

## CURRICULUM VITAE

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## Professional Education and Degrees

Academic degree: PhD, MSc, BApSc, BSc

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| 1997 | PhD in Natural Sciences. Development and application of risk analysis procedures to environmental projects.<br>Swiss Federal Institute of Technology, Zürich, ETHZ |
| 1988 | Master of Science in Soil Physics and Hydrology<br>University of British Columbia, UBC, Vancouver, Canada  |
| 1982 | Bachelor of Applied Science in Civil Engineering<br>University of British Columbia, UBC, Vancouver, Canada   |
| 1979 | Bachelor of Science in Mathematics<br>Simon Fraser University, SFU, Vancouver, Canada  |

## Selected Highlights of Professional Activities

### 1. Research Activities

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| 2000 – Present | Senior research scientist and group leader of Soil, Groundwater, and Catchments at the Swiss Federal Institute for Aquatic Science and Technology, Eawag. Research topics include: <ul style="list-style-type: none"> <li>➤ Alberta Innovates–Energy and Environment Solutions (AI--EES)–Water Resources</li> <li>➤ EU project EnviroGrids (Building Capacity for a Black Sea Basin Observation and Assessment System - Supporting Sustainable Development). Development of a hydrologic model for the Black Sea Basin to investigate the impact of climate and landuse change on water resources</li> <li>➤ EU project GENESIS (Groundwater and Dependent Ecosystems: New Scientific and Technical BasIS for Assessing Climate Change and Land-use Impacts on Groundwater Systems). Development of a European hydrologic model to investigate the impact of climate and landuse change on groundwater recharge</li> <li>➤ Development of an integrated assessment for mitigation of groundwater contamination with As and F</li> <li>➤ Modelling of water resources availability in terms of blue water and green water</li> <li>➤ Modelling water resources quality</li> <li>➤ Analysis of the effects of climate change on water resources</li> <li>➤ Modelling global groundwater pollution with arsenic, fluoride, and uranium</li> <li>➤ Modelling behaviour of pharmaceuticals in nature</li> <li>➤ Modelling flow of water in variably saturated soils at laboratory, field, and watershed scales</li> <li>➤ Modelling fate and transport of chemicals in variably saturated soils at laboratory, field, and watershed scales</li> <li>➤ Modelling soil pollution with heavy metals</li> <li>➤ Sensitivity, calibration, and uncertainty analysis</li> <li>➤ Modelling global water resources</li> <li>➤ Watershed modelling</li> </ul> |
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- Development of SWAT-CUP, a software for calibration and uncertainty analysis of SWAT model

1997 - 2000                      Research scientist at the Soil Protection Institute of Terrestrial Ecology, Swiss Federal Institute of Technology, Zürich, ETHZ. Research topics include:

- Studying the effect of heavy metals on water regime of forest ecosystems
- Development of inverse modelling techniques using ant colony optimisation
- Modelling of nitrogen movement in agricultural soils
- Modelling flow of water in layered unsaturated soils
- Analysis of risk and uncertainty of natural systems

1993 - 1997                      Scientific consultant at the Columbi Schmutz Dorte (CSD) engineering company, Bern, Switzerland. Research topics included:

- Development of methodologies for uncertainty and risk analysis for landfills and tunnels

1988 - 1992                      Research scientist at the Centre for Land and Biological Resources Research, Agriculture Canada, Vancouver, Canada. Research topic included:

- Development of a GIS integrated crop risk analysis system for the Peace River region of British Columbia, laboratory determination of soil hydraulic parameters, and verification and improvement of soil maps

## 2. Teaching Activities

2000- present                      Teaching block courses at Isfahan University of Technology

2000-2007                      Teaching two block courses at the Swiss Federal Institute of Technology (ETHZ) on “Modelling Soil Processes” (3 credit units) for undergraduate and graduate students together with Geri Furrer

Teaching, periodically, a PEAK course on modelling hydrology and chemical transport using programs SWAT (Soil and Water Assessment Tool, an integrated watershed-scale program), HYDRUS (an internationally widely used variably saturated flow and transport program), and MACRO (a European FOCUS model of flow and transport including macropore flow)

