

# KHAN ZAIB JADOON

## CURRICULUM VITAE

(LAST UPDATED July 25, 2022)



Professor in the Department of Civil Engineering  
International Islamic University  
Islamabad, Pakistan

☎ +92-51-383591-6

☎ +92-315-9486611

✉ [khanzaibjadoon@gmail.com](mailto:khanzaibjadoon@gmail.com) & [khanzaib.jadoon@iiu.edu.pk](mailto:khanzaib.jadoon@iiu.edu.pk)



[https://www.researchgate.net/profile/Khan\\_Jadoon](https://www.researchgate.net/profile/Khan_Jadoon)

### RESEARCH INTERESTS

- Geostatistical and numerical methods in hydrology and hydrogeophysics.
- Integrated hydrogeophysical inversion (joint inversion of hydrological and geophysical data) to estimate subsurface hydraulic properties.
- Aquifer characterization using inverse modeling and data integration approaches.
- Forward and inverse modeling of ground-penetrating radar (GPR) and electromagnetic induction (EMI) data to characterize subsurface hydraulics.
- Development, design and function of subsurface intakes for seawater desalination facilities, slow sand filtration, and aquifer storage and recovery.
- Development and implementation of smart technologies for water resources management.
- Internet of Things, Fog, and Cloud Computing for Smart Educational Institutions

### PROFESSIONAL AND RESEARCH EXPERIENCE

Jul 2022 – Present	Professor and Incharge Quality Development & Higher Studies, <a href="#">Department of Civil Engineering</a> , Faculty of Engineering & Technology, International Islamic University Islamabad, Pakistan
Aug 2020 – Jun 2022	Professor and Chairman, <a href="#">Department of Civil Engineering</a> , Faculty of Engineering & Technology, International Islamic University Islamabad, Pakistan
Aug 2017 – Jul 2020	Associate Professor & Chairman, <a href="#">Department of Civil Engineering</a> , Faculty of Engineering & Technology, International Islamic University Islamabad, Pakistan

Feb 2016 – Jul 2017	Associate Professor and Head of Department, <a href="#">Department of Civil Engineering</a> , COMSATS Institute of Information Technology, Abbottabad, Pakistan
Jan 2014 – Dec 2015	Research Scientist, <a href="#">Hydrology, Agriculture and Land Observation (HALO) group</a> , Water Desalination and Reuse Center, King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia
Jan 2012 – Dec 2013	Postdoctoral Research Fellow, <a href="#">Water Desalination and Reuse Center</a> , King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia
Dec 2010 – Dec 2011	Postdoctoral Research Fellow, <a href="#">Institute of Bio- and Geosciences (IBG3)</a> , Forschungszentrum Juelich, Germany.
Nov 2009 – Jan 2010	Guest Researcher, <a href="#">Earth Sciences Division (Hydrogeology group)</a> , Lawrence Berkeley National Laboratory (LBNL), Berkeley, US.
May 2007 – Dec 2010	Research Assistant/PhD Scholar, <a href="#">Institute of Bio- and Geosciences (IBG-3)</a> , Forschungszentrum Juelich, Germany.
May 2006 – Apr 2007	Research Associate, <a href="#">National Centre of Excellence in Geology</a> , University of Peshawar, Pakistan.
Oct 2003 – Apr 2006	Site Engineer, M/S Qadeem Shah Jadoon & Sons, Government Contractor, Abbottabad, Pakistan.

