Özer Özdal

Ph.D. Candidate

Contact Information

Concordia University
Loyola Campus
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Personal Information

Date of birth
28/05/1990
Place of birth
Izmir, Turkey

Languages

Native Turkish
Advanced English
Beginner French

Programming

Fortran, Python,
Matlab, C++,
Bash shell scripting,
Mathematica, LaTeX

Research interests

Particle Physics Phenomenology
Beyond the Standard Model Phenomenology
Supersymmetric Extensions of the Standard Model
Dark Matter in Supersymmetric and Non-supersymmetric Models
LHC Phenomenology
Grand Unified Theories
Electroweak Symmetry Breaking

Education

since 2016 **Ph.D. candidate in Physics** — Concordia University
Dark matter phenomenology in supersymmetric extentions of Standard Model

2016–2017 **Inter-University Transfer Student** — McGill University
Physics 610 Quantum Field Theory I given by Prof. Simon Caron-Huot
Physics 673 Quantum Field Theory II given by Prof. Alexander Maloney

2014–2016 **M.Sc. in Physics** — Izmir Institute of Technology
The Higgs boson and right-handed neutrinos in supersymmetric models

2009–2014 **B.Sc. in Physics (Ranked 3rd)** — Izmir Institute of Technology
Revisiting N-symmetric barrier tunneling in Quantum Mechanics

Experience

Since 2016 **Concordia University** — Teaching Assistant (TA)
PHYS 204: Mechanics (Tutor, 2019 Summer)
PHYS 367: Modern Physics and Relativity (Tutor, 2019 Winter)
PHYS 245: Classical Mechanics (Tutor, 2018 Fall)
PHYS 224: Introductory Experimental Mechanics (Lab Assistant)
PHYS 252: Optics (2018 Winter)
PHYS 236: Numerical Analysis in Physics (2017 Fall)
PHYS 224: Introductory Experimental Mechanics (Lab Assistant)
PHYS 252: Optics (2017 Winter)
PHYS 236: Numerical Analysis in Physics (2016 Fall)

Since 2016 **Concordia University** — Research Fellow
Mariana Frank Research Group

2015–2016 **TUBITAK Project No: 114F461** — Research Fellow
Muon Anomalous Magnetic Moment and Yukawa Quasi-Unification in Supersymmetric Models
Under the supervision of Assoc. Prof. Cem Salih Ün

2012–2012 **Koç University, Mechanical Characterization Lab** — Internship
Vibration modeling in nanowire resonators with mechanical coupling
Under the supervision of Assoc. Prof. Erdem Alaca

Activities

2015 **Introduction to Supersymmetry Summer School** (2015, September 7-11) Boğaziçi University

2015 **METU HEP Days** (2015, February 12-14) METU

2014 **Cosmology and Astroparticle Physics Summer School** (2014, September 1-12) Boğaziçi University

2014 **Differential Geometry and Topological Methods in Physics Summer School** (2014, August 25-29) Boğaziçi University

2014 **Computational Techniques for Physicists and Astronomers Summer School** (2014, August 13-22) Boğaziçi University

2014 **Winter School on Computer Applications in Accelerator and Particle Physics** (2014, February 3-10) Gaziosmanpaşa University

2013 **Physics for Astronomers** (2013, September 2-6) Boğaziçi University

2013 **Cosmology Summer School** (2013, August 19-30) Boğaziçi University

2010 **Istanbul University 27th International Physics Congress** (2010, September 14-17) Istanbul University

Presentations

2019 **2019 XIth International Symposium: Quantum Theory and Symmetries (QTS)** (Oral Presentation) (2019, 1-5 July)
Title: Relaxing LHC constraints on the W_R mass QTS 2019

2018 **2018 Phenomenology Symposium** (Oral Presentation)
(2018, 7-9 May)
Title: Naturalness and dark matter in supersymmetric $U(1)_{B-L} \times U(1)_R$ model Pheno 2018

2018 **Winter Nuclear and Particle Physics Conference** (Oral Presentation)
(2018, 15-18 February)
Title: Exploring the supersymmetric $U(1)_{B-L} \times U(1)_R$ model WNPPC 2018

2015 **First Joint METU-IPM Conference on LHC Physics** (Poster presentation)
(2015, September 29–October 3)
Title: Higgs Anomalies in SUSY B-L Model ICTP-ECAR

2014 **Turkish Physical Society 31th International Physics Congress**
(Poster presentation - 2014, July 21-24)
Title: Revisiting N-symmetric barrier tunneling in Quantum Mechanics TFD-31

2014 **Izmir Solid State Physics Meeting** (Poster presentation)
(2014, April 11)
Title: Revisiting N-symmetric barrier tunneling in Quantum Mechanics IZTECH

Publications

2019 **Relaxing LHC constraints on the W_R mass** Phys. Rev. D 99, 035001

2018 **Exploring the supersymmetric U(1)$_{B-L}\times$ U(1)$_R$ model with dark matter, muon g−2, and Z' mass limits** Phys. Rev. D 97, 015012

2017 **Muon g−2 in an alternative quasi-Yukawa unification with a less fine-tuned seesaw mechanism** Phys. Rev. D 97, 055007

2016 **The Higgs boson and right-handed neutrinos in supersymmetric models** IZTECH Theses & Dissertations

2016 **Mass spectrum and Higgs profile in B−L symmetric SSM** Phys. Rev. D 93, 055024

Awards

2019 **Graduate Student Mobility Award** Concordia University

2016 **Concordia International Tuition Award of Excellence** Concordia University

2014 **B.Sc. in Physics 3rd Ranked Award** Izmir Institute of Technology

References

1) **Mariana Frank**
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2) **Cem Salih Ün**
Associate professor in Physics
Department of Physics
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4) **Durmuş Ali Demir**
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Izmir Institute of Technology
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