

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

Phenomenology of particle physics
Beyond the Standard Model phenomenology
Supersymmetric extensions of the Standard Model
Dark matter in BSM
LHC Phenomenology
Grand unified theories
Electroweak symmetry breaking
Machine learning algorithms in particle physics

Education

- since 2016 **Ph.D. candidate in Physics** Concordia University
Dark matter phenomenology in supersymmetric extensions of Standard Model
Under the supervision of Prof. Mariana Frank
- 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
Under the supervision of Prof. Durmus Ali Demir
- 2009–2014 **B.Sc. in Physics (Ranked 3rd)** Izmir Institute of Technology
Revisiting N-symmetric barrier tunneling in Quantum Mechanics
Under the supervision of Prof. Ramazan Tuğrul Senger

Experience

- Since 2016 **Concordia University** Teaching Assistant (TA)
PHYS 252 Optics given by Dr. Ingo Salzmann (2018 Winter Semester)
PHYS 236 Numerical Analysis in Physics given by Dr. Georges Abinader
PHYS 224 Introductory Experimental Mechanics (as a lab assistant)
PHYS 252 Optics given by Dr. Gabriel Rosenbaum (2017 Winter Semester)
PHYS 236 Numerical Analysis in Physics given by Dr. Mario D'Amico
- 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

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

- 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

- 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) **Durmuş Ali Demir**
Professor in Physics
Department of Physics
Izmir Institute of Technology durmus.demir@gmail.com
- 3) **Cem Salih Ün**
Associate professor in Physics
Department of Physics
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