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## EDUCATION

<b>Dec 2010</b>	<b>PhD in Water Resources Engineering</b> , <i>Université Catholique de Louvain</i> , (UCL) Belgium.
Dissertation title	<i>Integrated hydrogeophysical inversion of ground-penetrating radar data for identifying field-scale soil hydraulic properties.</i>
Supervisor	Sebastien Lambot, Department of Environmental, Agricultural and Bio-Engineering, Université Catholique de Louvain, Belgium.
Major Research Area	<b>Non-Invasive Methods for Water Resources Management.</b> Hydrogeophysics, Joint Inversion of Hydrogeophysical data, Soil Hydraulic Parameters and digital soil mapping.
<b>Scientific Output</b>	Results of the thesis are published in five peer reviewed Journals: <i>Water Resources Research</i> , <i>Vadose Zone Journal</i> , <i>IEEE Transactions on Geosciences and Remote Sensing</i> , and <i>Near Surface Geophysics</i> .
<b>April 2006</b>	<b>MS in Earth Sciences - Department of Earth Sciences</b> , <i>Quaid-I-Azam University</i> , Islamabad, Pakistan.
Dissertation title	<i>Application of Geoelectrical method for Groundwater investigation studies in the area of Haripur, Pakistan.</i>
Supervisor	Zulfiqar Ahmad, Chairman Department of Earth Sciences, Quaid-i-Azam University, Islamabad, Pakistan.
Major Research Area	Geophysics and Geoelectrical Methods. Groundwater Geophysics and Aquifer Characterization.

August 2003

**BS in Civil Engineering - Department of Civil Engineering, NWFP University of Engineering and Technology Peshawar, Peshawar, Pakistan.**

Dissertation title

*Substructure Design of a Two Span Bridge in Regi Lalma Town, Pakistan.*

Supervisor

Irshad Ahmad, Department of Civil Engineering, NWFP University of Engineering and Technology Peshawar, Peshawar, Pakistan.

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### **HONOR AND AWARDS**

- Received Research Productivity Award (RPA-17) at COMSATS University, Abbottabad Campus (2017).
- Awarded postdoctoral fellowship by the Federal Ministry of Education and Research, Germany (2011).
- Awarded Helmholtz-Gemeinschaft Deutscher Forschungszentrem Scholarship for PhD research, Forschungszentrum Juelich, Germany (2007-2010).
- Awarded travel grant by Near Surface Geophysics Society to attend 79 Conference and Technical Exhibition, Society of Exploration Geophysics (SEG), Houston, US, (2009).
- Best poster presentation award at graduate school on Environmental Sciences, Technologies and Management (ENVITAM), Liège University, Belgium (2008).
- Secured FIRST POSITION in MS Earth Sciences (Geophysics), Department of Earth Sciences, Quaid-I-Azam University, Islamabad, Pakistan, (2006).
- Awarded research assistantship at Clemson University, South Carolina, US. NOT AVAILED, (2007).

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### **RESEARCH GRANTS AWARDED**

Sr. No	Title of project	Funding agency	Contribution PI/CO-PI	Amount	Duration/ Status
1	Development and Implementation of smart and Resource Efficient Irrigation System by Assessment of Water-Food and Energy Nexus	National Research Program for Universities (NRPU) of Heigher Education Commission (HEC) of Pakistan	PI	10 Million PKR	2022-2024 In progress
2	Development of Smart Groundwater Monitoring System to Calibrate and Validate	National Center of GIS & Space Application, Pakistan	PI	11 Million PKR	2022-2023 In progress

	GRACE Data for Real-Time Assessment of Groundwater Storage Depletion				
3	Spatiotemporal Monitoring Of soil Water Content profiles in Irrigated Field	King Abdullah University of Science & Technology, KSA	CO-PI	220,000 USD	2014-2015 Completed
4	Assessment of Coastal alluvial aquifer	King Abdullah University of Science & Technology, KSA	CO-PI	130,000 USD	2012-2013 Completed
5	CROP.SENSE.net- Non-Invasive Characterization of Plant Stress at The Field Scale	Federal Ministry of Education and Research, Germany	CO-PI	300,000 EURO	2010-2011 Completed
6	Non-Invasive Methods for Water Resources Management	Forschungszentrum Juelich, Germany	CO-Worker	450,000 EURO	2007-2010 Completed

