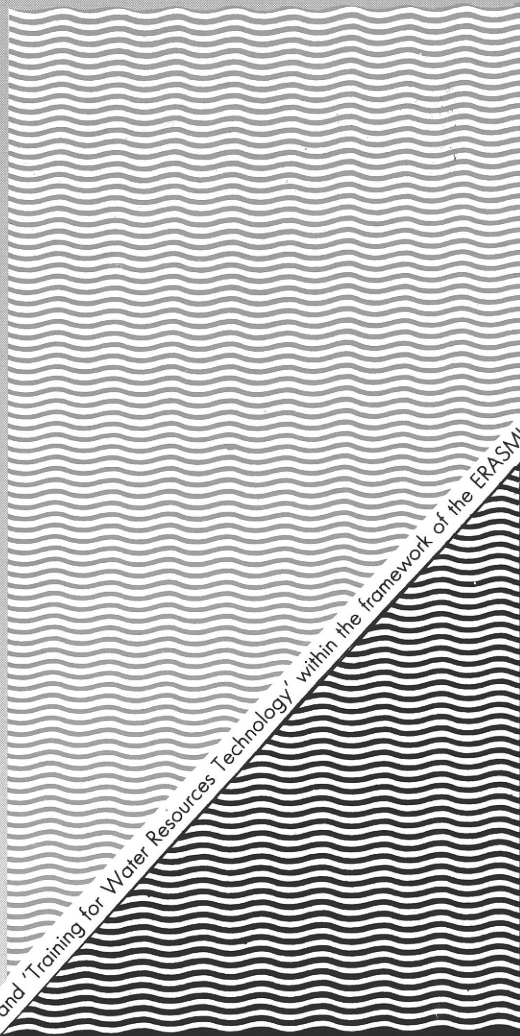


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PANTA RHEI



Information Bulletin for 'Education in Hydrology and Water Management' and 'Training for Water Resources Technology' within the framework of the ERASMUS, COMETT and TEMPUS Programmes of the European Community (EC).

A QUARTERLY BULLETIN

N° 9 - SEPTEMBER - 1991

GLOSSARY

ACMOBI

ACademic MOBIlity information system.

CEC

Commission of the European Community.

CEE

Central and Eastern Europe.

COMETT

COMmunity action for Education and Training for Technology, the European Community programme on cooperation between universities and industry regarding training in the field of technology (TFHR).

DG

Directorate-General, administrative unit of CEC (there are XXIII DGs).

EC

European Community (member states : B, D, DK, E, F, GR, I, IRL, L, NL, P, UK).

EP

European Parliament (EC).

EFTA

European Free Trade Association (member states : A, CH, FL, IS, N, S, SF).

ERASMUS

EuRopean Action Scheme for the Mobility of University Students (TFHR).

ETC

European Training Courses of TECHWARE.

FORCE

FORmation Continue en Europe - Continuing Vocational Training in Europe.

ICP

Interuniversity Cooperation Programme (ERASMUS).

IP

Intensive Programme (ERASMUS).

JEP

Joint European Project (TEMPUS).

NGAA

National Grant Awarding Authority providing the grants for student mobility (ERASMUS).

PEP

Personnel Exchange Programme of TECHWARE.

RTB

Regional TECHWARE Bureau.

SAST

Strategic Analysis for Science and Technology (DG XII).

SME

Small- and medium sized enterprise.

SPES

Student and young graduate Placements for training in European industry of the water environment Sector (TECHWARE).

STRANDS (COMETT)

A : Action establishing UETPs.

B : Action for transnational exchanges (students, young graduates, personnel).

C : Joint Training Actions.

D : Complementary measures.

TECHWARE

TECHnology for WAter REsources, sectoral UETP (COMETT, Strand A) and International Non-Profit-Making Association, with headquarters in Brussels (B). TECHWARE- Italia is a Regional TECHWARE Bureau (RTB).

The symbol of TECHWARE is the **icosahedron**, associated with water in PLATO's philosophy.

TEMPUS

TransEuropean Mobility Scheme for University Studies, the EC-programme for education and training in CEE-countries (eligible : BG, CS, H, PL, RU, YU).

TFHR

Task Force Human Resources, Education, Training and Youth (CEC).

UETP

University Enterprise Training Partnership (COMETT, Strand A).

Hydrology

The logos of the waters, or the science that deals with the waters of the earth, their occurrence, circulation and distribution, their chemical and physical properties, and their interaction with their environment, including their relations to living beings.

Water management

Planned development, distribution and use of water resources, in accordance with predetermined objectives and with respect to both quantity and quality of the water resources.

Water resources technology

The development and application of (new) technologies to increase and improve the supply both in quantity and quality, interpreted in terms of availability of surface and underground waters.

EDITORIAL

The EC Framework Programme for the early nineties is composed of :

- Enabling or Diffusing Technologies, wherein the Information & Communications Technologies and the Industrial & Materials Technologies
- Management of Natural Resources, wherein the Environment, the Life Sciences and Technologies and the Energy
- **Management of Intellectual Resources**, wherein **Human Capital and Mobility**

The objective of the latter sub-programme, with a budget of 493 M ECU, is to contribute to increasing human capital and optimizing the use of scientific and technical infrastructures of the Member States, whilst helping to create a real European scientific and technical Community. Post-doctoral workers are particularly targeted. Development of a training system for high-level research is aimed at.

