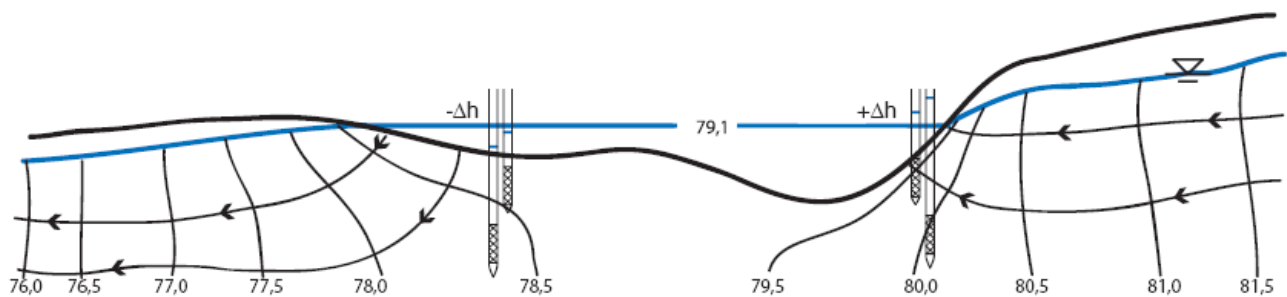


**FIVA Ph.D. course on**

**Surface-ground water interaction:  
From watershed processes to hyporheic exchange**



- DATES:** Sunday April 6 – Thursday April 10, 2008
- GUEST LECTURERS:** Don Rosenberry, U.S. Geological Survey, USA  
Masaki Hayashi, University of Calgary, Canada
- VENUE:** GEOCENTER, University of Copenhagen, Øster Voldgade 10,  
1350 K, DENMARK
- CONTACT PERSONS:** Peter Engesgaard, University of Copenhagen, pe@geol.ku.dk  
Bertel Nilsson, Geological Survey of Denmark and Greenland  
(GEUS), bn@geus.dk



## TENTATIVE PROGRAM:

<b>DAY 1</b>	<b>Introduction and characteristics of flow between ground water and surface water</b>
	Physical setting Lakes Wetland Rivers and streams Coastal
	Scale of study and/or setting Geological setting, heterogeneity Flowpaths Time of travel
	Darcy's law Flownet analysis Flownet using MODFLOW Dupuit-Forscheimer considerations
<b>DAY 2</b>	<b>Watershed-scale exchange</b>
	Models (e.g., Topmodel, MMS) Baseflow analysis (e.g., RORA) Hillslope hydrology and riparian zone
<b>DAY 3</b>	<b>Coastal, lake, wetland, hyporheic exchange</b>
	Physiography related to flowpath Scale (gradients of watershed, river; meander, pool-riffle, bedform)
<b>DAY 4</b>	<b>Methods of measurement</b>
	Well arrays local-scale hydraulic gradients and hydraulic conductivity
	Seepage meters
	Tracers isotopes solutes temperature
	Water budgets (ground water as the residual) evapotranspiration, precipitation, streamflow
<b>DAY 5</b>	<b>Case studies</b>
	Wetland hydrology Feedback relation between groundwater and terrestrial plants

## COURSE DETAILS AND HOW TO APPLY:

A total of 4 ECTS is credited for this course

The course is limited to 25 students.

FIVA will pay for accommodation during the course plus provide a small daily allowance.

Registration is open until Friday March 28, 2008. Please use the on-line registration which will be available on the FIVA website ([www.fiva.dk](http://www.fiva.dk)) in January 2008.