### PROFESSIONAL SOCIETIES MEMBERSHIP

- Pakistan Engineering Council (PEC)
- Environmental and Engineering Geophysical Society (EEGS)
- European Association of Geoscientists & Engineers (EAGE)
- American Geophysical Union (AGU)
- European Geosciences Union (EGU)
- Society of Exploration Geophysics (SEG)
- International Glaciological Society (IGS)

### PUBLICATIONS

#### PEER REVIEWED JOURNAL PUBLICATION

(\*STUDENT MENTORED)

**(33 Peer Reviewed Journal Articles Published)**

**Cumulative Impact Factor of published articles: 103.16**

[Google Scholar Report](#) dated July 10, 2022



- Ishfaque M.\*, Salman S., **Jadoon K. Z.**, Danish A. A. K., Bangash K I., and Qianwei D., 2022. [Understanding the Effect of Hydro-Climatological Parameters on Dam Seepage Using SHapley Additive exPlanations \(SHAP\): A Case Study of Earth-Fill Tarbela Dam, Pakistan](https://doi.org/10.3390/w14172598), *Water*, 14 (17), <https://doi.org/10.3390/w14172598>
- Hussain A., **Jadoon K. Z.**, Rahman K. U., Shang S., Shahid M., Ejaz N. and Khan H., 2022. [Analyzing the impact of Drought on Agriculture: Evidence from Pakistan Using Standardized Precipitation Evapotranspiration Index](https://doi.org/10.1007/s11069-022-05559-6), *Natural Hazards*, <https://doi.org/10.1007/s11069-022-05559-6>.
- Rehman K. U., Pham Q. B., **Jadoon K. Z.**, Shahid M., Kushwaha P. D., Duan Z., Mohammadi B., Khedhar K. and M., Anh D. T., 2022. [Comparison of machine learning and process-based SWAT model in simulating streamflow in the Upper Indus Basin](https://doi.org/10.1007/s13201-022-01692-6), *Applied Water Science*, 12(178), <https://doi.org/10.1007/s13201-022-01692-6>.
- Ishfaque, M.\*, Qainwei, D., Haq M. U., **Jadoon, K. Z.**, Shahzad, S. M., and Janjuhah, H. T., 2022. [Use of Recurrent Neural Network with Long Short-Term Memory for Seepage Prediction at Tarbela Dam, KP, Pakistan](https://doi.org/10.3390/en15093123), *Energies*, 15(9), 3123, <https://doi.org/10.3390/en15093123>
- Farooq, R., Ghumman A. R., Tariq M. A. U. R., Ahmed, A., **Jadoon, K. Z.**, 2020. [Optimal octagonal hooked collar countermeasure to reduce scour around a single bridge pier](https://doi.org/10.3311/PPci.15966) *Periodica Polytechnica Civil Engineering*, 64(4), pp. 1026-1037, 2020. <https://doi.org/10.3311/PPci.15966>
- Farooq R., Ahmad A., Rehman A. U., Abbasi S. A., Seemab F., **Jadoon K. Z.**, Tariq M. A. U., 2019. [Evaluation of adaptation techniques through hydrodynamic flash flood modelling under climate change conditions](https://doi.org/10.1007/s11265-019-00000-0) *International journal of Water Resources and Arid Environment* 8(2), 132-137.
- Moghadas D., **Jadoon K. Z.**, and McCabe M. F., 2019. [Spatiotemporal monitoring of soil moisture from EMI data using DCT-based Bayesian inference and neural network](https://doi.org/10.1016/j.jappgeo.2019.07.004) *Journal of Applied Geophysics*, Volume 169, pages 226-238, DOI: 10.1016/j.jappgeo.2019.07.004
- Kenawy A., McCabe M. F., JLopez-Moreno J. I., Hathal Y., Robba S. M., Budeiri A. L., **Jadoon K. Z.**, Abouelmagd A., Domínguez-Castro F., Trigo R. M., Vicente-Serrano S. O, 2019. [Spatial assessment of the performance of multiple high-resolution satellite-based precipitation data sets over the Middle East](https://doi.org/10.1002/joc.5968), *International Journal of Climatology*, Volume 39, Issue 5, pages 2522-2543, DOI: [org/10.1002/joc.5968](https://doi.org/10.1002/joc.5968)
- Farid A.\*, Khalid P., Muhammad Y. A., Iqbal M. A., and **Jadoon K. Z.**, 2018. [Seismic stratigraphy of the Mianwali and Bannu depressions, north-western Indus foreland basin](https://doi.org/10.1007/s00531-017-1558-6), *International Journal of Earth Sciences*, Volume 107, Issue 1, pages 1557 - 1578, DOI: 0.1007/s00531-017-1558-6
- Jadoon K. Z.**, Altaf U, McCabe M. F., Hoteit I., Muhammad N., Moghadas D., and Weihermueller L., 2017. [Inferring soil salinity in a drip irrigation system from multi-configuration EMI measurements using](https://doi.org/10.1016/j.jappgeo.2017.07.004)

