Name: R. Andrew Goodwin, Ph.D.

Title: Research Environmental Engineer, DB-04,
Cognitive Ecology & Ecohydraulics Team,
Environmental Laboratory, US Army Engineer
Research and Development Center (ERDC)

Education:
- 1996 Virginia Tech
  B.S., Civil Engineering
- 2000 Cornell University
  M.S., Environmental Systems Engineering
- 2004 Cornell University
  Ph.D., Environmental Systems Engineering

Sketch, Duties, and Responsibilities:

    Dr. Goodwin began his career with the US Army Corps of Engineers as a contract student in May 1998 with ERDC in the Environmental Laboratory, Environmental Processes and Engineering Division. He now co-leads the Cognitive Ecology and Ecohydraulics Team. Dr. Goodwin is the principal investigator for research projects involving neurocognition (non-human and human), swarming and network science, analysis and forecasting of individual (non-human and human) movement over complex landscapes, fish passage design analysis and forecasting, and development of more robust animal behavior algorithms.

    During his 12 years with USACE, Dr. Goodwin has developed relationships and collaborative efforts with numerous national and international partners and institutions earning the reputation as an expert in the field of forecasting 3-D fish movement and passage. Solutions that Dr. Goodwin has developed to solve fish passage and animal movement issues typically involve innovations from the disciplines of systems engineering, cognitive ecology, neurobiology, computational neuroscience, and numerical methods. Dr. Goodwin leads research teams that are often composed of several graduate level engineers and scientists, as well as undergraduate level scientists and technicians.

Fish Passage Publications:

    http://el.erdc.usace.army.mil/emrrp/nfs/fishpassage.html