2003-present                      Holding annual modelling workshops in Iran and periodically in China

1985 - 1988                      Laboratory Instructor and lecturer at the University of British Columbia, Soil Science Department. Teaching laboratory procedures and theory. Courses included soil physics and hydrology, biometeorology

1977 - 1980                      Instructor of Mathematics at Columbia College, Vancouver, Canada.  
Courses included calculus, statistics, and linear algebra

### 3. Selected List of Completed and On-going Projects

2000 – present

- Development of a comprehensive water resources model of Alberta and assessment of future climate change impact on Alberta's energy sector
- Development of an agro-hydrologic models for Europe, EU project
- Development of an agro-hydrologic model for Black Sea Basin, EU projects
- Modelling water resources of Iran
- Modelling water resources of Africa
- Analyses of the effect of climate change on water resources, soil erosion, crop yield, etc. in Africa and Iran
- Investigation of global groundwater contamination with geogenic contaminants such as As, F, Se, and U
- Global GIS-based study of freshwater availability at a sub-basin level and monthly time intervals
- Modelling of water flow, sediment transport, and nutrient transport in the NADUF-project study area of Thur watershed in Switzerland
- Modelling risk of herbicide contamination in surface waters in the Greifensee watershed in Switzerland
- Modelling of province-based water balance in Iran
- Investigation of river flow forecasting in the Western mountains of Iran
- Modelling of water flow and sediment transport in the Haihe River Basin in China
- Study of virtual water transfer within Iranian provinces
- Environmental risk assessment of pharmaceuticals in the European Community, EU project
- Characterization of heavy metal contamination in the calcareous soils of the Isfahan region of Iran using geostatistical approaches
- Modelling the effects of heavy metal stress on the water regime of a model forest
- Studying the effect of heavy metal stresses on the rooting strategy of some selected plants using the newly developed neutron radiography technique at the PSI
- Studying the effects of Cd, Zn, Pb, and Cu on water relations and crop uptake of wheat and safflower
- Studying Cd variability and availability in relation to soil parameters and landuse in the region of Isfahan, Iran
- Inverse modelling of flow and solute transport processes in watersheds
- Studying the spatial and temporal distribution of the snow cover and modelling the snow discharge in the mountains of Karoon watershed in Iran
- Modelling Cd transport in sewage sludge treated agricultural fields
- Modelling discharge and EC of leachate from the Losdorf and Seckenberg bottom-ash landfills in Switzerland
- Studying the threshold of available fresh water resources
- Studying desertification processes and control of sandstorm around Beijing

1995 – 2000

- Investigation of uncertainty in the modelling of landfill plume origination from the Kölliken landfill in Aaura, Switzerland

- Investigation and modelling of a landfill site in Riet, Switzerland
- Investigation of nitrogen leaching from agricultural fields in the Furtbach creek valley north of Zurich
- Inverse modelling of flow and solute transport processes in unsaturated soils
- Modelling unsaturated flow in layered soils
- Investigation of uncertainty in inversely estimated parameters
- Development of data worth analysis in environmental engineering projects
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1990 – 1995

- Review, compilation, and testing of some 30 available two-dimensional unsaturated flow and transport models. (BUWAL project)
- Development of risk methodology for crop insurance decisions
- Heading a project for the research and development of a GIS-based crop risk program for the Crop Insurance Branch of the British Columbia Provincial Government. As a requirement of the crop insurance program, risk maps were generated for wheat, barley, oat, and rape for the northern part of British Columbia

#### 4. Supervision and Co-Supervision of PhD and Postdoc projects

On going

- Saeed Vaghefi (Eawag): Coupling MODSIM (a water allocation optimization program) to SWAT (a water availability assessment program)
- Bahareh Kamali (Eawag): Assessment of the climate change impact on water availability and crop yield in Africa
- Delaram Houshmand (Ferdowsi University): Study of scenarios on the combined effects of climate and land use change on surface flows in Iran
- Elham Kakaee (Shiraz University): Hydrological Drought Propagation and Typology under different Climate Change Scenarios in Semi-Arid Regions
- Malihe Keykhae (IUT University) Assessing the impact of climate change on Rainfall and Temperature patterns in Iran

