

# Özer Özdal

## Contact Information

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## Personal Information

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

## Languages

Native Turkish  
Advanced English  
French (A2 Level)

## Software Skills

Monte Carlo Sampling  
Statistical Modeling  
Linear regression  
Clustering  
Quantitative Analysis  
Data Visualization

## Coursework

- Machine Learning
  - Deep Learning Specialization
- SQL for Data Science
  - Linear Algebra
- Multivariate Calculus
  - Probability Theory
- Computational Physics
  - Classical Mechanics
  - Quantum Mechanics
  - Statistical Mechanics

## Tools

PYTHON, C++  
SQL, FORTRAN  
CERN ROOT, LaTeX  
Bash shell scripting  
MATHEMATICA, MATLAB

## Packages

Scikit-Learn,  
NumPy, SciPy,  
Pandas, Matplotlib,  
Pytorch, TensorFlow

## Data Science Experience

since 2018 **Machine Learning in High-Energy Physics** Concordia University  
*My goal is to compare two  $D$  dimensional samples: the SM simulated events (background to BSM searches), and the real data, and to check if the two are drawn from the same probability density distribution.*

## Education

since 2016 **Ph.D. in Theoretical High Energy Physics** Concordia University  
*Phenomenology of new physics beyond the Standard Model: signals of dark matter and new gauge bosons at colliders. Lead to five scientific publications.*

2016–2017 **Inter-University Transfer Student** McGill University  
*Took two graduate courses: Quantum Field Theory I - II*

2014–2016 **M.Sc. in Theoretical High Energy Physics** Izmir Institute of Technology  
*The Higgs boson and right-handed neutrinos in supersymmetric models. Lead to two scientific publications.*

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

## Experience

Since 2016 **Research Assistant (RA)** Concordia University  
*Mariana Frank Research Group*

2019-2020 **Visiting Ph.D. Student** NExT Institute & University of Southampton  
*Supported by MITACS Globalink Research Award. Lead to two scientific publications.*

2016-2020 **Teaching Assistant (TA)** Concordia University  
*TAed for 8 physics courses. Graded assignments and wrote solutions, lead office hours and tutorial sessions.*

2015–2016 **Research Assistant (RA)** TUBITAK  
*Studied muon anomalous magnetic moment and yukawa quasi-unification in supersymmetric Models. Lead to two scientific publications.*

2012–2012 **Internship** Koç University, Mechanical Characterization Lab  
*Created vibration modeling in nanowire resonators with mechanical coupling*

## Relevant Accomplishments

- 7 peer-reviewed scientific publications in High Energy Physics
- Gave 17 talks about my research at conferences
- Awarded Globalink Research Award by MITACS and Graduate Student Mobility Award by Concordia University
- Attended 18 scientific workshops, summer/winter schools in top institutions
- Awarded by Concordia International Tuition Award of Excellence
- B.Sc. in Physics 3rd Ranked Award