



CHERNE Workshop CERVIA-2016



ROUND TABLE 1

Analysis and discussion on activities proposed for CHERNE partners

Moderator: Herwig Janssens

Topics to be discussed in RT1:

1. *CHERNE activities 2002-2015: Overview*
2. *CHERNE activities (proposed and organized) in 2015-16 – Proposals for 2016-17*
3. *CHERNE activities (proposed but not organized) in 2015-16 – Proposals for 2016-17*
4. *CHERNE activities: New initiatives and Proposals for 2016-17*
5. *Non CHERNE activities open for CHERNE partners*
6. *Other CHERNE partners – No activities*
7. *Remarks*

Annexes

1. *Template: Project Plan for CHERNE activities and other actions proposed to the network*
2. *Final Report on the 2nd (interim) Intensive Course on Industrial Radiography – Athens-2015*

1. CHERNE activities 2002-2015: Overview

	Year	course	held in
Pre-CHERNE:			
1	2002	PAN-1	Prague
2	2003	PAN-2	Prague
3	2004	PAN-3	Mol-Brussels
4	2005	pre-SPERANSA	Prague
CHERNE:			
5	2005	CHERNE Workshop	Valencia
5	2006	SPERANSA-1	Mol-Jülich
6	2006	CHERNE Workshop	Valencia

7	2007	SPERANSA-2	Prague
8	2007	JUNCCS-1	Jülich
9	2007	RAPIX-NOCOS-1	Brussels-Diepenbeek
10	2007	CHERNE Workshop	Prague
11	2008	SPERANSA-3	Mol-Brussels
12	2008	JUNCCS-2	Jülich
13	2008	RAPIX-NOCOS-2	Brussels-Diepenbeek
14	2008	CHERNE Workshop	Favignana
15	2009	ICARO-1	Lisbon
16	2009	JUNCCS-3	Jülich
17	2009	XIMER-1	Brussels-Diepenbeek
18	2009	CHERNE Workshop	Jülich
19	2010	ICARO-2	Palermo-Catania
20	2010	JUNCCS-4	Jülich
21	2010	MonteCarlo	Brussels
22	2010	CHERNE Workshop	Coimbra
23	2011	XIMER-2	Brussels-Diepenbeek
24	2011	ICARO-3	Lisbon
25	2011	PRA	Valencia
26	2011	JUNCCS-5	Jülich
27	2011	CHERNE Workshop	Brussels
28	2012	XIMER-3	Brussels-Diepenbeek
29	2012	SARA-1	Mol-Jülich
30	2012	CHERNE Workshop	Athens
31	2013	SARA-2	Prague
32	2013	XIMER-4	Brussels-Diepenbeek
33	2013	CHERNE Workshop	Salamanca
34	2014	SARA-3	Brussels-Diepenbeek
35	2014	XIMER-5	Brussels-Diepenbeek
36	2014	MANTRA	Bologna-Catania
37	2014	RADAM-1	Jülich
38	2014	CHERNE Workshop	Thessaloniki
39	2015	Radiochemistry	Valencia
40	2015	XIMER-6	Brussels-Diepenbeek
41	2015	IC-RAD	Athens
42	2015	SARA-4	Prague
43	2015	Imaging	Valencia
44	2015	Computing	Valencia
45	2015	Natural Radioactivity	Valencia
46	2015	RADAM-2	Jülich
47	2015	MARC-1	Jülich
48	2015	NORM	Diepenbeek
49	2015	Technical visit	Grenoble
50	2005	CHERNE Workshop	Minsk

2. **CHERNE activities (proposed and organized) in 2015-16**

➤ *Proposals for 2016-17*

Intensive course IC: **Radiation Detection and Measurement: RADAM-2**
Date of the project: 31/8-4/9/2015
Place(s) of the project: FH Aachen Campus Jülich
Coordinator(s): Friedrich Hoyler
Other partners: –
Number of participants: 13, from Germany, Belgium, Brazil