Obviously, this sub-programme of the Framework Programme is supplementary to such already existing programmes as ERASMUS and COMETT.

In fact, ERASMUS and COMETT are preparing and reinforcing the **human capital and mobility** for the next decades.

It is a task and challenge for the 'water'-community to be full and recognized part of this **Human Capital and Mobility** and to take up its share in the projects, grants and allowances. PANTA RHEI, through its service to the ERASMUS ICP 'Hydrology and Water Management' and to the COMETT UETP 'TECHWARE', will contribute to the

dissemination of the actions for **Human Capital and Mobility**.

Everyone agrees about the importance of the water resources development.

But how does it compare with other resources development in terms of business ? The United Nations' Contracts and Procurement Service (UN-CPS) spent in 1989 a total sum of \$US7 million towards engineering and consulting firms and other institutions for projects executed by UNDTCD (United Nations Division of Technological Cooperation for Development)*.

Water Resources ranks first with 26% of all contracts, followed by Energy Resources (23%) and Mineral Resources (19%).

'Water' is indeed a business and not only a scientific subject.

The Editor

* UN-DTCD : Into the 1990s at the service of developing countries.

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NEWS from ERASMUS

'Hydrology and Water Management'
Interuniversity Cooperation Programme

ICP-MEETING IN VALENCIA (E) TUESDAY 17 SEPTEMBER 1991

All partners of our ICP are kindly invited to our annual plenary meeting. The purpose of this meeting is to

- discuss the draft academic and financial reports of the activities of 1990-91 (ICP-90-B-0131) ;
- plan the activities during the academic year 1991-92 for which a total sum of 46,000 ECU (exclusive the student grants) has been awarded (ICP-91-B-1138) ;



- prepare the multi-annual application for 1992-93, due 31 October 1991.

VENUE
Prof. E. Cabrera
Hydraulic and Environmental
Engineering Department.
Universidad Politecnica de Valencia, Apartado de Correos 22012 E-46080 Valencia

Tel : +34-346-3615051 (ext. 352)
Fax : +34-346-3614800
Telex : 62080

of the Vrije Universiteit Brussel (B) and prepared his thesis entitled : 'Design Decision Making : Theory, Applications and the Case Study of the Pirai River Basin' under guidance of Profs. B. Delgrosso (I), J. Mariën (B) and J.J. Peters (B).

Gian Paulo was especially enthusiastic about student life in Brussels ! He therefore made efforts to study the Dutch language.

• **Carl Heiremans, student of the 5th year Civil Engineering at Brussels**, has spent 12 months in Italy. He first attended a one-month intensive Italian language course in August 1990 at Perugia, continued his courses in Genoa and completed his thesis entitled: 'Water Supply Network Rehabilitation : Technologies and Modelling Tools' under guidance of Prof. F. Siccardi (I).

Carl speaks and writes fluently Italian and prefers, of course, 'il sole italiano'. He returns to Genoa and will have his first job with an Italian consulting firm.

Good luck to both ERASMUS-students and many thanks to RAI Tre !

ANNUAL REPORT

ERASMUS PROGRAMME 1990/91

presented by the Commission
SEC (91) 902 final Brussels, 22 May 1991

This annual report counts 32 pp., presents a summary in 14 items and a lot of statistics.

Request your copy from :
ERASMUS Bureau
15, rue d'Arlon/Aarlenstraat 15
B-1040 Brussels

tel +32-2-2330111
fax +32-2-2330150
telex 63528

OUR ICP AT THE ITALIAN TV

RAI Tre was present at the end-of-the-year ceremony of the Facoltà di Ingegneria, Università degli Studi di Genova (I). Two students of our ICP were interviewed and explained their experiences :

• **Gian-Paulo Codeluppi, student of the 5th year Ingegneria Civile at Genoa**, has spent 6 months at the Faculty of Applied Sciences, Laboratory of Hydrology

ERASMUS ICP "Hydrology and Water Management"

Name :

Address :

.....
.....

requests a copy of the INFORMATION BROCHURE

Date : Signature :

Return to the Editor of PANTA RHEI

OTHER ICP

Prof. L. Lyklema

Nature Conservation Department
Wageningen Agricultural University
P.O. Box 8080, NL-6700 DD Wageningen
Tel : +31-8370-83174
Fax : +31-8370-84411

announces the acceptance of ICP-91-NL-1131/06 for which he is coordinator.

The programme includes an Intensive Programme 'Water quality of urban runoff and effects upon receiving waters'. A workshop will be held in Essen (D). Interested readers should contact Prof. Lyklema on the address given above.

EUROPEAN STUDENT NETWORK (ESN)

This Network aims at welcoming and helping ERASMUS students when they arrive in the host-university. This network is especially helpful in providing accommodation by room-exchange with ERASMUS-students of the home-university who leave during the same period as the arriving students. The latest ERASMUS newsletter discusses the accommodation issue : a dramatic problem which increases steadily.