Completed

- Elham Rouholahnejad, PhD: Hydrological Modelling of the Black Sea Catchment using SWAT
- Christine Kuendig, PhD: Building a hydrological model of Europe
- Christian Folberth, PhD: Large-scale modeling of agricultural water use, crop water productivity, and virtual water trade in the context of water scarcity and climate change with a focus on sub-saharan Africa.
- Rahele Malekian, PhD: The effect of zeolite and surfactant modified zeolite on nitrate leaching.
- Manouchehr Amini, postdoc: Global modeling of geogenic arsenic and fluoride in groundwaters
- Monireh Faramarzi, PhD: An Assessment of Regional Water Endowments, Water Constraints to Food Production, and Implications for Virtual Water Trade in Iran, (ETHZ/Eawag), 2010
- Samira Akhavan, PhD: Using SWAT and DRASTIC to investigate nitrate pollution in groundwaters of Hamadan-Bahar region in Iran, 2010
- Juergen Schuol, Phd: GIS-based Hydrological Modeling of Global Freshwater Availability, (ETHZ/Eawag), 2009

- Mats Larsbo, postdoc: Modelling pharmaceuticals transport in soils, 2008
- Jing Yang, PhD: Uncertainty analysis in distributed hydrological modelling using a Bayesian framework, (ETHZ/Eawag), 2007
- Manoj Manon, PhD: Influence of soil pollution by heavy metals on the water relation of young forest ecosystems, (ETHZ), 2006
- Mohammad Reza Ghanbarpour, PhD: Evaluation of spatial and temporal variability of snow cover in a large mountainous basin in Iran, (U. of Tehran), 2006
- Gholamabbas Sayad, PhD: Modeling of heavy metal and bromide transport under two rooting systems in a calcareous soil (Isfahan U. of Technology) , 2005
- Manouchehr Amini, PhD: Modeling heavy metal accumulation and assessing its uncertainty in agro-ecosystems of Isfahan region (Isfahan U. of Technology), 2005
- Andreas Kohler, PhD: Water flow and solute transport in a tile drained former wetland soil, (ETHZ/Eawag), 2004
- Barbara Schmied, PhD: Nitrogen dynamics and leaching from humus-rich and tile-drained agricultural soil, (ETHZ/Eawag), 2004
- Also, supervising master thesis and Phd's at Isfahan U. of Technology, U. of Tehran, and U. of Sharif, Tehran

## 5. Other Scientific activities

### Development of modelling related computer programs

- Development of SWAT-CUP, a calibration and uncertainty program containing several procedures for calibration of SWAT (Soil and Water Assessment Tool) program
- [http://www.eawag.ch/organisation/abteilungen/siam/software/swat/index\\_EN](http://www.eawag.ch/organisation/abteilungen/siam/software/swat/index_EN)
- Development of SUFI-2, a computer routine for parameter estimation and uncertainty analysis for models with a large number of unknown parameters
- Development of Ant Colony Optimization routine for inverse estimation of model parameters (The most downloaded paper in 2001 from the Journal of Advances in Water Resources web site)
- Development of procedures for risk analysis of environmental projects. In particular the program BUDA (Bayesian uncertainty development algorithm) was used for analysis of the Kölliken landfill, and investigation of the Murgenthal tunnelling project in Switzerland
- Development of the computer program SUFI (Sequential Uncertainty Fitting) , a routine for inverse estimation of model parameters (internationally used. The paper cited over 40 times in the literature)

### Organizing short courses and international conferences

- Organizing “The Third International Conference on Integrated Watershed Modelling using SWAT”, hosted by EAWAG (July 11-15, 2005), ([www.swat2005.eawag.ch](http://www.swat2005.eawag.ch))
- Organizing international modelling short course at Monte Verita, Eawag, Isfahan U. of Technology, and Tarbiat Modares University in Tehran, Iran

### Selected Local and International Talks During the Last 5 Years

- UNESCO-IHE. Hydrologic Modelling at Eawag.
- Sino-Swiss meeting. Watershed Modelling. Institute of Environmental Engineering, ETH