[Adaptive Markov Chain Monte Carlo](#), *Hydrology and Earth System Sciences*, DOI: 10.5194/hess-2016-299.

Moghadas D., **Jadoon K. Z.**, and McCabe M. F., 2017. [Spatiotemporal monitoring of soil water content profiles in an irrigated field using probabilistic inversion of time-lapse EMI data](#), *Advances in Water Resources*, Volume 110, pages 238-248, DOI: 10.1016/j.advwatres.2017.10.019

Farid A. \*, Khalid P., **Jadoon K. Z.**, Iqbal M. A., and Shafique M., 2017. [Applications of variogram analysis to electrical resistivity data for the occurrence and distribution of saline groundwater in Domail Plain, northwestern Himalayan Fold and thrust Belt, Pakistan](#), *Journal of Mountain Science*, Volume 14, Issue 1, pages 158–174, DOI: 10.1007/s11629-015-3754-9

Farid A. \*, Khalid P., **Jadoon K. Z.**, Iqbal M. A., and Small J., 2017. [An application of variogram modelling for electrical resistivity soundings to characterize depositional system and hydrogeology of Bannu Basin, Pakistan](#), *Geosciences Journal*, Volume 21, Issue 5, pages 819–839, DOI: 10.1007/s12303-017-0016-6

**Jadoon K. Z.**, Al-Mashharawi S., Hanafy S. M., Schuster G. T., Missimer T. M., 2016. [Anthropogenic-Induced Changes in the Mechanism of Drylands Ephemeral Stream Recharge, Western Saudi Arabia](#), *Water*, volume 8, issue 4, 1-14, DOI:10.3390/w8040136

Mughal I. \*, **Jadoon K. Z.**, Mai P. M., Missimer T. M., 2015. [Experimental Measurement of Diffusive Extinction Depth and Soil Moisture Gradients in a Dune Sand Aquifer in Western Saudi Arabia: Assessment of Evaporation Loss for Design of an MAR System](#), *Water*, volume 7, issue 12, page 6967-6982, DOI:10.3390/w7126669

**Jadoon K. Z.**, Moghadas D., Jadoon A., Missimer T., Al-Mashharawi S., and McCabe M. F., 2015. [Estimation of soil salinity in a drip irrigation system by using joint inversion of multi-coil electromagnetic induction measurements](#), *Water Resources Research*, volume 51, issue 5, page 3490-3504 DOI: 10.1002/2014WR016245

Lopez O. M. \*, **Jadoon K. Z.**, Missimer T. M., 2015. [Method of relating grain size distribution to hydraulic conductivity in dune sands to assist in assessing managed aquifer recharge projects: Wadi Khulays dune field, western Saudi Arabia](#), *Water*, volume 7, issue 11, page 6411-6426, DOI:10.3390/w7116411