➤ **Status 2016-17:** will be organized again: RADAM-3, 05/09-9/9/2016
number of participants: max 12

Intensive course IC: **Methods of Applied Radiochemistry MARC-1**
Date of the project: 7/9-11/9/2015
Place(s) of the project: FH Aachen Campus Jülich
Coordinator(s): Ulrich Scherer
Other partners: Caroline Licour
Number of participants: 13, from Germany, Belgium, Brazil

➤ **Status 2016-17:** will be organized again: MARC-2, 12/9-16/9/2016, in the framework of Erasmus+
new coordinator: Felix Schneider
number of participants: max 16
funding **Erasmus+**: 2 students per partner of Erasmus+ get funding

Intensive course IC: **IC-IRAD: Intensive Course on Industrial Radiography**
Date of the project: 21/09-25/09/2015
Place of the project: Nuclear Engineering Laboratory and School of Mechanical Engineering, National Technical University of Athens NTUA (Greece)
Coordinator (s) Nick P. Petropoulos
Number of participants: 11, FH Aachen-Jülich (9), National Technical University of Athens NTUA (1), Frederick University Cyprus (1)
Remarks: final report: see annex
course website: <https://sites.google.com/site/ntuaradiographycourse>

➤ **Status 2016-17:** will be organized again *biannually* (next: September 2017). In case of demand
and interest possibly *yearly*
max. number of participants: 12
course can be extended to 7 working days

Intensive course IC: **XIMER-7**
Date of the project: 11-22/4/2016
Place(s) of the project: Diepenbeek/Brussels, Belgium
Coordinator(s): UHasselt, ISIB, Belgium
Other partners: SCK•CEN, FANC, Megaports (Controlatom support)
Number of participants: 10 from Belgium (UH, ISIB)

Remarks: funded by International project UHasselt, ISIB

➤ **Status 2016-17:** will be replaced by **Environmental measurements** in the framework of **Erasmus+**

Intensive course IC: **Monte Carlo method applications to Laboratory, Industry and Medicine**

Date of the project: 15-17/02/2016

Place(s) of the project: ISIB (Brussels)

Coordinator(s): Wouter Schroevers (UH), Isabelle Gérardy (ISIB)

Number of participants: 20 from Belgium (UH, ISIB)

➤ **Status 2016-17:** will be organised again during the second quadrimester in ISIB, 20 or more participants
can be open to other partners than UH, ISIB

Intensive course IC: **RADIOCHEMISTRY: Methods and applications in Radiochemistry**

Date of the project: 25-29/04/2016

Place(s) of the project: UPV – Valencia (Spain)

Coordinator(s): José Ródenas

Other partners: Ulrich Scherer, FH Aachen Campus Jülich (Germany)

Number of participants: 24, all of them Spanish, from UPV, UPC, ITQ, GDES (Universities, institute of research and company respectively)

➤ **Status 2016-17:** Probably it will be organized, but it should be confirmed by Ulrich (Manheim) and UPV (to get funds)

Intensive course IC: **Soft Computing: An Introduction to Soft Computing Methods in Modern Engineering: Genetic Algorithms, Neural Networks and Fuzzy Logic**

Date of the project: 9-13/11/2015

Place(s) of the project: UPV – Valencia (Spain)

Coordinator(s): José Ródenas, UPV

Other partners: Enrico Zio, Politecnico de Milano (Italy)

Number of participants: 11 participants from UPV

➤ **Status 2016-17:** Probably it will be organized, but it should be confirmed by UPV (to get funds)

Technical visit

Date of the projects: 9/03/2016 – 23/03/2016

Place(s) of the project: Valencia, Spain

Coordinator(s): José Ródenas

Other partners: UHasselt

Number of participants: 10 students from UHasselt

Workshop: **CHERNE Workshop**

Date of the projects: 01-05/06/2015
Place(s) of the project: Belarusian State University, Minsk, Belarus
Coordinator(s): Tatsiana Savitskaya, Iryna Kimlenka
Other partners: CHERNE partners
Participants: Brussels, Catania, Diepenbeek, Julich, Minsk, Prague, Valencia