Constitution of the Board of E.S.N. for 1991

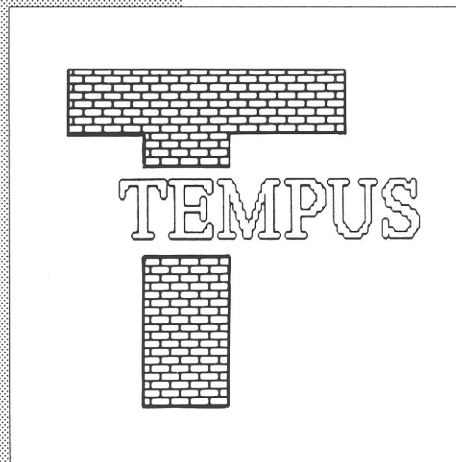
AARTS, JANSKE Achter St.-Pieter 19 bis, NL-3512 HR Utrecht
Tel +31-30-317431 +31-4924-1249 (parents) Fax +31-30-521818
(ESN-Utrecht/ mention ESN room 294)
HELLER QUITEIRO, FERNANDO Meléndez Valdés 18
E-28015 Madrid
Tel +34(9)1-4487823/4485364
KAZANTZOPOULOS, GIORGOS Delfon 84
GR-54643 Thessaloniki
Tel +30-31-992846 (at the university) Fax +30-31-206138
LOFFREDO, CHRISTOPHER Piazza S. Giovanni 1, I - Firenze
Tel +39-55-2381289
Office : Via Fabroni 4 Tel +39-55-461615
PAIRÉ-VINÁS, ANA E.N.S. Rue d'Ulm 45, F-75005 Paris
Tel +33-1-46338572
SCHMIDT, ANKE Höhenweg 22, D-6350 Bad Neuheim
Tel +49-60-323821
SPICE, DAREN Earlsbrook Rd. 48, GB-RHI 6DP Surrey (England)
Tel +44-737-767043
VAN DE VELDE, BART Schriekenstraat 7, B-9290 Berlare
Tel +32-91-678490
at the university : Tel +32-2-6412327 Fax +32-2-6412138
WANG, ANJA Universitetsparken 3.3.138, DK-8000 Aarhus C
Tel +45-86131786

EXECUTIVE

President Christopher Loffredo
Vice-president Janske Aarts
Treasurer Bart Van de Velde
Secretary Anja Wang

NEWS from TEMPUS

TEMPUS JOINT EUROPEAN PROJECT GRANT 1991-92



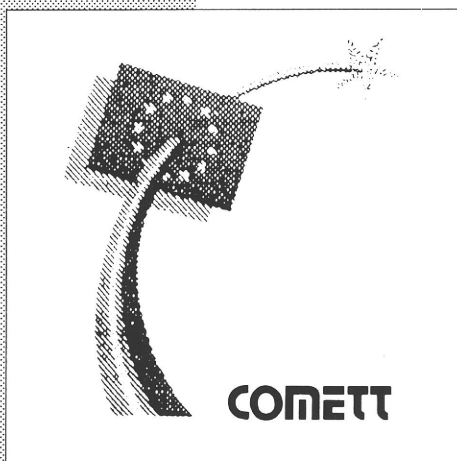
Prof. J. Bogardi (Wageningen Agricultural University, NL) announces the acceptance of the TEMPUS JOINT EUROPEAN PROJECT under No JEP-2150-91 during the academic year 1991 - 92 (up to 31 August 1992). The title of his JEP is : 'Interuniversity Coordinating Forum for (East-West) Cooperation in the areas of Environment, Water and Agricultural Soils (EWA-Ring)' and the participating organizations are :

Landbouwniversiteit Wageningen	NL
Vrije Universiteit Brussel	B
Rijksuniversiteit Gent	B
Universität Hannover	D
Technische Universität Braunschweig	D
Universidade de Coimbra	P
Academy of Agriculture in Wroclaw	PL
Cracow Technical University	PL
Warsaw University of Technology	PL
Academy of Agriculture in Warsaw	PL
Polish Academy of Sciences	PL
Godollo University of Agricultural Sciences	H
Budapest Technical University	H
Mihály Pollák College of Engineering Pécs	H
Higher School of Agriculture Nitra	CS
Technical University of Prague	CS
Higher School of Agriculture Prague	CS

A meeting of all participating organizations is planned in Wageningen, 21-22 October 1991.

CONTACT :

Prof. J. Bogardi
Department of Hydrology, Soil Physics and Hydraulics.
Nieuwe Kanaal 11
NL-6709 PA Wageningen
tel : +31-83-7082778 / 7082293
fax : +31-837084885
telex : 45015



Several COMETT Information Centres in the different EC and EFTA countries hold a meeting to prepare the 1992 call. The following list was issued by COMETT-TAO on 10 July 1991.

MEETING DATE		CONTACT TEL
A		
9/10	Austria	+43-22-4022838
B		
15/11	Belgium	+32-2-2-2105511
B (+ NL)		
25/10	Roosendaal (NL)	+32-2-2105319
D		
29-30/10	Hannover	+49-228-882257 +49-221-3768018
DK		
30/10 or 1/11	Denmark	+45-33-925436
E		
3/10	Spain	+34-1-5720098
F		
17/10	France	+33-1-40693735
FL		
8/10	Lichtenstein	+41-75-63511
GR		
7/10	Athens	+30-1-7782951
I		
4/10	Italy	+39-6-3960768
IRL		
5/11	Ireland	+353-1-370101
IS		
28-31/10	Iceland	+354-1-694311
L		
14/11	Luxembourg	+352-43-6263
N		
28/10	Norway	+47-2-237685
NL (+B)		
25/10	Roosendaal (NL)	+31-70-3510569
P		
1-3/10	Portugal	+351-1-545590
S		
24/10	Sweden	+46-8-7283642
SF		
25/10	Finland	+358-0-451-4020
UK		
6/11	Belfast	+44-71-9349654

SPECIAL COMETT CONFERENCE

'Towards new models of university-industry cooperation : the example of COMETT' hosted by The Netherlands during the Dutch presidency of the European Community.

