nucleon interactions, <https://doi.org/10.1103/PhysRevLett.70.722>
- Observation of the top quark, <https://doi.org/10.1103/PhysRevLett.74.2632>
- Diffractive Production of b anti- b in proton antiproton collisions at the Fermilab Tevatron, <https://doi.org/10.1103/PhysRevD.55.2683>
- Observation of Diffractively Produced W and Z Bosons in anti-p p Collisions at $s^{1/2} = 1800$ GeV, <http://dx.doi.org/10.1016/j.physletb.2003.09.001>
- Diffractive χ production at the Tevatron and the LHC, <http://dx.doi.org/10.1016/j.nuclphysb.2007.03.011>
- A Combined Search for the Standard Model Higgs Boson at $s^{1/2} = 1.96$ TeV, <http://dx.doi.org/10.1016/j.physletb.2008.02.069>
- b-Jet identification in the D0 experiment, <https://doi.org/10.1016/j.nima.2010.03.118>
- Observation of a new boson at a mass of 125 GeV with the CMS experiment at the LHC, <http://dx.doi.org/10.1016/j.physletb.2012.08.021>
- Exclusive $\gamma\gamma \rightarrow \mu^+ \mu^-$ production in proton-proton collisions at $\sqrt{s}=7$ TeV, [https://doi.org/10.1007/JHEP01\(2012\)052](https://doi.org/10.1007/JHEP01(2012)052)
- Evidence for exclusive $\gamma\gamma \rightarrow W^+ W^-$ production and constraints on anomalous quartic gauge couplings in pp collisions at $\sqrt{s}=7$ and 8 TeV, [https://doi.org/10.1007/JHEP08\(2016\)119](https://doi.org/10.1007/JHEP08(2016)119)