Workshop: **CHERNE Workshop**
Date of the projects: 30/05-01/06/2016
Place(s) of the project: Cervia, Italy
Coordinator(s): Domiziano Mostacci, Unibo, Bologna
Other partners: CHERNE partners
Participants: Athens, Bologna, Brussels, Catania, Covilha, Diepenbeek, Jülich, Mannheim, Messina, Milano, Prague

- **Status 2016-17:** to be organised in Covilhã - Portugal by Sandra Soares (Universidade da Beira Interior)

3. **CHERNE activities (proposed but not organized) in 2015-16**

- *Proposals for 2016-17*

Intensive course IC: **IMAGING: Formation, Acquisition and Processing of Images in Nuclear Medicine Techniques**

Date of the project: 9-13 May, 2016
Place(s) of the project: UPV – Valencia (Spain)
Coordinator(s): José Ródenas
Other partners: Isabel Lopes, Universidade de Coimbra (Portugal)
Remarks: Cancelled due to lack of funding

- **Status 2016-17:** Probably not organized (no funds)

Intensive course IC: **NATURAL RADIOACTIVITY: Protection against Natural Ionizing Radiation**

Date of the project: 23-27/11/2015
Place(s) of the project: UPV – Valencia (Spain)
Coordinator(s): José Ródenas, UPV
Other partners: Isabelle Gerardy, Institut Supérieur Industriel de Bruxelles (ISIB, Belgium)
Number of participants: 6 participants from UPV

- **Status 2016-17:** Probably organized within a STA structure

Intensive course IC: **WATER ISSUES AT NPP**
Date of the project: 15-26/03/2016
Place(s) of the project: Belarusian State University (Belarus)
Coordinator(s): Tatsiana Savitskaya, BSU, Iryna Kimlenka, BSU
Other partners: Dzmity Hrynshpan, Research Institute for Physical and Chemical Problems, BSU

➤ **Status 2016-17:** no answer received on mail for information

Intensive course IC: **PRA: Probability Risk Assessment**
Date of the project: 25-29/01/2016
Place(s) of the project: UPV – Valencia (Spain)
Coordinator(s): Sebastián Martorell

➤ **Status 2016-17:** will be organised in the framework of Erasmus+ (partner: ISIB)
january 2017
number of participants: max. 16 students
:
funding Erasmus+: 2 students per partner of Erasmus+ get funding

Intensive course IC: **Neutron physics in the subcritical assembly**
Place of the project: Aristotle University of Thessaloniki
Coordinator (s) Stelios Stoulos
Status 2015-16: not organized since the assembly is under reconstruction

➤ **Status 2016-17:** postponed indefinitely until the assembly will be functional

4. CHERNE activities: New initiatives and proposals for 2016-17

Training school: **Radionuclide production with Cyclotrons RPC**
Date of the project: September 2017
Place(s) of the project: Mannheim and Heidelberg
Coordinator(s): Ulrich Scherer, Hochschule Mannheim University of Applied Sciences
Other partners: German Cancer Research Center DKFZ (Deutsches Krebsforschungszentrum)
Number of participants: 12

Intensive course IC: **Safe Application of Radiation and radionuclides SARA-2016**
Date of the project: first week of October 2016
Place(s) of the project: Prague
Coordinator(s): CTU-Prague
Other partners: SURO v.v.i.
Number of participants: max. 16 students
Remarks: funding **Erasmus+**: 2 students per partner of Erasmus+ get funding

Training Course: **GATE: GEANT4 Application for Tomographic Emission**
Date of the project: 19/9-23/9/2016
Place(s) of the project: FH Aachen Campus Jülich
Coordinator(s): Karl Ziemons
Other partners: –
Number of participants: max 12

