# BAŞAK GÜVEN, Ph.D.
# Curriculum Vitae

## CONTACT INFORMATION

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## PERSONAL DETAILS

Date of Birth: 7 May 1974

Place of Birth: Istanbul, Turkey

Nationality: Turkish, British

Languages: English

## EDUCATION

**Ph.D.**: Department of Geography, The University of Reading, 2006.

Ph.D. Thesis Title: Modelling the Growth and Movement of Cyanobacteria in River Systems.

**B.S.**: Environmental Engineering Department, Civil Engineering Faculty, Istanbul Technical University, 2002.

## RESEARCH INTERESTS

Watershed modelling and risk mapping. Mathematical and process-based modelling of water quality and hydrology, Modelling the fate and transport of contaminants in watersheds, Modelling of algal behaviour in rivers, Modelling and simulating the transport and storage of sediment within rivers, GIS applications in catchment and hydrological modelling,

## ACADEMIC POSITIONS & RESPONSIBILITIES

Assistant Professor (2007-): Institute of Environmental Sciences, Boğaziçi University.

Academic Advisor (2014-): Environmental Sciences

Lecturer (2006-2007): Department of Geography, University of Reading.

Ph.D. Student & Researcher (2002-2006): Department of Geography, University of Reading.

## REVIEWS

### Manuscripts

Mathematical Biosciences, Water Science and Technology, Hydrology Research, Environmental Modeling & Assessment, Chinese Journal of Oceanology and Limnology, American Journal of Environmental Sciences.

### Project Proposals

The Scientific and Technological Research Council of Turkey (TUBITAK), Uludağ University Scientific Research Projects, The Turkish Fulbright Commission.

## TEACHING

### Boğaziçi University

ESc 615 – Environmental Systems Modeling

ESc 59A – Surface Water Quality Modeling

ESc 580 – Hydropolitics

ESc 501.02 – Principles of Environmental Pollution

ESc 301 – The Environmental Dimension

ESc 305 – Global Climate Change

ESc 572 – Graduate Seminar

ESc 514 – Water Quality Management

ESc 59G – Hydrological Processes

ESc 59E – Research Methodologies in Fluvial Systems Modelling

### University of Reading

Managing Environmental Change

Fluvial Hydrology and Morphology

## THESIS SUPERVISION

### Ongoing

Karami, F. Modeling Calcium Carbonate precipitation in the Acıgöl Lake using AQUATOX model. M. Sc. Thesis.

Akdoğan, Z. 'Title: TBA'. Ph. D. Thesis.

### Completed

Kahraman Özen, S. (2014). Application of a model to predict algal behaviour in rivers at Ömerli Reservoir, Turkey. M.Sc. Thesis.

Akdoğan, Z. (2014). Modeling contaminant transport in the Marmara region and analyzing the associated parametric sensitivity. M.Sc. Thesis.

Küçükdoğan, A. (2013). Modeling antibiotic transport and mapping the environmental risk in the Marmara region by using geographical information systems (GIS). M.Sc. Thesis.

Kaptan, S. (2011). The use of geographical information systems in catchment hydrology modeling: A case study from the Göksu River. M.Sc. Thesis.

## PROJECTS

"Application of a model to predict algal behaviour in rivers at Ömerli Reservoir", Boğaziçi University Research Fund, 2016. (PI)

"Modelling antibiotic transport and mapping the environmental risk in the Marmara Region by using ArcGIS", Boğaziçi University Research Fund, 2014. (PI)

"Modelling the effect of climate change on river morphology", Boğaziçi University Research Fund, 2011. (PI)

"LOCAR (Lowland Catchment Research) programme", National Environment Research Council (NERC), 2003-2004. (Researcher)

## PUBLICATIONS

### In Peer Reviewed International Journals (SCI / SCI-Expanded)

Akdoğan, Z., **Güven, B.** (2016). Assessing the sensitivity of SWMM to variations in hydrological and hydraulic parameters: A case study for the city of Istanbul. *Global NEST Journal*, **18** (4), 831 – 841.

Akdoğan, Z., **Güven, B.**, Balcıoğlu, I. (2016). Modeling Nutrient and Heavy Metal Transport at Selected Catchments in the Marmara Region. *Fresenius Environmental Bulletin*, **25** (4), 969 – 980.

Küçükdoğan, A., **Güven, B.**, Balcıoğlu, I. (2015). Mapping the Environmental Risk of Antibiotic Contamination by Using Multi-Criteria Decision Analysis. *CLEAN - Soil, Air, Water*, **43** (9), 1316 – 1326.