Amsterdam, Krasnapolsky Hotel
13-15 November 1991

Contact

COMETT Information Centre NL
PO Box 90734, NL-2509 LS The Hague

The programme includes :

- a plenary session 'Responsibility of industry in continuing technological education'
- a plenary forum 'The future of COMETT'
- several parallel sessions
- 'The COMETT market' with presentation of activities and products of UETPs.

TECHWARE will be present !

COMETT 1992 CALL FOR THE PERIOD 1992-1993 AND BEYOND ALSO FOR EFTA-COUNTRIES !

This call, due 15 January 1992, is again an open call for all strands. TECHWARE will apply for all strands and is expecting proposals from its members.

Strand Ba : Student and young graduate placements in industry (3 to 12 months).

Strand Bb : Advanced training placement projects, i.e. a well-defined industrial project designed as a university-enterprise venture (6 to 24 months).

Strand Bc : Personnel exchange programmes between 2 and 6 months.

Strand Ca (pool procedure) : Short training courses similar to the already accepted ETC-courses (see above), lasting for 18 months.

Strand Cb : Joint training projects. This strand is especially important because the funding can be as high as 500.000 ECU and the projects may last between 1 and 5 years. However, besides the general selection criteria for Strand C-projects, the following two characteristics will be VERY IMPORTANT

1. A high degree of transnationality
2. A clearly demonstrated high level of industrial involvement : clear and measurable industry funding, projects designed response to already completed studies of training needs analysis in industry, and active involvement (design, delivery and evaluation) of the enterprises that will be the consumer of the training developed.

TECHWARE identified three potential Cb-projects at its General Assembly of 20 April 1991. These proposals will again be discussed at the meeting of the Board of Management of 16 September 1991 in Valencia (E). One proposal is :

Computer-Aided-Learning in Hydraulics, Hydrology and Water Resources

It is proposed to develop a programme for C-A-L within the framework of TECHWARE in the subject areas listed above. The deadline for an application to the EC for support under Strand C-b of the COMETT programme is 15 January 1992 and therefore we need to begin detailed planning for this application as soon as possible.

There are THREE objectives in mind at present :

1. Programmes of a "guided tutorial" nature to provide back-up to students attending conventional courses in these subjects at universities and colleges.
2. Programmes which can be studied without further support. These could operate as "pre-requisite" material or form part of in-career training and development programmes tailored to the needs of individual employers within the European water industry.
3. Training programmes specifically aimed at third world countries to be taken locally in conjunction with trained local support personnel.

It is intended that programmes will contain multi-media elements (videodisc images as well as text), as appropriate and also interactive and numerical work.

Active participation is sought from current and future TECHWARE members; academic input for compiling the programmes and particularly INDUSTRIAL INPUT for statements of training needs and opportunities for material assessment.

Please contact : Professor R.H.J. Sellin, Department of Civil Engineering, University of Bristol, Bristol BS8 1TR, UK, if you are interested in receiving further details about the project.

For general information : please contact TECHWARE.



COMPUTER-AIDED-LEARNING

CAL in Hydraulics, Hydrology and Water Resources

Name :

Address :

.....

.....

is interested to cooperate actively in

- preparation of the application
- compiling of programmes and development
- statements of training needs
- material assessment
- I add details attached herewith

Date Signature

Return to the Editor of PANTA RHEI

For all further information contact the Secretary-General of TECHWARE c/o CIBE/BIWM, 2nd floor 70, rue aux Laines / Wolstraat 70 B-1000 Brussels

tel : +32-2-5188894

fax : +32-2-5188306

telex : 61927

attention TECHWARE

TECHWARE bank accountnumber (in ECU) 005-4323374-76-995-19

Bank address ASLK-CGER Wolvengracht 48 B-1000 Brussels

**MEETING OF THE
BOARD OF MANAGEMENT OF
TECHWARE**
TECHnology for WATER REsources

Monday 16 September 1991

Venue

Universidad Politecnica de Valencia
Departamento de Ingenieria Hidraulica
y medio Ambiente
Apartado Correos 22012
E-46080 Valencia

Agenda

1. Approval of the Minutes of the 4th Meeting of the Board of Management.
2. Financial report per 30 June 1991 and revised budget.
3. List of new members per 30 June 1991
4. COMETT II projects :
 - follow-up projects 1990
 - results and implementation of COMETT projects, Jan. 1991
 - preparation COMETT call, Jan. 1992
5. TEMPUS proposals :
 - results TEMPUS proposals, March 1991
 - TEMPUS call, Nov. 1991
6. Other EC programmes : COST, FORCE, SAST, SCIENCE, . . .
7. Regional TECHWARE Bureaus :
 - final application RTB-Espana
 - communications RTB <-> TECHWARE
8. TECHWARE, TECHWARE and the future : exchange of views.
9. Other activities :
 - proposal to cooperate with IET.
 - training activities for BADC-Belgian Administration for Development Cooperation.
10. Date and venue of the next BM.
11. Any other business.