Training school Erasmus+: **Environmental measurements**
Date of the project: most likely 1st week after Eastern 2017 (5 days)
Place(s) of the project: Brussels/Diepenbeek (?), Belgium
Coordinator(s): ISIB/UHasselt, Belgium
Other partners: SCK•CEN/FANC
Number of participants: max. 16 students
Remarks: funding **Erasmus+**: 2 students per partner of Erasmus+ get funding replaces **XIMER**

Training school Erasmus+: **Waste management**
Date of the project: most likely 21-26/11/2016
Place(s) of the project: Brussels/Diepenbeek (?), Belgium, Aachen (Germany)(?)
Coordinator(s): FHAachen/ISIB/UHasselt
Other partners: depending on the activities
Number of participants: max. 16 students
Remarks: funding Erasmus+, 2 students per partner of Erasmus+ get funding

5. **Non CHERNE activities open for CHERNE partners**

Intensive course IC: **III GEANT4 International School and Parallel Computing Concepts**
Date of the project: 9-13/11/2015
Place(s) of the project: INFN-Laboratori Nazionali del Sud and Università degli Studi di Catania
Coordinator(s): Enzo Bellini
Number of participants: max. 50

- **Status 2016-17:** will be organized again, but in Belgrade (Serbia) in 2017-18
 CHERNE partners are welcome

Training school: **Training school on NORM in Building Materials**
Date of the project: 31/08-04/09/2015
Place(s) of the project: Diepenbeek, Belgium
Coordinator(s): UHasselt, Diepenbeek, Belgium
Other partners: KULeuven, SCK•CEN, INFN and ISS (It), JRC-IRMM, Metallo Chimique, Canberra
Number of participants: 16
Remarks: funded by COST Action NORM4Building, International project UHasselt (only for CHERNE/COST-partners)

- **Status 2016-17:** replaced by the training school in Athens

Training School: **3rd TRAINING SCHOOL ON REUSE OF NORM IN BUILDING MATERIALS**
Date of the project: 12-16/09/2016
Place(s) of the project: Nuclear Engineering Department and Department of Metallurgy and Materials, National Technical University of Athens NTUA (Greece)
Coordinator(s): Marios J. Anagnostakis

Other partners:	D.Panias (NTUA), N.Petropoulos (NTUA)
Participants:	master and PhD students, early career investigators (up to 5 years after PhD is obtained), without excluding undergraduate students
Number of participants:	COST action sponsored: max. 9, total: max. 20 (only for CHERNE/COST-partners)
Remarks:	this training school is part of the COST Action 'NORM4BUILDING' more info on http://norm4building.org/?page_id=2163

6. Other CHERNE partners

Associate Members

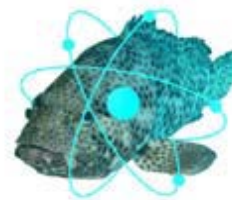
- Universidade de **Coimbra** (Portugal)
- Department of Nuclear Engineering, Università degli Studi di **Palermo** (Italia)
- Department of Physics, Università degli Studi di **Messina** (Italia) (renewed membership)
- Universidade da Beira Interior (UBI), **Covilhã** (Portugal)
- Instituto Superior Tecnico (IST), **Lisboa** (Portugal)
- Universidad de **Salamanca** (Spain)

7. Remarks

- For the announcement of the next activities the CHERNE template 2016-17 should be used (see annex), to be included in the CHERNE Bulletin.
- This template should be filled in *before the beginning of September 2016* to allow the communication to the students at the beginning of the academic year (end of September) in the CHERNE Bulletin and should be sent to:
 - the new Bulletin coordinator Agnes Peeters (peeters@isib.be)
 - the CHERNE secretary Isabelle Gerardy (gerardy@isib.be)
- Well before the actual organisation of a course a separate second announcement should be sent by the organisers to the partners.
- All further information concerning the projects will be distributed on the CHERNE Platform (platform coordinator: Marios Anagnostakis (managno@nuclear.ntua.gr))
- Funding for Erasmus+ for students and staff (1 professor if helping in the organisation):
 - accommodation: € 55,- per day
 - travel: < 300 km: no funding, > 300 km: fixed amount