- Institute of Geographical Science and Natural Resources Research, the Chinese Academy of Sciences, Beijing, China. Modelling soil processes
- University of Melbourne, Australia. Calibration of hydrologic models: When is a model calibrated?
- Magdeburg, Germany. Uncertainty estimation on catchment water quantity and quality estimation
- Eawag, Duebendorf. Role of GIS in hydrologic and water quality modelling
- Isfahan University of Technology, Isfahan, Iran. Stochastic inverse modelling, example: flow and transport through two bottom ash landfills
- Portsmouth, USA. Modelling of flow and transport through bottom ash landfills
- WSL, Influence of heavy metal pollution on the soil-plant water regime
- Xining, Qinghai, China, Qinghai Provincial Water Resource Bureau. Modelling water quantity and water quality in the Thur watershed in Switzerland
- Eawag, Kastanibaum. Integrated watershed management decision system

## 6. List of Publications in Refereed Journals

- Abbaspour, K. C., E. Rouholahnejad, S. Vaghefi, R. Srinivasan, B. Klöve. **2015**. Modelling hydrology and water quality of the European Continent at a subbasin scale: calibration of a high-resolution large-scale SWAT model. **Journal of Hydrology**, 524: 733-752.  
<http://www.sciencedirect.com/science/article/pii/S0022169415001985>
- Monireh F, Srinivasan R. Iravani, M. Bladon K.D., Abbaspour K.C., Zehnder A.J.B., Goss G.G. 2015. Setting up a hydrological model of Alberta: Data discrimination analyses prior to calibration. *Env. Modeling & Software*, 74:48-65.
- Bär, R., E. Rouholahnejad, K. Rahman, K.C. Abbaspour, A. Lehmann. **2015**. Climate change and agricultural water resources: A vulnerability assessment of the Black Sea catchment. **Environmental Science and Policy**, [doi:10.1016/j.envsci.2014.04.008](https://doi.org/10.1016/j.envsci.2014.04.008)
- Lehmann A, Giuliani G; Mancuso E; Abbaspour KC; Sözen S; Gorgan D; Beel A; Ray N. **2015**. Filling the gap between Earth observation and policy making in the Black Sea catchment with enviroGRIDS. **Environmental Science & Policy**. [doi:10.1016/j.envsci.2014.02.005](https://doi.org/10.1016/j.envsci.2014.02.005)
- Vaghefi A.S., Mousavi S.J., Abbaspour K.C., Srinivasan R., Arnold J.R. **2015**. Integration of Hydrologic and Water Allocation Models in Basin-Scale Water Resources Management Considering Crop Pattern and Climate Change: Karkheh River Basin in Iran. **Regional Environmental Change**. DOI 10.1007/s10113-013-0573-9.
- Zuo, D., Z. Xu, J. Zhao, K. C. Abbaspour & H. Yang. **2015**. Response of runoff to climate change in the Wei River basin, China, **Hydrological Sciences Journal**, 60(3): 508-522.
- Zuo, D., Xu, Z., Peng, D., Song, J., Cheng, L., Wei, S., Abbaspour, K.C., and Yang, H., **2015**. Simulating spatiotemporal variability of blue and green water resources availability with uncertainty analysis. **Hydrol. Process**. 29, 1942–1955.
- Rafiei Emam A., Kappas M., Akhavan S., Hosseini S.Z., Abbaspour K.C. **2015**. Estimation of groundwater recharge and its relation to land degradation: case study of a semi-arid river basin in Iran. **Environmental Earth Science**, 74:6791-6803.
- Monteiro J.A.E., Kamali B., Srinivasan R., Abbaspour K., Gucker B. 2015. Modelling the effect of riparian vegetation restoration on sediment transport in a human-impacted Brazilian catchment. *Journal of Ecohydrology*. In print.

