

## ENROLMENT

For enrolment, please send the application form by fax, post, or e-mail to:

Dr. Ondrej Slavik  
VUJE a.s. TRNAVA,  
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Fax: + 421- 33- 5991494

E-mail: Slavik@vuje.sk

**FEE:** Participation fee is 200 € (Euro)  
Fee includes a copy of the lectures, all lunches and coffee breaks.  
Payment instructions can be found in the application card.

**HOTELS:** The organizers will book a room in the accommodation of the VUJE training Centre (25–30 Euros per person and night) or can try to book standard hotels in Trnava – see attached list

**WEB:**

<http://www.nrg-nl.com/congres/rodos2003/index.html>

**CO-DIRECTORS:**

M. Zheleznyak (IMMSP, Ukraine)  
O. Slavik (VUJE, Slovakia)

**CO-ORDINATOR:**

R. Heling  
Department of Radiation & Environment  
NRG-Nuclear Research and Consultancy Group  
Utrechtseweg 310  
6812 AR Arnhem

Tel: + 31 3 56 24 67

Fax: + 31 4 42 36 35

E-mail: Heling@nrg-nl.com

**DATES AND SCHEDULE:**

15 – 18 December 2003;  
from 9:00 – 18:00  
19 December 2003, 9:00-13:00

**ENROLMENT:**

Deadline for enrolment is 20 November  
September 2003

**SCHOLARSHIPS:**

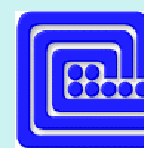
A limited number of scholarships and grants covering the participation fee has been pre-selected by the organisers. The selection has been made on the basis of interest shown for the originally planned course (see Course website)



**vuje**

EUROPEAN COMMISSION

RESEARCH DG



AN ECN NEMA COMPANY

IMMSP

EC-SPONSORED TRAINING COURSE  
ON

**THE HYDROLOGICAL  
MODELS OF THE DECISION  
SUPPORT SYSTEM  
RODOS**

**“TRAC-RODOS-HDM”**



**TRNAVA (SLOVAKIA)  
15-19 December 2003**

## PRESENTATION

This training course is organized to present and discuss the hydrological module RODOS-HDM of the decision support system for nuclear emergencies RODOS. This module comprises a number of hydrological models, and has been developed to assess the dose effects via the aquatic pathways after accidental releases. By means of this module it is possible to calculate the dispersion of radioactivity in the aquatic environment, and the dose consequence via the different exposure pathways.

With a number of hydrological models with different temporal and spatial scales, the fate and behaviour of radioactivity can be modelled. The transfer of radioactivity from run-off to rivers (RETRACE-D, RIVTOX) and reservoirs (COASTOX, THREETOX) or lakes (LAKECO) is assessed by a set of enhanced models integrated to the RODOS-HDM DSS. This course is aimed at:

- a) Acquaint the participants with the sophisticated model for rivers, lakes, and reservoirs.
- b) Training the participants in the customisation and use of the models
- c) Dissemination of information from these hydrological models in emergency situations.

The course contains realistic exercises, and lectures on the outlines and usage of the models.

## LIST OF CONTENTS

### Lectures

- L.1 *Introduction of the course*
- L.2 *Principles of hydrology*
- L.3 *Modelling radioactivity dispersion*
- L.4 *Principles of river modelling.*
- L.5 *Principles of run-off modelling.*
- L.6 *Principle of the complex lake models: 2D models*
- L.7 *Principles of 3D modelling*
- L.8 *Principles of lake ecosystem modelling*
- L.9 *Principle of dose modelling*
- L.10 *Selection criteria for the application for the HDM models*
- L.11 *Application of the river model*
- L.12 *Combined river and runoff models*
- L.13 *Application of the 2D model*
- L.14 *Experiences with RODOS-HDM models in Slovakia*
- L.15 *Application of the 3D model*
- L.16 *Application of the lake ecosystem model*
- L.17 *Connection HDM with the RODOS dose models*

### Exercises

- P.1 *Software: interfaces, databases*
- P.2 *Exercises on river model RIVTOX*
- P.3 *Exercises on the combined river and run-off model RIVTOX/RETRACE*
- P.4 *COASTOX application exercise*
- P.5 *THREETOX application exercise (Part I and Part II)*
- P.6 *Exercises on the LAKECO model*

## LECTURERS

**Mark Zeleznyak / Vladimir Maderich.**  
IMMSP/ Ukrainian Center of Environmental and Water Projects-UCEWP  
**Mikhail Kolomeev,** SPA Typhoon, Russia  
**Henrik Madsen,** DHI, Denmark  
**Rudie Heling,** NRG, The Netherlands  
**Ondrej Slávik,** VÚJE, Slovakia

## Payment Instructions

Payment of the Course Fee (200 €) should be paid during the registration ONLY by

- **Cash payment** after arrival at registration desk (PLEASE contact local organisers in advance)

Applicants for scholarship should contact the Organisers before the 15<sup>th</sup> of November 2003. NOTE: Scholarships are already selected, and you will be contacted by the organisers for detailed instructions.

For enrolment, please send this application form by fax, post or e-mail, together with the application to:

O. Slavik

## APPLICATION FORM

TRAINING COURSE ON THE  
HYDROLOGICAL MODELS OF THE  
DECISION SUPPORT SYSEM RODOS  
*TRAC-RODOS-HDM*  
TRNAVA (SLOVAKIA),  
15-19 December 2003

Surname.....

First Name.....

Nationality.....

Passport Number.....

Profession.....

Company/University.....

Address.....

Telephone.....

Fax.....

E-mail.....

Date and Signature:

## ACCODOMATION AND TRANSPORTATION FORM

*TRAC-RODOS-HDM*  
TRNAVA (SLOVAKIA), 15-19 December 2003

PLEASE fill in this form if you wish the use accommodation in the VUJE Training Centre (price 20-30 EURO per night, see web-site for other hotels)

Please note that the accommodation cost is not included in the Course Fee

Surname.....

First Name.....

Nationality.....

Passport Number.....

Type of room (single/double).....

Arrival Date.....

Departure Date.....

I arrive via (airport/station).....  
and need transportation by bus to Trnava

Arrival date and time  
(airport/station).....

Departure date and time  
(airport/station).....

Date and Signature: