Tuğba Nur Öztürk, Ph.D.
Postdoctoral Research Associate
Washington University in St Louis

E tugba.ozturk@wustl.edu
E ozturktug@gmail.com

EDUCATION

Doctorate in Physics — Concordia University; Montréal, Canada
September 2014 - July 2019
Research area: Molecular modeling, Molecular Dynamics, Homology Modelling, Free Energy Calculations, Reproducible Data Analysis, Computational Chemistry, Bioinformatics.

Graduate Certificate in University Teaching — Concordia University; Montréal, Canada
September 2017 - November 2018
Main interest: Active learning, Flipped Classroom, Incorporating computational thinking into undergraduate education.

Master of Science in Computational Science & Engineering — Koç University; İstanbul, Turkey
September 2012 - August 2014
Research area: Molecular modelling, Molecular Dynamics, Bioinformatics, Monte Carlo, Thermodynamics, Reproducible Data Analysis, Computational Chemistry.

Bachelor of Science in Physics Engineering — İstanbul Technical University; İstanbul, Turkey
September 2006 - June 2011

PUBLICATIONS

Peer-reviewed Journals

- Krohn*, Öztürk* et al. (2020). Genetic, structural and functional evidence link TMEM175 to synucleinopathies. ***Annals of Neurology***, 87(1), 139-153.
- Culham et al. (2018). Dual Role of the C-Terminal Domain in Osmosensing by Bacterial Osmolyte Transporter ProP. ***Biophysical Journal***, 115(11), 2152-2166.
- Ozturk, T. N. and Keskin, S. (2014). Computational Screening of Porous Coordination Networks for Adsorption and Membrane-Based Gas Separations, ***J. Phys. Chem. C***, 118 (25), 52 (49), 13988-13997.
- Ozturk, T. N. and Keskin, S. (2013). Predicting Gas Separation Performances of PCNs using Atomistic Simulations, ***Ind. Eng. Chem. Res.***, 52 (49), 17627–17639.

Conference Proceedings

- Ozturk, T. N. and Lamoureux, G. (2019). Ion permeation through Orai proteins. ***Biophysical Journal***, 116(3), 433a.
- Ozturk, T. N. and Lamoureux, G. (2017). Molecular Modelling of Hexamer and Tetramer Forms of the Orai Calcium Channel. ***Biophysical Journal***, 112(3), 506a.
- Ozturk, T. N. and Demiralp, M. (2012). Classical Dynamics of Isolated Univariate Quartic Anharmonic Oscillator via Probabilistic Evolution, ***Proceedings of 12th WSEAS International Conference on Systems Theory and Scientific***, 224-228.
- Ozturk, T. N. and Demiralp, M. (2012). Probabilistic evolution in purely second order one unknown autonomous explicit ODEs under initial conditions, ***Proceedings of 13th WSEAS International Conference on Mathematics and Computers in Biology and Chemistry, Mathematical Models and Methods in Applied Sciences***, 63-68.

AWARDS

- Conference and Exposition Award, Concordia University (2x$1000) — 2016, 2017
- FEBS Youth Travel Fund ($1800) — 2017
- Biophysical Society of Canada Travel Award ($500) — 2017
- Faculty of Arts and Science Student Conference Travel Support, Concordia University ($375) — 2016
- Mostafa Showleh Physics Teaching Assistant Award, Department of Physics, Concordia University ($500) — 2016
- PROTEO Graduate Student Scholarship ($8000) — 2015
- International Tuition Fee Remission Award Tuition Rate — 2014
- Faculty of Arts and Science Graduate Fellowship ($4250) — 2014-2016
- Concordia University Graduate Fellowship ($32400) — 2014
- Koç University Full Scholarship for the Graduate Program — 2012

WORK EXPERIENCE

Research

Research Associate — Washington University, St Louis, USA; Present
Focus: Theoretical and computational investigation of dimerization of ClC transporter in lipid bilayers

Research Assistant — Dawson College, Montreal, CANADA; 2018
Focus: T. Öztürk worked in the physics team of SALTISE project that aims to explore and implement evidence-based innovations in pedagogy and educational technology.

