# Ilil Levakov

## PhD environmental hydrology and microbiology







Environmental hydrologists specialized in soil and water quality, soil microbiology, and pollution migration in the unsaturated zone and groundwater.

## Proficiency skills

Analytical methods for water and soil: Titrations, spectrophotometry, Ion chromatography, ICP-MS, combustion TOC analyzer. Molecular biology: qPCR, DNA extraction and quantification. Enzymatic assays. Software operation and modeling: MATLAB, ArcGIS, Hydrus. Water systems operation: pump stations and monitoring systems. Presentation in national and international conferences, scientific reports, and grants.

## Professional experience

**2015- 2021**: Managing multidisciplinary research in hydrology, microbiology, and biochemistry.

- -Designing and operating an advanced bio-remediation system for soil and groundwater pollution.
- Developing a new technique for examining extracellular enzymes in soil.
- Modeling flow and transport in a contaminated site.

**2019-2020** Research project manager - Conducting a full research survey project from technical operation to scientific reports publication to Netzer Hasharon LTD.

**2018-2019:** Instructor in "Drop in the desert" project-promoting excellence and academic skills to high school students from the Bedouin communities.

**2013- 2015:** Research assistant in Geochemical project- a collaboration between the Ben-Gurion University, the Geological Survey of Israel, and the Negev Nuclear Research Center

**2014-2016:** Technical assistant in GPS campaigns-Geophysical research, Geological Survey of Israel

#### Education

Ph.D. 2017-2021 | Environmental hydrology and microbiology, Zuckerberg Institute for Water Research (ZIWR), Ben Gurion University of the Negev. "Combined in situ bioremediation of vadose zone and groundwater polluted with perchlorate"

M.Sc. 2015-2017 | Research thesis in environmental hydrology and microbiology, Zuckerberg Institute for Water Research (ZIWR), Ben Gurion University of the Negev. Cum Laude

B.Sc. 2011-2015 | Dual program: Life science and Geological & Environmental Sciences, Ben Gurion University of the Negev.

## Military service

Obligatory military service in Israel (2007-2009) border control in the West Bank, last position as a sergeant.

## Languages

Hebrew, English.

### Reference

Prof. Ofer Dahan - Associate Professor- Zuckerberg Institute for Water Research (PhD supervisor). odahan@bgu.ac.il, +972 528795888

#### **Publications**

- **Levakov Ilil**, Zeev Ronen, and Ofer Dahan. "Combined in-situ bioremediation treatment for perchlorate pollution in the vadose zone and groundwater." Journal of hazardous materials 369 (2019): 439-447.
- **Levakov Ilil**, Jincheng Han, Zeev Ronen, and Ofer Dahan. "Inhibition of perchlorate biodegradation by ferric and ferrous iron." Journal of Hazardous Materials 410 (2021): 124555.
- **Levakov Ilil**, Zeev Ronen, Hagar Siebner, and Ofer Dahan. "Continuous in-situ measurement of free extracellular enzyme activity as direct indicator for soil biological activity." Soil Biology and Biochemistry 163 (2021): 108448.

### Presentations at scientific meetings

**Levakov,I.,** Dahan,O., Ronen,Z. (2016). In situ biodegradation treatment method for perchlorate contamination. Presented as oral presentation in the I.A.W.R - Israel Association of Water Resources, Israel.

**Levakov,I.,** Dahan,O., Ronen,Z. (2016). Developing an Alternative treatment method for perchlorate contamination in the vadose zone. Presented as oral presentation in Water Research in Israel conference: The Next Generation for Research, Management and Industry, Israel.

**Levakov,I.**, Dahan,O., Ronen,Z. (2017). Combined in situ bioremediation treatment for perchlorate pollution in the vadose zone and groundwater. Presented as oral presentation in the I.A.W.R - Israel Association of Water Resources, Israel.

**Levakov,I.,** Dahan,O., Ronen,Z (2018). In situ biodegradation treatment method for perchlorate contamination in the vadose zone. Presented as oral presentation in the Israel society of soil science conference, The Hebrew University.

**Levakov,I.,** Dahan,O., Ronen,Z. (2018). "Combined in situ bioremediation treatment for perchlorate pollution in the vadose zone and groundwater". Presented as oral presentation in the EGU (European Geosciences Union) conference. Vienna, Austria.

**Levakov,I.,** Ronen,Z., Han,J., Dahan,O. (2019). "Competitive and inhibition factors to perchlorate degradation at a combined alternative treatment for groundwater and unsaturated zone". Presented as poster in Eyal (Israel Water Resources Association) conference. Israel.

**Levakov, I.,** Ronen, Z., Dahan, O. (2021). "Perchlorate bioremediation treatment for soil, groundwater, and vadose zone". Presented as a poster in the Nature Conference on Sustainable Solutions for Pollution Control (virtual conference).

#### Prizes and Awards

- Certificate for academic achievement in the Dual B.Sc program: Life science with Geological & Environmental Sciences.
- Best lecture award at the 3rd graduate students conference -Water Research in Israel: The Next Generation for Research, Management, and Industry.
- 2019 ZIWR Excellence Scholarship.
- Cum laude degrees award for the master graduation.