**Güven, B.** (2013). Uncertainty analysis of a hydrodynamic sediment transport model: a case study from the Göksu River. *Carpathian Journal of Earth and Environmental Sciences*, **8** (1), 127 – 138.

**Güven, B.**, Howard, A. (2011). Sensitivity analysis of a cyanobacterial growth and movement model under two different flow regimes. *Environmental Modeling & Assessment*, **16** (6), 577 – 589.

**Guven, B.**, Howard. A. (2007). Identifying the critical parameters of a cyanobacterial growth and movement model by using generalised sensitivity analysis. *Ecological Modelling*, **207** (1), 11 – 21.

**Guven, B.**, Howard, A. (2006). Modelling the growth and movement of cyanobacteria in river systems. *Science of The Total Environment*, **368** (2-3), 898 – 908.

**Guven, B.**, Howard, A. (2006). A review and classification of the existing models of cyanobacteria. *Progress in Physical Geography*, **30** (1), 1 – 24.

**In Peer Reviewed National Journals**

Güven, B., Akdoğan Z. (2016). Evaluation of empirical modelling techniques for the estimation of sediment amount in rivers. *Uludağ University Journal of the Faculty of Engineering,* **21**(2), 309-318.

Akdoğan, Z., Küçükdoğan, A., **Güven B.** (2015). Yayılı kirleticilerin havzalardaki taşınım süreçleri: Antibiyotikler, ağır metaller ve besi maddeleri üzerine modelleme yaklaşımları. *Marmara University Journal of Science*, **27**(1), 21 – 31.

**In International Conferences**

**Güven, B.**, Balcıoğlu, I. An assessment of pollution in agricultural soil and pollution abatement alternatives for livestock waste. Livestock Waste 2016: Pollution Control and Resource Recovery for the Livestock Sector, Galway, Ireland, 10 – 12 August, 2016.

Helvacı, B., **Güven, B.**, Sarıoğlu Alpay, S., Erdinçler, A. Analytical analysis of membrane bioreactor filtration of household wastewater by Euler, Heun and Runge-Kutta methods. 14th International Conference on Environmental Science and Technology, Rhodes, Greece, September, 2015.

**Güven, B.** An artificial neural network approach in the estimation of sediment amount in rivers. 14th International Conference on Environmental Science and Technology, Rhodes, Greece, September, 2015.

Küçükdoğan, A., **Güven, B.**, Balcıoğlu, I. Modeling antibiotic transport and mapping the environmental risk in the Marmara Region by using Geographical Information Systems (GIS). 2nd International Conference on Sustainable Watershed Conference, Dalaman – Muğla, Turkey, September, 2014.

Kahraman Özen, S., **Güven, B.** Application of a model to predict algal behaviour in rivers at Ömerli Reservoir, Turkey. 2nd International Conference on Recycling and Reuse, Istanbul, Turkey, 4-6 June, 2014.

Akdogan, Z., **Güven, B.**, Balcıoğlu I. Modeling contaminant transport in the Marmara Region and analyzing the associated parametric sensitivity. 2nd International Conference on Recycling and Reuse, Istanbul, Turkey, 4-6 June, 2014.

Kaptan, S., **Güven, B.**, Oral V. The Use of Geographical Information Systems in Catchment Hydrology Modeling: A case study from Goksu River with a focus on local data gathering and harmonization processes. 1st International Conference on Sustainable Watershed Management, Istanbul, Turkey, September, 2011.

**Güven, B.** Uncertainty Analysis of a Hydrodynamic Sediment Transport Model: A Case Study from the Göksu River. The 8th International IWA Symposium on Waste Management Problems in AGRO-Industries, Çeşme, İzmir, June, 2011.

**Güven, B.**, Howard, A. Analytical modelling of cyanobacterial surface blooms in rivers. 8th International conference on toxic cyanobacteria, Istanbul, Turkey, September, 2010.

**Guven, B.**, Howard, A. Classification of the existing models of cyanobacteria. 11th International Symposium on Phototropic Prokaryotes, Tokyo, Japan, August, 2003.

Öztürk I., Eroğlu, V., **Güven, B.**, Soyer E., Eldem, N. Control of mussels in water intake systems. 2nd World Engineering Congress, Water Engineering and Geomatic Programs, Sarawak, Malesia, 22-25 July, 2002.

**In National Conferences**

Akdoğan, Z., **Güven, B.** Hidrolojik Modellemede Parametrik Duyarlılığının Değerlendirilmesi: İstanbul İli Örneği. 3. Ulusal Çevre Kongresi, Marmaris, Türkiye, 24 – 28 Eylül, 2016.