

PERSONAL INFORMATION

Agota HOREL



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- 💬 Skype Agota Horel

Sex Female | Nationality Hungarian

WORK EXPERIENCE

- 2013–Present **Senior research scientist**
Department of Soil Physics and Water Management, Institute for Soil Science and Agricultural Chemistry, Centre for Agricultural Research, Hungarian Academy of Sciences, Budapest (Hungary)
- 2010–2013 **Postdoctoral Research Scientist**
Department of Biology, University of Alabama, Dauphin Island Sea Lab, Dauphin Island (United States)
- 2009–2010 **Research Scientist**
Alaska Center for Energy and Power, University of Alaska Fairbanks, Fairbanks (United States)

EDUCATION AND TRAINING

- 2006-2009 **PhD in Environmental Engineering**
University of Alaska Fairbanks, Department of Civil and Environmental Engineering, Fairbanks, AK (United States)
Dissertation title: Biodegradation of Petroleum and Alternative Fuel Hydrocarbons in Moderate to Cold Climate
- 1996-1999 **BSc in Civil Engineering**
Szechenyi Istvan University, Department of Civil and Environmental Engineering, Győr (Hungary)

PERSONAL SKILLS

Mother tongue(s) Hungarian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
	ECL. C2.				
German	A2	A2	A2	A2	A2
	ECL. B2.				

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
[Common European Framework of Reference for Languages](#)

Memberships	2019 – present	Associate editor for Soil Science Annual journal
	2013 – present	Hungarian Soil Science Society member
	2015 – present	European Geosciences Union member
	2011 – 2013	Society of Environmental Toxicology and Chemistry (SETAC) member
	2010 – 2013	American Association for the Advancement of Science (AAAS) member
	2006 – 2010	Science Advisory Committee member. Prince William Sound Regional Citizen's Advisory Council, Fairbanks, AK
	2003 – 2006	Port Operation and Vessel Traffic System committee member. Prince William Sound Regional Citizen's Advisory Council, AK
	2007 & 2008	American Water Resources Association Conference – Alaska Chapter Moderator and Organizer, Fairbanks, AK and Juneau, AK

Organisational / managerial skills Principal Investigator of ongoing research projects

Awards, Fellowships	2015-18	Bolyai Janos Research Fellowship of the Hungarian Academy of Sciences
	2008-09	Thesis Completion Fellowship; Fairbanks, AK
	2008	Vincent S. Haneman, Jr., Professional Engineers Travel Scholarship; Fairbanks, AK
	2008	Contaminant in Freezing Ground Scholarship Award; Fairlee, VT
	2006-08	Inland Northwest Research Alliance (INRA) Fellowship; Fairbanks, AK,
	2008	Inland Northwest Research Alliance Travel Grant; Graduate School Travel Grant; Fairbanks, AK
	2008	Water and Environmental Research Center Travel Grant; Fairbanks, AK
	2006	American Water Resources Association Graduate Scholarship; Fairbanks, AK