- Monteiro J.A.E., Strauch M., Srinivasan R., Abbaspour K., Gucker B. 2015. Accuracy of grid precipitation data for Brazil: Application in river discharge modelling of the Tocantins catchment. *Hydrological Processes*. In print.
- Lehmann A., Giuliani G., Ray N., Rahman K., Abbaspour K.C., Nativi S., Craglia M., Cripe D., Quevauviller P., Beniston M. **2014**. Reviewing innovative Earth observation solutions for filling science-policy gaps in hydrology. *Journal of Hydrology*, 518:267-277.
- Rouholahnejad E., K.C. Abbaspour, R. Srinivasan, V. Bacu, A. Lehmann. **2014**. A high resolution spatiotemporal distribution of water resources quantity and quality in the Black Sea Basin. *Water Resources Research*, 50, 5866–5885 DOI: 10.1002/2013WR014132.
- Memarian H., Balasundram S., Abbaspour K.C., Talib J., Sood A., Teh C. **2014**. SWAT-based hydrological modeling of tropical landuse scenarios. *Hydrological Sciences Journal*. DOI:10.1080/02626667.2014.892598.
- Liu J, Folberth C, Yang H, Röckström J, Abbaspour K, Zehnder AJ. **2013**. A global and spatially explicit assessment of climate change impacts on crop production and consumptive water use. *PLoS One*, 2013;8(2):e57750. doi:10.1371/journal.pone.0057750.
- Folberth, C., Yang, H., Gaiser, T., Abbaspour, K.C., Schulin, R. **2013**. Modeling maize yield responses to improvement in nutrient, water and cultivar inputs in sub-Saharan Africa, *Agricultural Systems* 119:22-34.
- Andersson JCM, Zehnder AJB, Wehrli B., Jewitt GPW, Abbaspour KC, Yang H. **2013**. Improving Crop Yield and Water Productivity by Ecological Sanitation and Water Harvesting in South Africa. *Environ. Sci. Technol.* 47:4341–4348. dx.doi.org/10.1021/es304585p.
- Vaghefi S., S. J. Mousavi, K. C. Abbaspour, R. Srinivasan, H. Yang. **2013**. Analyses of the impact of climate change on water resources components, drought and wheat yield in semiarid regions: Karkheh River Basin in Iran. *Hydrological processes*. DOI: 10.1002/hyp.9747.
- Faramarzi M, K.C. Abbaspour, S.A. Vaghefi, M.R. Farzaneh, A.J.B. Zehnder, H. Yang. **2013**. Modelling impacts of climate change on freshwater availability in Africa. *Journal of Hydrology. Ecological Modelling* 250 (2013) 1– 14.
- Poudel, DD, Lee, T , Srinivasan, R, Abbaspour K., Jeong, CY. **2013**. Assessment of seasonal and spatial variation of surface water quality, identification of factors associated with water quality variability, and the modeling of critical nonpoint source pollution areas in an agricultural watershed. *J. of Soil and Water Conservation*, 68(3): 155-171. DOI: 10.2051/jswc.68.3.155
- Azimi M., Heshmati Gh.A , Farahpour M., Faramarzi M., Abbaspour KC. **2013**. Modeling the impact of rangeland management on forage production of sagebrush species in arid and semi-arid regions of Iran. *Ecological Modelling* 250 (2013) 1– 14.
- Wei S, Yang H. , Song J., Abbaspour K., Xu Z. **2013**. A wavelet-neural network hybrid modelling approach for estimating and predicting river monthly flows, *Hydrological Sciences Journal*, 58:2, 374-389.
- Rahman, K , Maringanti, C , Beniston, M , Widmer, F , Abbaspour K. , Lehmann, A **2013**. Streamflow Modeling in a Highly Managed Mountainous Glacier Watershed Using SWAT: The Upper Rhone River Watershed Case in Switzerland. *Water Resources Management*, 27(2): 323-339 DOI: 10.1007/s11269-012-0188-9.



