

Weekly CEA FM Seminar: Spring 2017



JOHNS HOPKINS

Center for Environmental
& Applied Fluid Mechanics

Date: **Friday, March 10, 2017**

Time: 11:00 AM

Location: Gilman Hall # 132

Speaker: **Prof. M. Bayani Cardenas** (University of Texas at Austin)

Title: ***"Water cycling across aquatic interfaces: how it works and why it matters from the pore scale to the continental scale"***

Abstract

Rivers and aquifers are intimately linked. Where these two connect, in the area of porous and permeable sediments adjacent and below the river called hyporheic zones, myriad novel physical and biogeochemical processes take place. What makes the processes distinctive are that they are driven by and feedback with large physical and chemical gradients. These processes can determine water quality from the scale of pores, to bedforms, to river reaches, and eventually integrate to impact watersheds at the continental scale. This presentation will highlight studies that explain the mechanics and chemistry of river-hyporheic-aquifer processes across all the scales above and threads them together.

Bio

M. Bayani Cardenas is a professor at the Department of Geological Sciences at The University of Texas at Austin. His expertise is on flow and transport processes of hydrologic systems. He received his PhD in 2006 in Hydrology from the New Mexico Inst. of Mining and Technology, his MS in 2002 from the University of Nebraska-Lincoln, and his BS from the University of the Philippines.