**THE CONSTITUTION AND BYE-LAWS
OF TECHWARE, INTERNATIONAL
NON-PROFIT-MAKING ASSOCIATION**

Members are entitled to receive a copy of the Constitution and Bye-laws of TECHWARE. The legal constitution (in Dutch), approved at the founding meeting of 6 July 1990, has been published in the annexes of the Belgian Official Journal of 4 April 1991 under N.4913 (pp. 2338-2340). It contains also the list of the members of the Board of Management (Raad van beheer).

The constitution has been translated into English, French, Italian and Spanish.

COMETT CALL 1991

TECHWARE was very successful at this call restricted to UETPs. The following new contracts were signed :

91/1/5518 Ba

TECHWARE's programme SPES-Student and young graduate Placements for training in European industry of the water environment sector. The contract comprises a budget for a total of 35 student-placements during 210 months, subdivided as follows :

EUR > EUR (20 s, 120 sm)
EUR > EFTA (10 s, 60 sm)
EFTA > EUR (5 s, 30 sm)

Duration of the contract is 25 months. To prepare and manage these placements in the best possible way, TECHWARE has prepared a VADEMECUM for Applicants, Universities and Enterprises.

Please, request your free copy using the form. Allow for a period of about 6 months between this request and the start of your training.

91/1/5519/Bc

TECHWARE's programme PEP-Personnel Exchange Programme. A grant has been awarded for a two-month personnel exchange between a Belgian university and a Danish enterprise.

91/1/5520/Ca

TECHWARE's ETC-European Training Courses 'Advanced Technologies for Water Environment Management, Water Treatment Processes and Computer Applications'. The contract comprises a budget for 15 courses in 23 sessions with a total of 140 course-days. The duration of the contract is 18 months. The first courses are already announced. See enclosures.

91/1/5521/D

Preparatory visits during one year including the following countries : E, F, GR, I and P. These visits will be especially useful for preparing the call 1992.

TECHWARE/SPES

Student and young graduate Placements for training in European industry of the water environment Sector.

Name :
Address :
.....
.....

requests a copy of the SPES VADEMECUM for Applicants, Universities and Enterprises

Date Signature

Return to the Editor of PANTA RHEI

NEWS FROM TECHWARE MEMBERS

Prof. P. Jacobsen, co-editor of PANTA RHEI and Vice-president of TECHWARE, presented a paper entitled: 'European education and training in urban drainage'

(co-authors: L. Ingesmann and S. Hestehave) at the International Conference on Urban Drainage and New Technologies, 17-21 June 1991, Dubrovnik, Yugoslavia.

FORTHCOMING TECHWARE ACTIVITIES

ECOTOXICOLOGY A TOOL FOR WATER QUALITY MANAGEMENT

Short training courses (Strand Ca 1990)
29 October - 1 November, 1991
London, United Kingdom

25 February - 28 February, 1992
Lelystad, The Netherlands

Objectives

The aim of the short training courses, to be held in London, UK and Lelystad, The Netherlands, is to familiarize participants with the latest progress and state-of-the-art technologies in ecotoxicology and environmental chemistry which are relevant to practical applications for the management of water quality. The programme will develop these aspects through a combination of lecture, workshop and tutorial sessions.

The courses are aimed at those graduate level employees and technical managers who are involved in water quality management policy making and its application in industry, consultancy, water authorities or public sector institutions throughout Europe. In addition, the courses will be of interest to those who

have working responsibilities within the general field of pollution biomonitoring and environmental impact assessment.

Please contact:

Dr Mike Revitt
School of Applied Science
Middlesex Polytechnic
Bounds Green Road
London N11 2NQ, UK
Tel: +44/81 368 1299
Fax: +44/81 361 1726

EUROPEAN TRAINING COURSES

SP 1.3 GROUNDWATER POLLUTION MANAGEMENT

Wallingford - Oxford (UK)
28 - 1 November 1991

organized by TECHWARE ITALIA

and
HYDRAULICS RESEARCH,
WALLINGFORD
INTERNATIONAL GROUNDWATER
MODELLING CENTRE, DELFT
UNIVERSITY OF GENOA

within the frame of COMETT

Contact

HR Wallingford, Richard Woolridge
Oxfordshire, UK-OX10 8BA
tel: +49-491-35381
fax: +44-491-32233
telex: 848552 HRSWAL G

SP 3.1 ADVANCED MANAGEMENT OF DRINKING WATER SUPPLY SYSTEMS

see enclosure

Genova, Italy
14-19 October 1991

organized by TECHWARE ITALIA
within the frame of COMETT

Contact

TECHWARE Italia, N. Bazzuro
c/o AMGA - Genova
Via S.S. Giacomo e Filippo 7
I-16122 Genova
tel: +39-10-2858-1
fax: +39-10-2858-284