Dehwah A. H. \*, **Jadoon K. Z.**, Al-Mashharawi S., Missimer T. M., 2015. [Effects of nearshore evaporation rates on the design of seabed gallery intake systems for SWRO facilities located along the Red Sea shoreline of Saudi Arabia](#), *Desalination and Water Treatment*, page 1-8, DOI: 10.1080/19443994.2015.1098796

Rosas J. \*, **Jadoon K. Z.**, Missimer T. M., 2015. [New empirical relationship between grain size distribution and hydraulic conductivity for ephemeral stream bed sediments](#), *Environmental Earth Sciences*, volume, 73, issue 3, page 1303-1315, DOI: 10.1007/s12665-014-3484-2.

**Jadoon K. Z.**, Weihermuller L., McCabe M. F., Moghadas D., Vereecken H., and Lambot S., 2015. [Temporal monitoring of soil freeze-thaw cycles over a snow-covered surface by using air-launched group-penetrating radar](#), *Remote Sensing*, volume 7, issue 9, page 12041-12056, DOI:10.3390/rs70912041

- Jonard F., Weihermüller L., Schwank M., **Jadoon KZ.**, Vereecken H., and Lambot S., 2015. [Estimation of the hydraulic properties of a sand using ground-based passive and active microwave remote sensing](#) *IEEE Transactions on Geoscience and Remote Sensing*, volume 53, issue 6, page 3095-3109, DOI:10.1109/TGRS.2014.2368831
- Missimer T. M., Hoppe-Jones C., **Jadoon K. Z.**, Li D., Al-Mashharawi S.K., 2014. [Hydrogeology, water quality, and microbial assessment of a coastal alluvial aquifer in western Saudi Arabia: potential use of coastal wadi aquifers for desalination water supplies](#), *Hydrogeology Journal*, volume 22, issue 8, page 1921-1934, DOI: 10.1007/s10040-014-1168-3
- Farid A. \*, **Jadoon K. Z.**, Khalid P., Jouini M. S., 2014. [The depositional setting of the late Quaternary sedimentary fill in southern Bannu basin, northwest Himalayan fold and thrust belt](#), *Environmental Monitoring and Assessment*, volume 186, issue 10, page 6587-6604, DOI: 10.1007/s10661-014-3876-5.
- Missimer, T. M., Guo W., Maliva R G., Rosas J., and **Jadoon, K. Z.**, 2014. [Enhancement of wadi dam recharge using dams coupled with aquifer storage and recovery wells](#), *Environmental Earth Sciences*, volume 73, issue 12, page 7723-7731, DOI: 10.1007/s12665-014-3410-7
- Moghadas D., **Jadoon K. Z.**, Vanderborght J., Lambot S., and Vereecken H., 2014. [Estimation of near surface soil water content during evaporation using coupling of dielectric mixing models with full-waveform inversion of ground penetrating radar](#), *Near Surface Geophysics*, volume 12, issue 5, page 623 – 633, DOI: 10.3997/1873-0604.2014017
- Dimitrov M.\* , Vanderborght J., K. G. Kostov., **Jadoon K. Z.**, Weihermueller L., Bindlish R., Pachehsky Y., Schwank M., and Vereecken H., 2014. [Soil hydraulic parameters and surface soil moisture of a tilled bare soil plot inversely derived from L-band brightness temperatures](#), *Vadose Zone Journal*, volume 13, issue 1, page 1-18, DOI:10.2136/vzj2013.04.0075
- Moghadas D., **Jadoon K. Z.**, Vanderborght J., Lambot S., and Vereecken H., 2013. [Effects of near surface soil moisture profiles during evaporation on far-field ground-penetrating radar data: a numerical study](#), *Vadose Zone Journal*, volume 12, issue 2, page 1-11, DOI:10.2136/vzj2012.0138
- Farid A. \*, **Jadoon K. Z.**, Akhter G., Iqbal M. A., 2013. [Hydrostratigraphy and Hydrogeology of western part of Maira Area Khyber Pakhtunkhwa, Pakistan: a case study by using electrical resistivity](#), *Environmental Monitoring and Assessment*, volume 185, issue 3, page 2407-2422, DOI:10.1007/s10661-012-2720-z
- Jadoon K. Z.**, Weihermüller L., Scharnagl B., Kowalsky M.B., Bechtold M., Hubbar S. S., Vereecken H., and Lambot S., 2012. [Estimation of soil hydraulic parameters in the field by integrated hydrogeophysical inversion of time-lapse ground-penetrating radar data](#), *Vadose Zone Journal*, volume 11, issue 14, page 1-17, DOI: 10.2136/vzj2011.0177.
- Jonard F., Weihermüller L., **Jadoon K. Z.**, Schwank M., Vereecken H., and Lambot S., 2011. [Mapping field scale soil moisture with L-band radiometer and ground-penetrating radar over a bare soil](#), *IEEE*



*Transactions on Geoscience And Remote Sensing*, volume 49, issue 8, page 2863-2875, DOI: 10.1109/TGRS.2011.2114890

**Jadoon K. Z.**, Slob E., Vereecken H., and Lambot S., 2011. [Analysis of antenna transfer functions and phase center position for modeling Off-ground GPR](#), *IEEE Transactions on Geoscience And Remote Sensing*, volume 48, issue 5, page 1649-1662, DOI: 10.1109/TGRS.2010.2089691.

**Jadoon K. Z.**, Lambot S., Scharnagl B., van der Kruk J., Slob E., and Vereecken H., 2010. [Quantifying field-scale surface soil water content from proximal GPR signal inversion in the time domain](#), *Near Surface Geophysics*, volume 8, issue 6, page 483–491, DOI: 10.3997/1873-0604.2010036.

Lambot, S., Rhebergen, J., Slob, E., Lopera, O., **Jadoon K. Z.** and Vereecken, H., 2009. [Remote estimation of the hydraulic properties of a sandy soil using full-waveform integrated hydrogeophysical inversion of time-lapse, off-ground GPR data](#), *Vadose Zone Journal*, volume 8, issue 3, page 743–754, DOI: 10.2136/vzj2008.0058

**Jadoon K. Z.**, Slob E.C., Vanclooster M., Vereecken H., and Lambot S., 2008. [Uniqueness and stability analysis of hydrogeophysical inversion for time-lapse ground-penetrating radar estimates of shallow soil hydraulic properties](#), *Water Resources Research*, volume 44, issue 9, page W09 421, DOI:10.1029/2007WR006 639

## **BOOK CHAPTER PUBLICATION**

### **(2 published)**

Minet J., **Jadoon K. Z.**, Jonard F., Mahmoudzadeh M. R., Tran P. A., and Lambot S., Advanced ground penetrating Radar for soil moisture retrieval, in: *Multiscale Hydrologic Remote Sensing: Perspectives and Applications*, edited by N.B Chang and Y. Hong. CRC Press/Francis & Taylor group, 2012, Chap 2.

Lambot, S., Slob E., Minet J., **Jadoon K. Z.**, Vanclooster M., and Vereecken H., Full-Waveform Modeling and Inversion of Ground Penetrating Radar Data for Non-Invasive Characterization of the Soil Hydrogeophysical Properties, In: *Proximal Soil Sensing, Developments in Soil Science Series*, R.A. Viscarra Rossel, A.B. McBratney, and B. Minasny ed(s), Springer, 1st Edition., 2010, Chap 25.

## **INTERNATIONAL PEER-REVIEWED CONFERENCE PROCEEDINGS (23 Published)**

**Jadoon K. Z.**, and Moghadas D., Spatiotemporal monitoring of soil water content using time-lapse electromagnetic induction measurements, *3<sup>rd</sup> International Water and Health Congress*, Antalya, Turkey, 12-15 November, 2019.

