

# Özer Özdal

Ph.D. Candidate

## Contact Information

Concordia University  
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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 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 367: Modern Physics and Relativity (Tutor, 2019 Winter)*  
*PHYS 245 Classical Mechanics (Tutor, 2018 Fall)*  
*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	<b>Introduction to Supersymmetry Summer School</b> (2015, September 7-11)	Boğaziçi University
2015	<b>METU HEP Days</b> (2015, February 12-14)	METU
2014	<b>Cosmology and Astroparticle Physics Summer School</b> (2014, September 1-12)	Boğaziçi University
2014	<b>Differential Geometry and Topological Methods in Physics Summer School</b> (2014, August 25-29)	Boğaziçi University
2014	<b>Computational Techniques for Physicists and Astronomers Summer School</b> (2014, August 13-22)	Boğaziçi University
2014	<b>Winter School on Computer Applications in Accelerator and Particle Physics</b> (2014, February 3-10)	Gaziosmanpaşa University
2013	<b>Physics for Astronomers</b> (2013, September 2-6)	Boğaziçi University
2013	<b>Cosmology Summer School</b> (2013, August 19-30)	Boğaziçi University
2010	<b>Istanbul University 27th International Physics Congress</b> (2010, September 14-17)	Istanbul University

## Presentations

2018	<b>2018 Phenomenology Symposium</b> (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	<b>Winter Nuclear and Particle Physics Conference</b> (Oral Presentation) (2018, 15-18 February) Title: Exploring the supersymmetric $U(1)_{B-L} \times U(1)_R$ model	WNPPC 2018
2015	<b>First Joint METU-IPM Conference on LHC Physics</b> (Poster presentation) (2015, September 29–October 3) Title: Higgs Anomalies in SUSY B-L Model	ICTP-ECAR
2014	<b>Turkish Physical Society 31th International Physics Congress</b> (Poster presentation - 2014, July 21-24) Title: Revisiting N-symmetric barrier tunneling in Quantum Mechanics	TFD-31
2014	<b>Izmir Solid State Physics Meeting</b> (Poster presentation) (2014, April 11) Title: Revisiting N-symmetric barrier tunneling in Quantum Mechanics	IZTECH

## Publications

2019	<b>Relaxing LHC constraints on the <math>W_R</math> mass</b>	Phys. Rev. D 99, 035001
2018	<b>Exploring the supersymmetric <math>U(1)_{B-L} \times U(1)_R</math> model with dark matter, muon <math>g-2</math>, and <math>Z'</math> mass limits</b>	Phys. Rev. D 97, 015012
2017	<b>Muon <math>g-2</math> in an alternative quasi-Yukawa unification with a less fine-tuned seesaw mechanism</b>	Phys. Rev. D 97, 055007
2016	<b>The Higgs boson and right-handed neutrinos in supersymmetric models</b>	IZTECH Theses & Dissertations
2016	<b>Mass spectrum and Higgs profile in B-L symmetric SSM</b>	Phys. Rev. D 93, 055024

## Awards

2016	<b>Concordia International Tuition Award of Excellence</b>	Concordia University
2014	<b>B.Sc. in Physics 3rd Ranked Award</b>	Izmir Institute of Technology

## References

- 1) **Mariana Frank**  
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- 2) **Cem Salih Ün**  
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- 3) **Poulose Poulose**  
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Indian Institute of Technology Guwahati  
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- 4) **Durmuş Ali Demir**  
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