CHERNE 2016-17



Project Plan for CHERNE activities and other actions proposed to the network

Acronym/Short title of the project: xxx xxx

Time schedule for the proposal of educational activities for students (proposals not addressed to students may be introduced at any time)	before September 15: the organiser fills the present form and sends it to the CHERNE secretary Isabelle Gerardy (gerardy@isib.be) and to the Bulletin coordinator Agnes Peeters (peeters@isib.be) before September 30: received proposals are sent by means of the CHERNE Bulletin to all CHERNE partners by the CHERNE secretary and made available on the CHERNE platform
Context	This project plan is meant to inform CHERNE partners and their students about an activity organised in the framework of the CHERNE network, taking into account the objectives of CHERNE as described in the CHERNE declaration (www.cherne.ntua.gr)
Definitions	IC: Intensive course, at least 1 week/2 ECTS SP: strategic partnership (may include intensive programmes and other actions) IP: intensive programme, part of the actions of a SP

Title of the project and acronym (if applicable)	
Type of the project	Please fill in: SP, IP, IC, training school, excursion, visit, internship, workshop, research, other?
Main objective of the project	Describe in a few lines the main objective of the project. A more extensive description can be given in an annex
Short description of the project	
Expected learning outcomes (if applicable)	
Date of the project	
Place(s) of the project	
Coordinator(s)	Name, Institution, email
Contact person (if different)	Name, Institution, email
Other partners	Name, Institution
Is the partnership still open to more partners?	open / closed
Intended participants	students (Ba, Ma, PhD?), staff members, external, ...?
Expected present studying level of participants and their specialisation (if relevant)	the activity is organised for the own students, free places are open for students of CHERNE partners / or: .../... the activity is organised for students of all CHERNE partners / or: the activity is organised for .../...
Prerequisites	

Expected initial knowledge	
Intended or maximal number of participants	
Task force (if applicable)	Name, Institution
Working method, time schedule and deadlines for the organisation and for the task force	Make clear here which kind of answer is expected from CHERNE members to this proposal and when.
Evaluation (of participants, by participants, by organisers, ...)	
Reporting and dissemination (if applicable)	
Is the project part of an Erasmus program?	
ECTS or ECVET credits applicable? How many?	
Are any other academic, industrial or research non CHERNE partners involved?	Name, Institution
Terminology	CHERNE: Cooperation for Higher Education on Radiological and Nuclear Engineering other:.../...
Practical organisation	Accommodation : organised / not organised
Costs for the students (if applicable)	Travel :covered / not covered Accommodation Social events Tuition fee TOTAL FEE
Extra information or conditions	.../...
Anything else	.../...

Annex 1

.../...

Annex 2

.../...

ΕΘΝΙΚΟ ΜΕΤΣΟΒΙΟ ΠΟΛΥΤΕΧΝΕΙΟ

ΣΧΟΛΗ ΜΗΧΑΝΟΛΟΓΩΝ ΜΗΧΑΝΙΚΩΝ
ΤΟΜΕΑΣ ΠΥΡΗΝΙΚΗΣ ΤΕΧΝΟΛΟΓΙΑΣ

ΕΠΙΚ. ΚΑΘΗΓΗΤΗΣ Ν.Π. ΠΕΤΡΟΠΟΥΛΟΣ
Δρ. Μηχανολόγος Μηχανικός ΕΜΠ



NATIONAL TECHNICAL UNIVERSITY
OF ATHENS
SCHOOL OF MECHANICAL ENGINEERING
DEPARTMENT OF NUCLEAR ENGINEERING

ASSIST. PROFESSOR N.P. PETROPOULOS
Dipl. Eng. NTUA, Ph.D. NTUA

Dr. Ing. Isabelle GERARDY,

Chef de travaux
Matériaux et physique nucléaire
Institut Supérieur des Ingénieurs de Bruxelles
BELGIUM