Driving licence B category

ADDITIONAL INFORMATION

Publications	2018	Tóth E, Gelybó Gy, Dencsó M, Kása I, Birkás M, <u>Horel A</u> Chapter 19 - Soil CO ₂ Emissions in a Long-Term Tillage Treatment Experiment A2 - Muñoz, María Ángeles In: Maria Ángeles Muñoz, Raúl Zornoza (szerk.) Soil Management and Climate Change. Cambridge (MA): Academic Press, 2018. pp. 293-307. (ISBN:978-0-12-812128-3)
	2017	Kása I, Gelybó Gy, <u>Horel A</u> , Bakacsi Z, Tóth E, Koós S, Dencso M, Deelstra J, Molnár S, Farkas Cs Evaluation of three semi-distributed hydrological models in simulating discharge from a small forest and arable dominated catchment BIOLOGIA (BRATISLAVA) 72:(9) pp. 1002-1009.
	2017	Schiewer S, <u>Horel A</u> Biodiesel addition influences biodegradation rates of fresh and artificially weathered diesel fuel in Alaskan sand JOURNAL OF COLD REGIONS ENGINEERING 31:(4) Paper 04017012
	2016	<u>Horel A</u> , Schiewer S. Impact of VOC removal by activated carbon on biodegradation rates of diesel, Syntroleum and biodiesel in contaminated sand. SCIENCE OF THE TOTAL ENVIRONMENT 573: pp. 106-114
	2015	<u>Agota Horel</u> , Behzad Mortazavi, Patricia A Sobecky. Input of organic matter enhances degradation of weathered diesel fuel in sub-tropical sediments. SCIENCE OF THE TOTAL ENVIRONMENT 533: pp. 82-90
	2015	<u>Agota Horel</u> , Silke Schiewer, Debasmita Misra. Effect of concentration gradients on biodegradation in bench-scale sand columns with HYDRUS modeling of hydrocarbon transport and degradation ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH 22:(17) pp. 13251-13262
	2015	<u>Horel A</u> , Tóth E, Gelybó Gy, Kása I, Bakacsi Zs, Farkas Cs. Effects of Land Use and Management on Soil Hydraulic Properties. OPEN GEOSCIENCES 7:(1) pp. 742-754
	2014	Peter Šurda, Lubomír Lichner, Viliam Nagy, Jozef Kollár, Massimo Iovino, <u>Agota Horel</u> Effects of vegetation at different succession stages on soil properties and water flow in sandy soil BIOLOGIA (BRATISLAVA) 70:(11) pp. 1474-1479
	2014	<u>A. Horel</u> and S. Schiewer. Influence of inocula with prior hydrocarbon exposure on biodegradation rates of diesel, synthetic diesel, and fish-biodiesel in soil. CHEMOSPHERE , Volume: 109, pp. 150–156.
	2014	<u>A. Horel</u> , B. Mortazavi, and P.A. Sobecky. Biostimulation of weathered MC252 crude oil in northern Gulf of Mexico sandy sediments. INTERNATIONAL BIODETERIORATION AND BIODEGRADATION . Volume: 93, pp. 1–9.
	2014	<u>A. Horel</u> , R.J. Bernard and B. Mortazavi. Impact of crude oil exposure on nitrogen cycling in a previously impacted <i>Juncus roemerianus</i> salt marsh in the northern Gulf of Mexico. ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH , Volume: 21, pp. 6982–6993.
	2014	<u>A. Horel</u> , L. Lichner, A. Alaoui, H. Czachor and V. Nagy. Transport of iodide in structured clay-loam soil under maize during irrigation experiments analyzed using HYDRUS model. BIOLOGIA , 69:(11) pp. 1531-1538.
	2014	C. Farkas, G. Gelybo, Z. Bakacsi, <u>A. Horel</u> , A. Hagyo, L. Dobor, I. Kasa and E. Toth. Impact of expected climate change on soil water regime under different vegetation conditions. BIOLOGIA , Volume: 69:(11) pp. 1510-1519

- 2013 B. Mortazavi, A. Horel, JS. Anders, A. Mirjafari, MJ. Beazley and PA. Sobecky. Enhancing the biodegradation of oil in sandy sediments with choline: A naturally methylated nitrogen compound. **ENVIRONMENTAL POLLUTION**, Volume: 182, pp. 53–62.
- 2013 B. Mortazavi, A. Horel, M. Beazley and P.A. Sobecky. Intrinsic rates of petroleum hydrocarbon biodegradation in Gulf of Mexico intertidal sandy sediments and its enhancement by organic substrates. **JOURNAL OF HAZARDOUS MATERIALS**, Volume: 244–245, pp. 537–544
- 2012 A. Horel, B. Mortazavi and P.A. Sobecky. Seasonal monitoring of hydrocarbon degraders in Alabama marine ecosystems following the Deepwater Horizon oil spill. **WATER, AIR, AND SOIL POLLUTION**, Volume: 223 (6), pp. 3145-3154.
- 2012 A. Horel, B. Mortazavi and P.A. Sobecky. Responses of microbial community from Northern Gulf of Mexico sandy sediments following exposure to Deepwater Horizon crude oil. **ENVIRONMENTAL TOXICOLOGY AND CHEMISTRY**, Volume: 31 (5), pp. 1004–1011.
- 2011 A. Horel and S. Schiewer. Influence of constant and fluctuating temperature on biodegradation rates of fish biodiesel blends contaminating Alaskan sand. **CHEMOSPHERE**, Volume: 83, pp. 652–660.
- 2009 A. Horel and S. Schiewer. Investigation of the physical and chemical parameters affecting biodegradation of diesel and synthetic diesel fuel contaminating Alaskan soils. **COLD REGIONS SCIENCE AND TECHNOLOGY**, Volume: 58, Issue: 3, pp. 113–119.

Recent projects

2019-2023. Impact of spatial allocation of soil water and soil organic carbon on greenhouse gas emission in a small catchment. OTKA/NKFIH – FK131792. Principal Investigator

2015-2019. The effects of biochar application on nitrogen cycling under different land use and soil management systems. NKFI – PD116157. Principal Investigator

2017-2020. Complex Assessment of soil moisture conditions in the Rákos Stream catchment. NKFI – FK124803. Participant

2013-2017. Data model fusion for studying the combined effects of different land use and climate change scenarios on water regime and soil erosion. NKFI – K101065. Participant