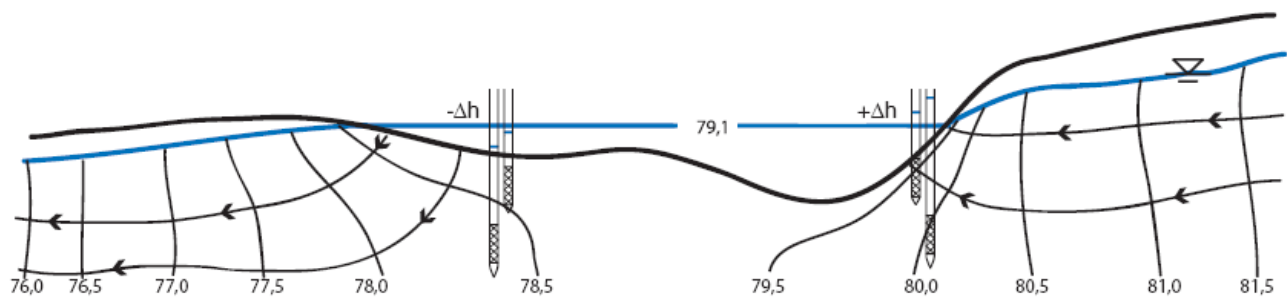


FIVA Ph.D. course on

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



- DATES:** Monday June 7 – Friday June 11, 2010
- 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@geo.ku.dk
Bertel Nilsson, Geological Survey of Denmark and Greenland
(GEUS), bn@geus.dk



TENTATIVE PROGRAM:

DAY 1	Introduction and characteristics of flow between ground water and surface water
	Basic concepts <ul style="list-style-type: none">Darcy's lawEquipotentials and flowlinesTopographically driven groundwater flow systemFlownet analysis using TopoDrive
	Physical setting <ul style="list-style-type: none">LakesWetlandRivers and streamsCoastal
	Scale of study and/or setting <ul style="list-style-type: none">Geological setting, heterogeneityFlowpathsTime of travel
DAY 2	Watershed-scale exchange
	Vasose zone hydrology Hillslope hydrology and riparian zone Baseflow analysis (e.g., RORA)
DAY 3	Coastal, lake, wetland, hyporheic exchange
	Physiography related to flowpath Scale (gradients of watershed, river; meander, pool-riffle, bedform)
DAY 4	Methods of measurement
	Well arrays <ul style="list-style-type: none">Local-scale hydraulic gradients and hydraulic conductivity
	Seepage meters
	Tracers <ul style="list-style-type: none">Isotopes/solutesTemperature
DAY 5	Lake/wetland water balance
	Water balance equation Estimation of groundwater exchange flux Case study examples

COURSE DETAILS AND HOW TO APPLY:

A total of 5 ECTS is credited for this course

The course is limited to 25 students.

FIVA will pay for accommodation during the course plus provide lunch and coffee/tea.

Registration is open until Friday April 30, 2010 at noon. Please use the on-line registration which is available on the FIVA website (www.fiva.dk).