- Mihon, D., Bacu, V., Rodila, D., Stefanut, T., Abbaspour, K., Rouholahnejad, E., Gorgan, D. **2013**. Grid based hydrologic model calibration and execution, **Advances in Intelligent Systems and Computing** 187:279-293.
- Arnold J.G., Moriasi D. N., Gassman P.W. Abbaspour, K.C. White, M. J. Srinivasan, R. Santhi, C. Harmel, R. D. van Griensven, A. Van Liew, M. W. Kannan, N. Jha, M. K. **2012**. SWAT: model use, calibration, and validation. **TRANSACTIONS OF THE ASABE** 55(4): 1491-1508.
- Rouholahnejad E, Abbaspour KC, Vejdani M, Srinivasan R, Schulin R, Lehmann A. **2012**. Parallelization framework for calibration of hydrological models, **Environmental Modelling Software**, 31: 28-36.
- Jamshid Mousavi, S., Abbaspour K.C., Kamali B., Amini M., and Yang H. **2012**. Uncertainty-based automatic calibration of HEC-HMS model using sequential uncertainty fitting approach. **Journal of Hydroinformatics**, 14(2): 286-309.
- Wei S., Yang H., Song J., Abbaspour K.C., Xu Z., **2012**. System dynamics simulation model for assessing socio-economic impacts of different levels of environmental flow allocation in the Weihe River Basin, China. **European Journal of Operational Research** 221 (2012) 248–262.
- Gorgan D., Bacu V., Mihon D., Rodila D. Abbaspour K.C., Rouholahnejad E. **2012**. Grid based calibration of SWAT hydrological models. **Nat. Hazards Earth Syst. Sci.**, 12, 2411–2423.
- Kamali B., Mousavi S.J., Abbaspour K.C. 2012. Automatic calibration of HEC-HMS using single-objective and multi-objective PSO algorithms. *Hydrological Processes*, DOI: 10.1002/hyp.9510.
- Gorgan D., Bacu V., Mihon D., Stefanut, T., Rodila D., Cau P., Abbaspour, K., Giuliani, G., Ray N., Lehmann A. **2012**. Software Platform Interoperability Throughout EnviroGRIDS Portal. **IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing**, 5( 6): 1617-1627.
- Memarian, H., Balasundram, S.K., Talib, J., Sung, C.T.B., Sood, A.M., Abbaspour, K.C., Haghizadeh, A. **2012**. Hydrologic analysis of a tropical watershed using KINEROS2. **Environment Asia** 5 (1): 84-93
- Memarian, H. Balasundram S.K., Talib J.B, Sood A.M., Abbaspour K.C. **2012**. Trend analysis of water discharge and sediment load during the past three decades of development in the Langat basin, Malaysia. **Hydrological Sciences Journal**, 57(6):1-16.
- Notter B. Hurni H., Wiesmann U., and Abbaspour K.C. **2012**. Modelling water provision as an ecosystem service in a large East African river basin. **Hydrology and Earth Science System**, 16:69-86.
- Folbertha, C., Yang H., Wang X., Abbaspour K.C. **2012**. Impact of input data resolution and extent of harvested areas on crop yield estimates in large-scale agricultural modeling for maize in the USA Christian. **Ecological Modeling**, 235-236: 8-18.
- Folberth C., Gaiser T., Abbaspour K.C., Schulin R., Yang H. **2012**. Regionalization of a large-scale crop growth model for sub-Saharan Africa: Model setup, evaluation, and estimation of maize yields. **Agriculture, Ecosystems and Environment** 151 (2012) 21– 33.
- Azimi M, Heshmati Gh.A., Faramarzi M., Abbaspour K.C. **2012**. Modelling the impact of rangeland management on Sagebrush community in arid and semi-arid regions of Iran. **Ecological Modeling**. Accepted.

