

Piotr Parasiewicz, PhD

Summary of qualifications

River science and restoration engineering:

Instream flow and habitat modeling: Ecohydraulics and ecohydrology, Quantitative modeling of running water ecosystem with focus on system scale physical habitat assessment and modeling. **MesoHABSIM model** - a multiscale approach to instream habitat modeling.

River restoration and management: Assessment and maintenance of ecological integrity, comprehensive river management concepts, river restoration planning, construction and evaluation.

Fish ecology and fisheries management: Fish community structure, diversity and population dynamics.

Fish passage: Development of innovative technologies for diadromous and freshwater fishpassage (design, planning, construction and evaluation).

River Survey and Instrumentation: physical and biological survey designs, development and application of flow meters and multiplex sensors.

Geographical Information Systems (GIS), Remote sensing, Digital Terrain Models (DTM), environmental statistics, computer programming, Computer Aided Design (CAD).

Education

- 1998 - **University of Agricultural Sciences in Vienna, Austria.**
Ph. D. (Doctor rerum naturalium technicarum, doctor of science *summa cum laude*) Natural Resources Management and Water Engineering,
- 1993 - **University of Agricultural Sciences in Vienna, Austria.**
G. E. (Dipl. Ing.), Environmental and Water Engineering
- 1988 - **University of Agricultural Sciences in Vienna, Austria.**
B.S., Environmental and Water Engineering.

Professional experience

- 2007-pres. **Rushing Rivers Institute** Amherst, MA
Director
- Founded an environmental, science based non-profit to promote application of cutting-edge science in river management and restoration
- 2007-2009. **Mt. Holyoke College** S. Hadley, MA
Director of Northeast Instream Habitat Program
- Manage research project modeling dwarf wedgemussel habitat

on the Upper Delaware river

2004-2007 **University of Massachusetts** Amherst, MA
Research Associate Professor, Director of Northeast Instream Habitat Program

- Managed extramural research project and developed MesoHABSIM technology

2000-2004 **Cornell University** Ithaca, NY
Research Associate IV, Director of Instream Habitat Program

- Manage research project modeling dwarf wedgemussel habitat on the Managed extramural research project and invented MesoHABSIM approach

1988-1999 **Univ. of Agric. Sciences** Vienna, Austria
University Lecturer, Institute of Water Provision, River Ecology and Waste Management Department of Hydrobiology, Fisheries and Aquaculture

- Working with interdisciplinary team of biologists, water engineers and landscape ecologist on river restoration.
- River restoration planning with CAD, nature like fishways, habitat models for fish. Developed multivariate habitat model Harpha, international collaborations, helped develop EU Water Framework Directive

**Select
recent**

peer-reviewed

publications

Parasiewicz, P., J. Nestler, N.L. Poff and A. Goodwin. (2008) Virtual Reference River: A Model for Scientific Discovery and Reconciliation. 2008. In: M. S. Alonso, I. M. Rubio (ed) Ecological Management: New Research, Nova Science Publishers, Inc. pp. - ISBN: 978-1-60456-786-1

Parasiewicz, P. (2008): Habitat time-series analysis to define flow-augmentation strategy for the Quinebaug River, Connecticut and Massachusetts, USA. *River Research and Application*. 24: 439–452.

Parasiewicz, P. (2008): Application of MesoHABSIM and target fish community approaches for selecting restoration measures of the Quinebaug River, Connecticut and Massachusetts, USA. *River Research and Application*. 24: 459–471.

Parasiewicz, P. (2007): The MesoHABSIM Model Revisited. *River Research and Application* **23** (8):893-903.

Parasiewicz, P. (2007): Developing a reference habitat template and ecological management scenarios using the MesoHABSIM model. *River Research and Application* **23** (8): 924-932.

Parasiewicz P., J. Eberstaller, S. Weiss, S. Schmutz (1998): Conceptual guidance for nature-like bypass channels, In: M. Jungwirth, S. Schmutz, S. Weiss (eds), Fish Migration and Fish Bypasses, Fishery News Books, Blackwell Science, Oxford.