COMPUTER CONFERENCE COURSE

THE INTEGRATED CONCEPT OF URBAN MANAGEMENT

A training Course based on Distance
Education

Scheduled for the period of
24 October 1991 - 28 February 1992

Course Information

Professor Per Jacobsen or Course Secretary Anette Simonsen.
Department of environmental Engineering, Technical University of Denmark.
Building 115
DK-2800 Lyngby
tel: +45-45-033908
fax: +45-45-932850
telex: 37529 DTHDIA DK

ACTIVITIES CO-SPONSORED BY TECHWARE

EUROPEAN WATER CONGRESS

Antwerp, Belgium
19-20 September 1991

QUALITY OF SURFACE WATERS IN THE EUROPEAN COMMUNITY

For any further information, please contact the v.z.w. WEL
Kipdorp 11
B-2000 Antwerp
tel: +32-3-2316448 (Ext. 56)
fax: +32-3-4750311

SCS EUROPEAN SIMULATION SYMPOSIUM

INTELLIGENT PROCESS CONTROL DESIGN AND SCHEDULING

MODELLING AND CONTROL OF WATER RESOURCES SYSTEMS AND GLOBAL CHANGES

Ghent, Belgium
November 6-8, 1991

Contact

The Society for Computer Simulation International,
European Simulation Office
c/o Philippe Geril, University of Ghent
Coupure Links 653, B-9000 Ghent
tel: +32-91-23494 fax: +32-91-234941

SEPTEMBER 1991

1 **Postgraduate Programme in Hydrology**
Diploma-course (12 months)
MSc. or M. Eng. course (24 months)

2 2/9-29/11
Brussels (B)
Training activities and courses
MIST Management of Information in Science and Technology

3 5/9
Wallingford (UK)
SEMINAR
Design and operation of jetties

4 10/9
Delft (NL)
Short course (6 weeks)
Seminar on Coastal Zone Management

5 16/9
Valencia (E)
Board of Management TECHWARE

1 17/9
Valencia (E)
Meeting
ERASMUS ICP-90-B-0131 and ICP-91-B-1138

3 17-19/9
Wallingford (UK)
Irrigation Hydraulics

6 18-19/9
Montpellier (F)
Septièmes Journées Hydrologiques de Montpellier
"La formation des hydrologues"

3 19/9
Wallingford (UK)
SEMINAR
Data collection for water quality models

5 19-20/9
Antwerpen (B)
European Water Congress
Co-sponsored by TECHWARE

7 20-25/9
Island of Terschelling (NL)
Third European Junior Scientist Workshop

3 30/9-4/10
Wallingford (UK)
Hydrometry

3 30/9-18/10
Wallingford (UK)
Effective Irrigation Management

OCTOBER 1991

4 Delft (NL)
Post-graduate Diploma courses (11 months)
Hydraulic Engineering Hydrology Sanitary Engineering Environmental Science & Technology Water Quality Management Advanced Environmental Sanitation
Post-graduate Diploma course (23 months)
Transportation & Road Engineering in Developing Countries

5 Rennes (F)
European courses
Ressources et qualité de l'eau

3 3/10
Wallingford (UK)
SEMINAR
Prediction and control of water quality

9 7-11/10
Rueil-Malmaison, Paris (F)
Short course on basic and advanced principles
Physical modelling of gas-liquid flows
Institut Français du Pétrole

4 14-18/10
Delft (NL)
Short course
Applied Modelling of Groundwater Pollution

5 14-19/10
Genova (I)
TECHWARE ETC SP3.1
Advanced Management of drinking water supply

3 15-17/10
Wallingford (UK)
COURSE
Coastal Hydraulics

10 21-24/10
Birmingham (UK)
Organic Pollution of Groundwater

3 22-24/10
Wallingford (UK)
An Introduction to Water Quality

11 23-25/10
The Hague (NL)
Aquatic Toxicity Reduction in Industrial Effluents

8 28/10-1/11
Wallingford (UK)
TECHWARE ETC SP1.3
Groundwater Pollution Management

12 29/10-1/11
London (UK)
TECHWARE Ca-course
Ecotoxicology : A tool for water quality management

NOVEMBER 1991

5 Lund (S)
TECHWARE ETC SP5.1
Radars and rainfall in urban hydrology : fundamentals

Rennes (F)
European courses
Technologie du traitement des eaux résiduaires

8 4/9-11
Perugia (I)
TECHWARE ETC SP1.2
Flood Hazards in Mediterranean countries

3 6-8/11
Wallingford (UK)
Aquatic Environment

14 6-8/11
Gent (B)
European Simulation Symposium
The Society for Computer Simulation International
European Simulation Office, co-sponsored by TECHWARE

15 7-8/11
Segovia (E)
Parador Nacional de Segovia
COMETT Strand Ba Conference
Transnational Placements in Enterprises

3 12-14/11
Wallingford (UK)
COURSE
River hydraulics and hydrology

CALENDAR

FEBRUARY 1992

Rennes (F)
European courses
**Epuration agronomique
des effluents**

1/2-31/7
Budapest (H)
VITUKI
**23th International
Postgraduate course in
Hydrology**

4-6/2
Wallingford (UK)
**An introduction to Sedi-
ment Size Analysis**

25-27/2
Wallingford (UK)
HR Wallingford
**Computer Modelling of
Tidal Processes**