Farooq R., Ghumman A. R., Ahmad A., Rehman A. U., Abbasi S. A., Seemab F., **Jadoon K. Z.**, and Tariq M. A. U. R., Evaluation of Adaptation Techniques Through Hydro-Dynamic Flash Flood Modeling under Climate Change Conditions, *International Conference on Water Resources and Arid Environment*, Riyadh, Saudi Arabia, 22-24 January 2019.

**Jadoon K.Z.**, Farooq R., and Farid A., Estimation of spatial distribution of aquifer boundaries and thickness using geo-electrical resistivity measurements for groundwater modeling, *The 2<sup>nd</sup> international conference on Integrated Hydrosystem Modelling*, Tübingen, Germany, 03-06 April, 2018.



- Jadoon K. Z.**, McCabe F. M., Moghadas D., Probabilistic inversion of time-lapse EMI data for spatiotemporal monitoring of soil moisture, *The 23rd European Meeting of Environmental and Engineering Geophysics*, Malmo, Sweden, 03-07 September 2017.
- Jadoon K. Z.**, Muhammad N., Baig S., Farid A., 2016. Estimation of aquifer boundaries and thicknesses using geo-electrical resistivity measurements for groundwater flow models- a case study of Haripur area, *The 3rd International Water Conference "Water Security & Sustainable Growth"*, Islamabad, Pakistan, 23-25 August 2016.
- Jadoon K. Z.**, McCabe F. M., Moghadas D., Application of electromagnetic induction to monitor changes in soil electrical conductivity profiles in arid agriculture field, *The 21st European Meeting of Environmental and Engineering Geophysics*, Turin, Italy, 06-10 September 2015.
- Dehwah A. H., **Jadoon K. Z.**, Al-Mashharawi S., Missimer T. M., 2015. Effects of nearshore evaporation rates on the design of seabed gallery intake systems for SWRO facilities located along the red sea shoreline of Saudi Arabia, *Proceeding of The 7th Conference of the European Desalination Society*, Palermo, Italy, 10-14 May 2015.
- Jadoon, K. Z.**, Al-Mashharawi S., Ng K. C., Missimer T. M., Modified design of a basin-type solar still for water desalination, *Proceedings of the International Desalination Association World Congress*, Tianjin, China, 20-25 October 2013.
- Missimer, T. M., Guo W., Maliva R G., Rosas J., and **Jadoon, K. Z.**, Enhancement of wadi dam recharge using dams coupled with aquifer storage and recovery wells, *Proceedings of the 8th International Symposium On Managed Aquifer Recharge*, Beijing, China, 15-19 October, 2013.
- Jadoon, K. Z.**, Lambot S., Dimitrov M., Weihermueller L., Moghadas D., Vereecken H., Temporal monitoring of the soil freeze-thaw cycles over snow-cover land by using off-ground GPR, *Proceedings of the 7th International Workshop on Advanced Ground Penetrating Radar*, Nantes, France, 2-5 July 2013.
- Jadoon, K. Z.**, Moghadas, D., Jadoon, A., and Missimer, T. M., Joint inversion of multi-configuration electromagnetic induction data to characterize subsurface electrical conductivity, *Proceedings of the 18th European Meeting of Environmental and Engineering Geophysics*, Paris, France, 3-5 September 2012.
- Jonard F., Weihermüller, L., Schwank M., **Jadoon, K. Z.**, Verreken, H., and Lambot, S., Estimating soil hydraulic properties using L-Band radiometer and ground-penetrating radar, *Proceedings of the IEEE International Geoscience and Remote Sensing Symposium*, Munich, Germany, 22-27 July 2012.
- Jadoon, K. Z.**, Weihermüller, L., Verreken, H., and Lambot, S., Estimation of soil hydraulic parameters by integrated hydrogeophysical inversion of time-lapse GPR data measured at Selhausen, Germany, *Proceedings of the 14th International Conference on Ground Penetrating Radar*, Shanghai, China, 4-8 June 2012.

