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PERSONAL INFORMATION

Name: Debtosh Chowdhury
Date of birth: 1st February 1987
Place of birth: Mouri-Daspara, West Bengal, India
Nationality: Indian
Gender: Male

Present Address

2 Avenue François Molé
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Permanent Address

Mouri-Daspara (Ananda Dham)
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ACADEMIC PROFILE

Joint-Postdoctoral Fellow at École Polytechnique & LPT, Orsay, France. Advisors: Emilian Dudas & Yann Mambrini	Oct 2017 - present
Postdoctoral Fellow at INFN, Sezione di Roma, Italy. Advisor: Luca Silvestrini	Feb 2014 - Sep 2017
PhD studies in 'Flavor and Dark Matter Issues in Supersymmetric Models' at Indian Institute of Science, Bangalore, India. Advisor: Sudhir K. Vempati	Sep 2009 - Dec 2013
Integrated PhD student at Indian Institute of Science, Bangalore, India. Masters Project on 'Extra Dimensions as Physics Beyond the Standard Model'	Aug 2007 - Sep 2009
Bachelor of Science in Physics (minor: Computer Science & Mathematics) at University of Calcutta, Kolkata, India.	Oct 2004 - June 2007
12 th Grade from West Bengal Council of Higher Secondary Education (WBCHSE), India. (Subjects: Physics, Mathematics, Chemistry and Biology)	July 2004
10 th Grade from West Bengal Board of Secondary Education (WBBSE), India.	June 2002

RESEARCH INTERESTS

- Broadly physics beyond the Standard Model and Higgs physics.
- Dark matter physics.
- Precision and flavor physics.
- Collider physics.

LIST OF PUBLICATIONS

1. "Update of Global Two-Higgs-Doublet Model Fits," D. Chowdhury and O. Eberhardt, arXiv:1711.02095 [hep-ph].
2. "Indirect Searches of the Degenerate MSSM," D. Chowdhury, K. M. Patel, X. Tata and S. K. Vempati, Phys. Rev. D **95**, no. 7, 075025 (2017) [arXiv:1612.06471 [hep-ph]].
3. "Next-to-leading order unitarity fits in Two-Higgs-Doublet models with soft Z_2 breaking," V. Cacchio, D. Chowdhury, O. Eberhardt and C. W. Murphy, JHEP **1611**, 026 (2016) [arXiv:1609.01290 [hep-ph]].
4. "Status of MSSM Higgs sector after ICHEP 2016," R. K. Barman, B. Bhattacharjee, A. Choudhury, D. Chowdhury, J. Lahiri and S. Ray, arXiv:1608.02573 [hep-ph].
5. "Constraints on dark matter annihilation to fermions and a photon," D. Chowdhury, A. M. Iyer and R. Laha, arXiv:1601.06140 [hep-ph].
6. "Muon $g-2$ in anomaly mediated SUSY breaking," D. Chowdhury and N. Yokozaki, JHEP **1508**, 111 (2015) [arXiv:1505.05153 [hep-ph]].
7. "Same sign di-lepton candles of the composite gluons," A. Azatov, D. Chowdhury, D. Ghosh and T. S. Ray, JHEP **1508**, 140 (2015) [arXiv:1505.01506 [hep-ph]].
8. "Global fits of the two-loop renormalized Two-Higgs-Doublet model with soft Z_2 breaking," D. Chowdhury and O. Eberhardt, JHEP **1511**, 052 (2015) [arXiv:1503.08216 [hep-ph]].
9. "Explaining the Lepton Non-universality at the LHCb and CMS within a Unified Framework," S. Biswas, D. Chowdhury, S. Han and S. J. Lee, JHEP **1502**, 142 (2015) [arXiv:1409.0882 [hep-ph]].
10. "Charge and Color Breaking Constraints in MSSM after the Higgs Discovery at LHC," D. Chowdhury, R. M. Godbole, K. A. Mohan and S. K. Vempati, JHEP **1402**, 110 (2014) [arXiv:1310.1932 [hep-ph]].
11. "Revisiting lepton flavor violation in a supersymmetric type II seesaw mechanism," D. Chowdhury and K. M. Patel, Phys. Rev. D **87**, no. 9, 095018 (2013) [arXiv:1304.7888 [hep-ph]].
12. "Status of Supersymmetric Seesaw in SO(10) Models," L. Calibbi, D. Chowdhury, A. Masiero, K. M. Patel and S. K. Vempati, JHEP **1211**, 040 (2012) [arXiv:1207.7227 [hep-ph]].
13. "Supersymmetry Les Houches Accord: Seesaw Models and Generalised PDG Numbering Scheme," L. Basso, A. Belyaev, D. Chowdhury, M. Hirsch, S. Khalil, S. Moretti, B. O'Leary and W. Porod *et al.*, Comput. Phys. Commun. **184**, 698 (2013) [arXiv:1206.4563 [hep-ph]].
14. "SUSEFLAV: Program for supersymmetric mass spectra with seesaw mechanism and rare lepton flavor violating decays," D. Chowdhury, R. Garani and S. K. Vempati, Comput. Phys. Commun. **184**, 899 (2013) [arXiv:1109.3551 [hep-ph]].