25-28/2
Lelystad (NL)
TECHWARE Ca-course
**Ecotoxicology : A tool
for water quality man-
agement**

JANUARY 1992

5
Brussels (B)
TECHWARE ETC SP7
**ACMOBI - Data man-
agement using CDS/ISIS**

3
12/12
Wallingford (UK)
SEMINAR
**Reservoir sedimenta-
tion**

5
Bologna (I)
TECHWARE ETC SP4.1
**Optimum design and
hydraulic analysis of
water distribution net-
works**

Rennes (F)
European courses
**Analyse d'images et
ressources en l'eau**

3
28-30/1
Wallingford (UK)
Times Series Rainfall

13-15/11
Amsterdam (NL)
Special COMETT Conference
**Towards new models of
university-industry co-
operation : the example
of COMETT**

14-15/11
Tervuren (B)
SEMINAR
**Third International
Seminar on Manage-
ment of Information
Related to Water and
the Environment**

18-22/11
Delft (NL)
**Applied Modelling of
Groundwater Chemis-
try**
IGWMC/IHE

19-21/11
Wallingford (UK)
**Instrumentation and
Measurement Tech-
niques**

25-29/11
Sheffield (UK)
TECHWARE ETC SP5.5
**Environmental monitor-
ing water quality**

27-28/11
Wallingford (UK)
SEMINAR
**Harbour and approach
channel sedimentation**

Rennes (F)
European courses
**Activité biologique dans
les sols et qualité de
l'eau**

DECEMBER 1991

MARCH 1992

Rennes (F)
European courses
Analyse multicritère de la gestion de l'eau

5 Exeter (UK)
TECHWARE ETC SP4.1
Optimum design and hydraulic analysis of water distribution networks

5 Brussels (B)
TECHWARE ETC SP2.1
Basics of mathematical Groundwater modelling

8 Genova (I)
TECHWARE ETC SP1.4
Water resources evaluation and exploitation

20 16-20/3
Paris (F)
The Ninth International Conference on Technology and Education

3 24-26/3
Wallingford (UK)
River Engineering

3 30/3-3/4
Wallingford (UK)
Costal Surveying

5 Delft (NL)
TECHWARE ETC SP2.2
Regional hydrological systems analysis

22 Genova (I)
Water distribution networks planning and maintenance

22 Athens (GR)
Water distribution networks planning and maintenance

21 12-15/4
Wageningen (NL)
Changes in Agriculture and Environment : a challenge for Higher Education
European conference on Higher Education in Agriculture

MAY 1992

5 Den Haag (NL)
TECHWARE ETC SP3.2
Treatment processes for drinking water

5 Athens (GR)
TECHWARE ETC SP7
ACMOBI - Data Management using CDS/ISIS

23 25-29/5
Budapest (H)
SEMINAR
Education in Computational hydraulics and hydrology
Hydrocomp '92

JUNE 1992

8 Antwerpen (B)
TECHWARE ETC SP1.1
Fresh Water Conservation
Reuse of treated wastewater
Pollution safeguards

8 Lisboa (P)
TECHWARE ETC SP1.2
Flood Hazards in Mediterranean countries

5 Barcelona (E)
TECHWARE ETC SP2.4
Inverse modelling techniques

8 Brussels (B)
TECHWARE ETC SP3.1
Management of drinking water supply

5 Dubrovnik (YU)
TECHWARE ETC SP5.2
Radars and rainfall in urban hydrology : interactions

AUGUST 1992

Gent (B)
TECHWARE ETC SP3.3
Waste water treatment processes

SEPTEMBER 1992

8 Genova (I)
TECHWARE ETC SP3.3
Waste water treatment processes

5 Lisboa (P)
TECHWARE ETC SP2.1
Basics of mathematical Groundwater modelling

5 Newcastle (UK)
TECHWARE ETC SP2.3
Groundwater flow-paths and pollutant transport

OCTOBER 1992

8 Cosenza (I)
TECHWARE ETC SP3.2
**Treatment processes
for drinking water**

5 Paris (F)
TECHWARE ETC SP4.2
**Optimal operation and
control of water distri-
bution networks**

5 Genova (I)
TECHWARE ETC SP7
**ACMOBI - Data Man-
agement using CDS/
ISIS**

NOVEMBER 1992

5 Lyngby (DK)
TECHWARE ETC SP5.3
**Radars and rainfall in
urban hydrology: en-
gineering aspects**

DECEMBER 1992

5 Karlsruhe (D)
TECHWARE ETC 4.2
**Optimal operation and
control of water distri-
bution networks**

AUGUST 1993

19 30/8-12/9
The Hague (NL)
**Research and training
programmes and
their influence on in-
stitutional
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formance**

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Cours international d'études supérieures
en hydrologie
P.O. Box 27
H-1453 Budapest, Hongrie
- 19 ICID 15th Congress - Question 45.6**
International Commission on Irrigation and
Drainage (ICID)
Congress 1993, c/o Holland Organizing
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rue Vilain XIII-17A
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MISCELLANEA

ERASMUS BUREAU wishes to appoint a number of ADMINISTRATIVE OFFICERS

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Grants Department on the
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INTER-UNIVERSITY COOP-
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Applications are invited from
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The persons appointed are
likely to have:

- Knowledge of the higher education system of more than one EC Member State;
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 - Competence in English or French (additional languages a definite asset).
- Persons interested in these opportunities are invited to send their CV with an accompanying letter to:
Mr. R. Loeckx, Assistant Director - ERASMUS Bureau
rue d'Arlon 15
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tel : 32-2-2330111
fax : 32-2-2330150

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European Environmental Research Organisation FELLOWSHIPS

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duration, are available.
These are for scientists who
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Awards are not limited to
Ph.D holders. Provision is
made for travel and subsist-
ence, but not for a bench fee.
Applications for short-term
fellowships can be made at
any time and are decided
upon soon after receipt of the
completed form.

