

## HYDRUS Modeling Workshop, April 8-10, 2013

Instructor: : Dr. Jirka Šimůnek, Dept. of Environmental Sciences, University of California Riverside, CA, USA

As a service to the community of individuals concerned with water and solute flow in Hawaii the Water Resources Research Center at the University of Hawaii is considering offering a workshop on Advanced modeling of water flow and contaminant transport in porous media using the HYDRUS and HP1 software packages this coming April.

HYDRUS is Windows-based modeling software that can be used for analysis of water flow, heat and solute transport in variably saturated porous media (e.g., soils). The HYDRUS suite of software is supported by an interactive graphics-based interface for data-preprocessing, discretization of the soil profile, and graphic presentation of the results.

HYDRUS has been used in hundreds, if not thousands of applications referenced in peer-reviewed journal articles and many technical reports. The software packages are also used in classrooms of many universities in courses covering soil physics, processes in the vadose zone, or vadose zone hydrology.

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## Workshop Objectives:

A detailed conceptual and mathematical description of water flow and solute transport processes in the vadose zone will be covered during the first part of the workshop. Hands-on computer sessions will then provide participants an opportunity to become familiar with the windows-based HYDRUS computer software packages, including several additional modules, such as ROSETTA, HP1, UNSATCHEM, and/or the Wetlands module. Emphasis will be on preparation of input data for a variety of one- and multi-dimensional applications. Selected advanced HYDRUS topics will be covered during the second part of the workshop.

## Advanced topics will include:

- Coupled movement of water, vapor, and energy (including the surface energy balance)
- Preferential/nonequilibrium water flow and solute transport (using dual-porosity and dualpermeability models)
- Biogeochemical transport (using the UNSATCHEM and HP1 (coupled HYDRUS-1D and PHREEQC) modules)
- Modeling flow and transport using a three-dimensional module of HYDRUS (2D/3D)

## Cost:

Graduate students: \$295

Faculty and Post Doctoral researchers: \$395

Non-University: \$495

Click here for registration form

The course will be held on the University of Hawaii Manoa campus on April 10-13, 2013.

Additional information can be obtained at <a href="http://www.pc-progress.com/en/Default.aspx?courses-2013#K5">http://www.pc-progress.com/en/Default.aspx?courses-2013#K5</a>



