**Hydraulic Modeling for Healthy Aquatic Ecosystems**

**David Zhu**

Dept. of Civil and Environmental Engineering, University of Alberta   
Email: david.zhu@ualberta.ca

In this talk, I will first review the hydraulic modeling work that has been conducted for fish entrainment risk assessment, fish passes, stream rehabilitation and connectivity, as well as river physical habitat modeling. In addition to field measurements, physical laboratory modeling and computational fluid dynamics modeling have also been used in these studies. I will also discuss the path forward where the need for the integration of hydraulic modeling and biological studies is highlighted.