Long-term fellowships (one or
two years) are also avail-
able. Enquire about details
and deadlines.

Application forms and fur-
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obtained from the EERO,
P.O. Box 191
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The Netherlands
fax : +31-8370-84818

ON YOUR DESK

Education year book 1987: Longman
community information
guides / ed. by Kate Lodge
and Longman Group (Essex)
Essex : Longman, 1990 -
706p. -ISBN 0-582-062578

Effective on-the-job training in Hydrology. A guide for
supervisions of hydrology
technicians by Rob
Allaburton.

Technical document in Hy-
drology, UNESCO, Paris
1991, SC-91/WS-6, 85 pp.

International Water Supply Association IWSA

"UNITING THE WORLD OF WATER"

The "MAARTEN
SCHALEKAMP AWARD" is
to be awarded in Buda-
pest, October 1993.
Includes two prizes, intended
to motivate young engineers
and scientists, both for sci-
entific research and innova-
tion oriented work in water
supply, one to be awarded to
entrants employed full-time
in practice of water supply,
the other to a full-time student
in a water-related field. In-
formation:

IWSA

1 Queen Anne's Gate,
UK - London, SW1H 9BT



■ Short Course on Applied Modelling of Groundwater Chemistry

■ November 18-22, 1991

- Dr. D.L. Parkhurst, USGS, USA
- Dr. L.N. Plummer, USGS, USA
- Dr. C.A.J. Appelo, VU, The Netherlands
- Dr. D. Postma, TU, Denmark

Course Description

The course focusses on theory and application of hydrogeochemical groundwater models featuring the wide spectrum of hydrogeochemical reactions. Through workshops on the models PHREEQE, PHREEQM, WATEQF and BALANCE, the ease of modelling practical hydrogeochemical problems and interpreting water quality analyses will be experienced.

- Information: IGWMC, tel: +31 15 697215
Registration: IHE Registrar's Office,
P.O. Box 3015, 2601 DA Delft, The Netherlands.
Tel: +31-15-783404, fax: +31-15-122921.
Registration fee: NLG 3000; NLG 3400 if reservation is
made after October 31, 1991.

Please note

You may receive more than one copy of this information bulletin due to :

- your membership in one of the partner-organizations
- your partnership in one of the water related ERASMUS, COMETT or TEMPUS projects.

Please pass extra bulletins on to your colleagues who may be interested in PANTA RHEI.

- Please add my name to your mailing list
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- Please publish the enclosed training informations (calendar format) in the next issue
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PANTA RHEI

A quarterly information bulletin edited on behalf of the partners in the field of hydrology, water management and water resources technology. It is published with the financial support of the European Community within the framework of the ERASMUS, COMETT and TEMPUS programmes and distributed free of charge. The present distribution is 3,500 copies. Issues are published in September, December, March and June.

OBJECTIVES OF PANTA RHEI

An efficient and continuous way of communication among all ERASMUS, COMETT and TEMPUS partners, both active and prospective, and among students and training participants with interest in water related fields: Service to the

- ICP-Interuniversity Cooperation Programme "Hydrology and Water Management"
- UETP-University Enterprise Training Partnership : TECHWARE - TECHNOLOGY for WATER RESOURCES.

Dissemination of activities or proposals of partners, in particular,

- transnational exchanges of students, young graduates and staff
- joint development of full curricula or specific training tools
- crash or intensive courses
- analysis of training needs

Information about other water related training activities.

Promotion of a European dimension in the field of water-related education and training.

"panta rhei"

all things are in constant flux.

It is an axioma of Heraclitus (c. 540 - c. 480 BC), Greek philosopher of Ephesus, quoted by Plato. Heraclitus is also known for illustrating the persistence of unity through change by the analogy of the river : "Upon those who step into the same river different and ever different waters flow down".

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A. Van der Beken

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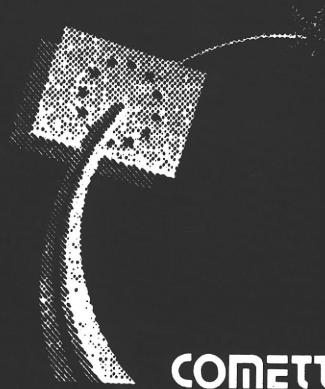
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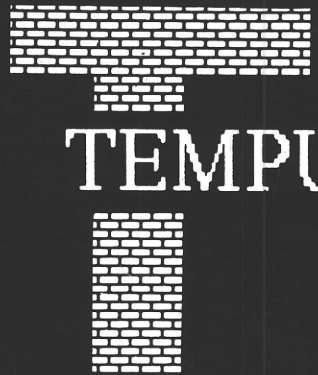
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