



EDUCATION

Environmental Sciences, PhD. ETH Zurich ; Zurich, Switzerland Thesis: The Influence of Street Trees on Urban Cooling and Human Thermal Comfort	<u>2023 – present</u>
Atmospheric Sciences, MSc. GPA: 3.94/4 Istanbul Technical University ; Istanbul, Turkey	<u>2021 – 2023</u>
Meteorological Engineering, BSc. GPA: 3.45/4 Istanbul Technical University ; Istanbul, Turkey	<u>2016 - 2021</u>

FIELD EXPERIENCE

PhD Researcher Swiss Federal Laboratories for Materials Science and Technology Researching the impact of street trees on urban climate using ICON.	<u>2023 Sep – Present</u>
Project Engineer Cirrus Utilized ML to conduct a climate risk analysis (RCP45/85) as part of the UNDP's <i>Enhancing Adaptation Action in Turkey</i> Project.	<u>2021 Jun – 2022 March</u>
Data Science Intern Tarentum AI Drew conclusions regarding wind power generation while performing error calculations.	<u>2021 Mar - Dec</u>
Volunteer Junior Project Researcher Cirrus Volunteered in the UNDP's <i>Enhancing Adaptation Action in Turkey</i> Project and carried out post-processing of the regCM.	<u>2021 Jan - Jun</u>
Student Internship Alkazar Technology Explored different ML algorithms to nowcast radar imageries.	<u>2020 Aug - Sep</u>

PUBLICATIONS

Donmez, K., Stagakis, S., Ponomarev, N., Schulz JP., and Brunner D., 2026. Evaluating the role of Urban Canopy Parameters in ICON TERRA_URB. *Urban Clim.* 68, 103018. <https://doi.org/10.1016/j.uclim.2026.103018>.

Donmez, B., Donmez, K., Y. Sonuç, C., Unal, Y., 2024. Future Change of Humid Heat Extremes and Population Exposure in Türkiye. *International Journal of Climatology*, 44(11), 3912–3929. <https://doi.org/10.1002/joc.8559>.

Donmez, K., Donmez, B., Ustun, H.D-U., Unal, Y., 2023. Boundary-dependent urban impacts on timing, pattern, and magnitude of heavy rainfall in Istanbul. *Atmos. Res.* 106681 <https://doi.org/10.1016/j.atmosres.2023.106681>.

Donmez, B., Donmez, K., Ustun, H.D-U., Unal, Y., 2022. Urbanization-induced changes in convective and frontal precipitation events in Ankara. *Urban Clim.* 46, 101316 <https://doi.org/10.1016/j.uclim.2022.101316>.

PUBLIC PRESENTATIONS

Dönmez, K., and Brunner, D.: A ComIn-Based Urban Canopy Model Coupling for ICON with Subgrid Thermal Comfort Diagnostics. Beat the Heat (BTH), Bern, Switzerland, 09 Sep 2026.

Dönmez, K., and Brunner, D.: Enhancing Urban Climate Simulations with ICON TERRA_URB: A Case Study of Zurich Using Improved Urban Canopy Representations. ICCARUS, Offenbach, Germany, 10-14 Mar 2025.

Dönmez, K., Emmenegger, L., and Brunner, D.: Improved Urban Climate Simulations in ICON TERRA_URB, Swiss Geoscience Meetings (SGM), Basel, Switzerland, 09 Nov 2024.

Dönmez, K., Emmenegger, L., and Brunner, D.: Urban Climate and CO2 Simulations with the New Atmospheric Model ICON-ART Accounting for Spatially Varying Urban Morphology and Material Properties, EGU General Assembly 2024, Vienna, Austria, 14–19 Apr 2024, EGU24-3375, <https://doi.org/10.5194/egusphere-egu24-3375>, 2024.

Dönmez, K., Emmenegger, L., and Brunner, D.: Urban Climate and CO2 Simulations with ICON-ART Accounting for Spatially Varying Urban Properties, COSMO-ICON User Workshop, Zurich, Switzerland, 12 Feb 2024.