- Dimitrov, M., Kostov, K.G., Jonard, F., **Jadoon, K.Z.**, Schwank, M., Weihermuller, L., Hermes, N., Vanderborcht, J., Vereecken, H., New improved algorithm for sky calibration of L-band radiometers JUumlBARA and ELBARA II, *Proceeding of the 12th Specialist Meeting on Microwave Radiometry and Remote Sensing of the Environment (MicroRad)*, Rome, Italy, 5-9 March 2012.
- Dimitrov, M., J., Vanderborcht, **K. Z., Jadoon**, M., Schwank, L., Weihermueller, and H. Vereecken, Closed loop brightness temperature data inversion for the retrieval of soil hydraulic properties, *Proceedings of the IEEE International Geoscience and Remote Sensing Symposium*, Vancouver, Canada, 24-29 July 2011.
- Jadoon K. Z.**, Andre F., van der Kruk., Slob E., Vereecken H., and Lambot S., Propagation of ground penetrating radar waves in pure and saline water, *Proceedings of the 6th International Workshop on Advanced Ground Penetrating Radar*, Aachen, Germany, 22-24 June 2011.
- Mahmoudzadeh, M. R., **K. Z. Jadoon**, and S. Lambot, Evaluation of Far-Field Layered Media Modeling for Time-Domain Commercial GPR Antenna, *Proceedings of the 6th International Workshop on Advanced Ground Penetrating Radar*, Aachen, Germany, 22-24 June 2011.
- Jadoon, K. Z.**, S. Lambot, E. Slob, and H. Vereecken, Investigation of the frequency dependent antenna transfer functions and phase center position for modelling off-ground GPR, *Proceedings of the 13th International Conference on Ground Penetrating Radar*, Lecce, Italy, 21-25 June 2010.
- S. Lambot, E. Slob, Andre F., **Jadoon, K. Z.**, Slob E., and H. Vereecken, A generalized full-waveform modeling approach for time and frequency domain, off-ground and on-ground radars for wave propagation in multilayered media, *Proceedings of the 13th International Conference on Ground Penetrating Radar*, Lecce, Italy, 21-25 June 2010.
- Jadoon, K. Z.**, S. Lambot, E. Slob, and H. Vereecken, Parameter estimation for unsaturated soil hydraulic properties using full-waveform hydrogeophysical inversion of time-lapse GPR data, *Extended Abstract SEG, 79 Conference and Technical Exhibition*, Houston, USA, 25-31 October 2009.
- Jadoon, K. Z.**, S. Lambot, E. Slob, and H. Verrecken. Hydrogeophysical inversion of time-lapse GPR data to reconstruct vertical EM profiles and identify soil hydraulic properties. *Proceedings of the 12th International Conference on Ground Penetrating Radar*, edited by Chris Rogers and Richard J Chignell, 5p, The University of Birmingham, Birmingham, UK, 16-19 June 2008.
- Lambot, S., J. Minet, E.C. Slob, **K.Z. Jadoon**, M. Vanclooster, and H. Vereecken, Full-Waveform Modeling and Inversion of Proximal Ground Penetrating Radar Data for Soil Hydrogeophysical Characterization, *Proceedings of the 1st Global Workshop on High Resolution Digital Soil Sensing and Mapping*, Sydney, Organised by the Australian Centre for Precision Agriculture, University of Sydney and CSIRO Land & Water, 11p, Sydney, Australia, 5-8 Feb 2008.

**ABSTRACTS AT INTERNATIONAL MEETINGS**  
**(21 Published)**

**Jadoon K. Z.**, Weihermüller L., Lambot S., Moghadas D., Vereecken H., (2021) Estimation of unsaturated soil hydraulic parameters by integrated hydrogeophysical inversion of time-lapse ground-penetrating radar measurements, InterPore 2021 Online Conference, 31 May – 04 June 2021.

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