15. “Flavored Co-annihilations,” D. Chowdhury, R. Garani and S. K. Vempati, JHEP **1206**, 014 (2012) [arXiv:1104.4467 [hep-ph]].
16. “Results from PAMELA, ATIC and FERMI : Pulsars or Dark Matter ?”, D. Chowdhury, C. J. Jog and S. K. Vempati, Pramana **76**, 1-22 (2011) [arXiv:0909.1182v3 [astro-ph.HE]].
17. “Resistivity noise in crystalline magnetic nanowires and its implications to domain formation and kinetics”, A. Singh, D. Chowdhury and A. Ghosh. Appl. Phys. Lett. **95**, 092103 (2009) [arXiv:0908.0136].

In Proceedings

1. “The muon $g - 2$ and degenerate supersymmetry,” D. Chowdhury, K. M. Patel, X. Tata and S. K. Vempati, EPJ Web Conf. **118**, 01027 (2016).
2. “Les Houches 2011: Physics at TeV Colliders New Physics Working Group Report,” G. Brooijmans, B. Gripaios, F. Moortgat, J. Santiago, P. Skands, D. Albornoz Vasquez, B. C. Allanach and A. Alloul *et al.*, arXiv:1203.1488 [hep-ph].
3. “Flavoured co-annihilation,” D. Chowdhury, R. Garani and S. K. Vempati, Pramana **79**, 849 (2012).
4. “SuSeFLAV: A Program for calculating supersymmetric spectra and lepton flavor violation,” D. Chowdhury, R. Garani and S. K. Vempati, Pramana **79**, 887 (2012) [arXiv:1112.4403 [hep-ph]].

REFERENCES

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INVITED TALKS

CHEP, Indian Institute of Science, Bangalore, India	Jan 2016
LBNL, Berkeley, USA	Sep 2015
SLAC, Stanford, USA	Sep 2015
Argonne Lab, Chicago, USA	Sep 2015
CCAPP, Ohio State University, Ohio, USA	Sep 2015
Michigan State University, Michigan, USA	Aug 2015
Centro de Ciencias de Benasque Pedro Pascual, Benasque, Spain	April 2014
The Institute of Mathematica Sciences, Chennai, India	Aug 2013
Tata Institute of Fundamental Research, Mumbai, India	Oct 2012
Indian Association for the Cultivation of Science, Kolkata, India	Oct 2012
Top-Higgs Meeting, Bangalore, India	Sep 2012
Max-Planck-Institut für Physik, Munich, Germany	July 2011
Institut für Theoretische Physik und Astrophysik, Würzburg, Germany	July 2011
Technische Universität München, Munich, Germany	July 2011
Laboratoire de Physique Subatomique et de Cosmologie, Grenoble, France	June 2011
Deutsches Elektronen Synchrotron (DESY), Hamburg, Germany	June 2011
Physical Research Laboratory, Ahmedabad, India	April 2011

TALKS AT CONFERENCES/WORKSHOPS

PASCOS 2017, Madrid, Spain	June 2017
SUSY 2016, Melbourne, Australia	Aug 2016
Higgs Tasting Workshop, Benasque, Spain	May 2016
WHEPP 2015, Kanpur, India	Dec 2015
SUSY 2015, Lake Tahoe, USA	Aug 2015
Dark Matter: Astrophysical probes, Laboratory tests, and Theory aspects, Munich, Germany	Feb 2015
Workshop on Frontiers of New Physics: Colliders and Beyond, Trieste, Italy	June 2014
Fifth Workshop on Theory, Phenomenology and Experiments in Flavor Physics, Capri, Italy	May 2014
After the Discovery: Hunting for a Non-Standard Higgs Sector, Benasque, Spain	April 2014
WHEPP 2013, Puri, India	Dec 2013
From Strings to LHC, Puri, India	Dec 2012
Top-Higgs Meeting 2012, Bangalore, India	Sep 2012
Lepton-Photon 2011, Mumbai, India	Aug 2011
iCAPP Meeting on Dark Matter, Ahmedabad, India	Apr 2011
Workshop on Dark Matter in the LHC Era: Direct and Indirect Searches, Kolkata, India	Jan 2011
XIX DAE-BRNS High Energy Physics Symposium, Jaipur, India	Dec 2010

TEACHING AND ADVISING EXPERIENCE

Co-advised Antonio M. Coutinho (Ph.D. student at Università degli Studi Roma Tre, Rome): *Anomalies in $b \rightarrow s$ transitions and metastability of the two Higgs doublet model: two global analyses*, 2017

Co-advised Vincenzo Cacchio (Master's student at Università La Sapienza, Rome): *Constraints on the two Higgs doublet model of type II*, 2016

Teaching Assistant at Department of Physics and Centre for High Energy Physics at Indian Institute of Science, Bangalore, India for the following courses:

PH 205 Mathematical Physics	2010
PH 201 Classical Mechanics	2012

PROFESSIONAL ACTIVITIES

Organizer of Weekly Journal Club at INFN, Rome, Jan 2015 - Jan 2017

Manuscript referee for Journal of High Energy Physics (JHEP), Oct 2017 - present