Donmez, B., **Donmez, K.**, Yuruk Sonuc, C., and Unal, Y.: Present and projected humid heat exposure and precipitation extremes in Turkey, EGU General Assembly 2023, Vienna, Austria, 24–28 Apr 2023, EGU23-12059, <https://doi.org/10.5194/egusphere-egu23-12059>, 2023.

Dönmez, K., Dönmez, B., Diren-Üstün, D., and Ünal, Y.: Assessment of Urbanization Impact On Heavy Precipitation in Istanbul, Turkey, EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-3057, <https://doi.org/10.5194/egusphere-egu21-3057>, 2021.

Dönmez, B., **Dönmez, K.**, Diren-Üstün, D., and Ünal, Y.: The Impact of Urban Land Use On the Springtime Frontal Precipitation Event in Ankara: A Case Study of 5 May 2014, EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-3056, <https://doi.org/10.5194/egusphere-egu21-3056>, 2021.

RESEARCH INTERESTS AND TECHNICAL SKILLS

Interests: Numerical Weather Prediction, Climate Modeling, Urban Meteorology, Extreme Events, Statistics in Atmospheric Sciences, Big-Data Analysis, ChatGPT, Claude

Computer: Python, ICON, WRF, COSMO-CLM, Terra_Urb, Bep-Tree, GIS

AWARDS

International Global Climate Change Congress 2021 [Presentation Clip](#) 2021
Canakkale Onsekiz Mart University
• Most Innovative Paper Award

PERSONAL PROJECTS

Climaturk Website	<u>2021 - Present</u>
• Visualizing and elaborating on past thunderstorm events that struck turkey. • Viewing climatological conditions for atmospheric variables in turkey. • Analyzing unique and practical climatological indices for turkey.	
Learn with Kutay & Berkay Education	<u>2021 - Present</u>
• Includes contents about how to utilize atmospheric model datasets using the state-of-art python libraries.	
Visjobs Python Library	<u>2020 - Present</u>
• Effectively accessing and visualizing atmospheric data on python.	

THESIS

Donmez, K., Unal, Y., 2023. Future Changes in Hourly Extreme Precipitation, Return Levels, and Non-stationary Impacts in Türkiye. *Thesis (M.Sc.) - İstanbul Technical University, Graduate School.* <http://hdl.handle.net/11527/25215>

Donmez, K., Unal, Y., 2021. Assessment of Urbanization Impact On Heavy Precipitation in Istanbul, Turkey. *Thesis (B.Sc.) - İstanbul Technical University.*

LANGUAGES

ENGLISH:
 • IELTS (06.01.2022): Overall: 7.5 (C1), Listening: 8.5, Reading: 7, Speaking: 7, Writing: 7

TURKISH: Native

VOLUNTEER SOCIAL EXPERIENCE

Social Media Editor Instagram	<u>2020 - 2023</u>
TMMOB Chamber of Meteorological Engineers	
• Managing Instagram Account of TMMOB Chamber of Meteorological Engineers.	
International Volunteer Workcamp	<u>2020</u>
COCAT – Reus, Spain	
• CAL MASSÓ: Art, Music and movement.	
International Volunteer Workcamp Credentials	<u>2019</u>
CONCORDIA – Avignon, France	
• Participated in the restoration of a historic church.	
Data Analysis Team Leadership Website	<u>2019</u>
Istanbul Technical University – High Altitude Balloon Team	
• Trained with data analysis team to develop high altitude balloon from scratch and participate in the Balloon Challenge competition which cancelled due to pandemic.	
Organization Coordinator Website	<u>2019</u>
Istanbul Technical University – Meteorological Research Club (METAR)	
• Coordinated activities to familiarize students with the department	

MEDIA APPEARANCE

TMMOB Chamber of Meteorological Engineers Presentation Clip	<u>2021</u>
1st year special talk	
Mor Ve Otesi (music band) Cover Competition Presentation Clip	<u>2018</u>
Participated in the contest	
The Voice Turkey Presentation Clip	<u>2017</u>
Supported my twin brother	
High School Music Competition Presentation Clip	<u>2015</u>
Playing drums for the band	