Research Assistant — Under Prof. Dr. Guillaume Lamoureux's supervision, Department of Physics, Concordia University; 2014 - 2019
Focus: Molecular modelling of ion sensing and transport in proteins. She specifically focused on the CRAC channel, TMEM175 channel and ProP osmolyte transporter.
T. Öztürk designed the computational studies on ion channels and transporters; supervised summer interns; performed molecular dynamics simulations and free energy calculations; analyzed the simulation data; contributed in writing peer-review journal articles and facilitated workshops on programming, writing and teaching for graduate students.

Research Assistant — Under Prof. Dr. Seda Keskin's supervision, Koç University; 2012 - 2014
Focus: Computational investigation of small gas adsorption and diffusion through nanoporous crystals using Grand Canonical Monte Carlo and Equilibrium Molecular Dynamics simulations.
T. Öztürk designed and conducted two projects; wrote two peer-review journal articles; mentored an undergraduate student; and gave oral and poster presentations in national and international conferences.

Teaching

Lecturer — Department of Physics, Concordia University; 2018
Teaching an undergraduate level Mechanics course (PHYS 204) in the summer semester.
Workshop Facilitator/IT Workshop Leader — GradProSkills, Concordia University; 2017 - 2019
Designing and facilitating Python and R workshops for graduate students.
Workshop Facilitator — Center of Teaching and Learning, Concordia University; 2017 - 2019
Facilitating a 32-hour long teaching workshop every year (32-hour graduate-level graduate seminar in university teaching and TA orientation workshops).
Teaching Assistant — Department of Physics, Concordia University; 2014 - 2018
Grading, instructing the laboratory experiments and demonstrating the problem solving sessions for the first year physics courses: Mechanics, Electricity and Magnetism, Optics.
Teaching Assistant — Koç University; 2012 - 2014
Grading, instructing laboratory experiments, demonstrating science documentaries, facilitating discussion groups, designing assignments, demonstrating problem solving sessions for different courses including : SCI 103 Life Sciences, SCI 107 Energy and Environment, SCI 110 Physics of Sphere, CHEM 301 Physical Chemistry, CHBI 585 Molecular Modelling, MECH 204 Thermodynamics.

Other (Talks, Leadership, Mentorship, Supervision and Organization)

Invited Talk, Hacking your academic Career in Psychology, Department of Psychology, Concordia University — 2019.

T. Öztürk gave a talk titled "**Want to learn R?**" to the graduate students of the Department of Psychology introducing the Concordia GradProSkills R workshops she designed and facilitates and RLadies-Montreal meetups.

Supervision, Department of Physics, Concordia University — 2018.

T. Öztürk supervised an undergraduate student from the University of Guelph for her summer internship in Lamoureux Research Group at Concordia University. The aim of this project was computational investigation of coiled-coil interaction of the C-terminus domain of the ProP peptide.

The Graduate Student Committee Member for the Academic Chair Search Process, Department of Physics, Concordia University — 2017.

T. Öztürk has been chosen as the graduate student member of the academic chair search committee. She also took part in evaluating the faculty position applicants in the Department of Physics as a senior Ph.D. student.

Science Discussion Community Leader, Department of Physics, Concordia University — 2018.

A science communication project organized by T. Öztürk and funded by the Department of Physics. It aimed to promote science communication between graduate students and involved mini-tutorials on teaching, writing, presenting, communication skills.

Head of External Sponsors, Chemistry and Biochemistry Graduate Student Conference, Concordia University — 2016 and 2017.

A total of ~5000$ raised by T. Öztürk through company donations. She also took part in organizing various events before, during and after the day of the conference.

Mentor, High Altitude Ballooning Project, Department of Physics, Concordia University — 2014 - 2015.

This project's aim was to offer undergraduate women in physics opportunities to develop valuable research experience and to connect with female mentors in the graduate program. It involved designing and executing a high altitude balloon payload. T. Öztürk mentored and supervised three female undergraduate students on designing a microcontroller sensor board to gather, store and send data acquired from the balloon's flight.

COMPUTER SKILLS

- **Bash**, C, C++, Matlab, **Octave**, **Python**, **R**, **Tcl**.
- Molecular Modelling: **Bio3D**, CHARMM, Gromacs, **MDAnalysis**, Modeller, MDtraj, **NAMD**, PyMOL and **VMD**.

LANGUAGES

English (fluent), French (Beginner) and Turkish (native).

PROFESSIONAL MEMBERSHIPS

- PROTEO (The Quebec Network for Research on Protein Function, Engineering, and Applications)
- The Biophysical Society
- The Biophysical Society, Education Committee Member