- Akhavan S., Abbaspour K.C., Mousavi S.F., Mousavi S.J. **2012**. The impact of rainfall uncertainty and the choice of objective function on SWAT model calibration. **Journal of Hydrology**. In prep.
- Akhavan, S., Mousavi S.F., Abedi-Koupai J., Abbaspour K.C. **2011**. Conditioning DRASTIC model to simulate nitrate pollution case study: Hamadan-Bahar Plain. **Environmental Earth Sciences**. 63(6):1155-1167.
- Chavoshi, E., Afyuni, M., Hajabbasi, M. A., Khoshgoftarmanesh, A. H., Abbaspour, K. C., Shariatmadari, H., Mirghafari, N. **2011**. Health Risk Assessment of Fluoride Exposure in Soil, Plants, and Water at Isfahan, Iran. **Human and Ecological Risk Assessment**, 17(2): 414-430.
- Bahrani, J. M. R. Kavianpour, M. S. Abdi, A. Telvari, K. Abbaspour, and B. Rouzkhosh. **2011**. A comparison between artificial neural network method and nonlinear regression method to estimate the missing hydrometric data. **Journal of Hydroinformatics**, 245-254.
- Malekian, R. J. Abedi-Koupai, S.S. Eslamian, S.F. Mousavi, K.C. Abbaspour, M. Afyuni. **2011**. Ion-exchange process for ammonium removal and release using natural Iranian zeolite. **Applied Clay Science**, 51(3):323-329.
- Zhang, Z.Y. **Yang, H.**, Shi, M.J., Zehnder, A.J.B., Abbaspour, K.C. **2011**. Analyses of impacts of China's international trade on its water resources and uses. **Hydrology and Earth System Sciences**. 15: 2871-2880.
- Mousavi, J., Abbaspour, K. C., Yang, H. **2011**. Uncertainty-based Automatic Calibration of HEC-HMS Model Using Sequential Uncertainty Fitting Approach'. **Journal of Hydroinformatics**. doi: 10.2166/hydro.2011.071.
- Zare, M., Afyuni, M., Abbaspour, K. C. **2010**. Effects of Biosolids Application on Temporal Variations in Soil Physical and Unsaturated Hydraulic Properties. **JOURNAL OF RESIDUALS SCIENCE & TECHNOLOGY**, 7(4): 227-235.
- Faramarzi, M, Yang H., Mousavi J., Schulin R., Binder CR., Abbaspour K.C. **2010**. Analysis of Intra-country virtual water trade strategy to alleviate water scarcity in Iran. **Hydrol. Earth Syst. Sci**. 14: 1417-1433.
- Faramarzi, M, Yang H., Schulin R., Abbaspour K.C. **2010**. Modeling wheat yield and crop water productivity in Iran: Implications of agricultural water management for wheat production. **Agricultural Water Management**. 97: 1861-1875.
- Akhavan, S., Abedi-Koupai J., Mousavi S.F., Afyuni, M., Eslamian S.S, Abbaspour K.C. **2010**. Application of SWAT model to investigate nitrate leaching in Hamadan-Bahar watershed, Iran. **Journal of Agriculture, Ecosystem, & Environment**, 139(4):675-688.
- Wei, S., Yang H., Abbaspour K., Mousavi J., Gnauck A. 2010. Game theory based models to analyze water conflicts in the Middle Route of the South-to-North water transfer project in China. **Water Reserach**, 44: 2499-2516.
- Sayyad, G., M. Afyuni, F. Mousavi, K. C. Abbaspour, R. Schulin. 2010. Transport and uptake of Cd, Cu, Pb and Zn in a calcareous soil under wheat and safflower cultivation - a column study. **Geoderma**, 154: 311-320.
- Amini M., Abbaspour K.C., Johnson CA., 2010. A comparison of different rule-based statistical models for modeling geogenic groundwater contamination. **Environmental Modeling and Software**. 25(12): 1650-1657.
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- Ghanbarpour, M.R., Abbaspour, K.C., Jalalvand, G., Ashtiani, Gh. **2010**. Stochastic modeling of surface stream flow at different time scales: Sangsoorakh karst basin, Iran, **Journal of Cave and Karst Studies**. 21(1): 1-10.
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- Rostamian, R., S.F. Mousavi, M. Heidarpour, M. Afyuni, and K.C. Abbaspour, **2009**. Application of SWAT2000 model for estimating runoff and sediment in Beheshtabad watershed, a sub-basin of Northern Karun, **Journal of Sci. & Technol. Agric. & Natur. Resour.**, 12(46):517-532. In Persian.
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- Zhou, Y., Y. Zhang, K.C. Abbaspour, H-J. Mosler, H. Yang. **2009**. Economic impacts on farm households due to water reallocation in China's Chaobai watershed. **Agricultural Water Management**, 96(5):883-891. doi: 10.1016/j.agwat.2008.11.011.
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