Athens, May 06, 2016

Re: Final Report for the 2nd (interim) Intensive Course on Industrial Radiography

Dear Dr. GERARDY,

Let me please provide herewith an accounting report of the 2nd Intensive Course on Industrial Radiography (IC-IRAD), which was successfully held between Sep 21 and Sep 25, 2015, at the Nuclear Engineering Department of the National Technical University of Athens (NED-NTUA). As well-known, the course is a joint initiative of NED-NTUA and the CHERNE network. Detailed data on this course have been also made available at the course web site, which has been specifically prepared for the course purposes, at the following link:

<https://sites.google.com/site/ntuaradiographycourse/>

1. Course history, aim and generic particulars

The aim of this one-week intensive course is to bring together students and teaching staff from higher education institutions involved in the nuclear engineering applications fields, for a 5 continuous full day (09.00-17.00) course regarding the principles of conventional (film) industrial radiography and associated radiation protection.

The usefulness of an intensive course on industrial radiography, either with or without ERASMUS or other funding support, were proposed by the Nuclear Engineering Department of the National Technical University of Athens (NED-NTUA) during the 8th CHERNE Workshop, which was hosted by NED-NTUA in GREECE, between 28 to 30 May 2012.

A second detailed discussion on the matter was further held during the 9th CHERNE Workshop, which was hosted by the Faculty of Sciences at the University of Salamanca, SPAIN, between 5 to 7 June 2013. Following these discussions, it was finally decided that such a course could be organized for the first time within Autumn 2014 under the name IC-IRAD and for the duration of one week only.

The 1st Course was successfully held between Sep 29 and Oct 3, 2014. Despite the fact that the organizers were planning to hold the 2nd Course, in 2016, an expressed interest coming from many students of the FH-Aachen was the initiative, which led to the organization of this course in 2015.

2. Particulars of the 2nd Course

The course was not funded by any external source and, therefore, it was run using the personnel, the facilities and the equipment available at NED-NTUA. Registered participants were not supported

15780 ΑΘΗΝΑ • 15780 ATHENS, GREECE ☎ (+30) 210-7722939 📠 (+30) 210-7722914
✉ npetr@central.ntua.gr • npetro@nuclear.ntua.gr 🌐 <http://nuclear.ntua.gr>

financially, in any way i.e. for transportation, accommodation, per-Diem etc. It has been decided that despite the lack of funding to charge no fees to the course participants.

The course was held for eleven (11) participants, namely: nine (9) students coming from FH Aachen (GERMANY), one (1) student coming from the National Technical University of Athens (GREECE) and one (1) faculty member of the Frederick University in CYPRUS. All participants were registered in June 2015. All lectures were given in English (the official course language). All participants received adequate course material mainly in printed form and also electronic copies of suggested studying material.

Since the level of the attending participants was sufficiently high it was decided that there was no need for an oral or written examination. Course duration and content was unofficially considered as equivalent to 2 ECTS, nevertheless there was no official provision for ECTS or ECVET credits, since the credit system has not been yet adopted in our University for such provisional seminars.

A duly signed certificate of attendance was issued for all course participants.

Rest of the characteristics of the given lectures program and course conduct specifics may be found at the link of the course web site.

3. Course equipment and facilities

Here is a basic list of the main equipment and facilities which were available for the course:

- a. X-Ray Source type ERESKO MF42 (200 kV) by GE Inspection and Sensing Technologies
- b. NOVA (Agfa) Film Processor Type: 7070/100 by GE Inspection and Sensing Technologies
- c. 4X Film Viewer 205x85 mm for Welding Film by Kowolux
- d. Digit-X Densitometer by Fidgeon Ltd
- e. Scanjet G4050 by Hewlett Packard]
- f. Image quality indicators (after DIN), lead letters and numbers, densitometer calibration film, spatial resolution specimens

In addition:

The was provided an independent and adequate classroom with all necessary audio visual means.

4. Course evaluation

An evaluation of the course was held in the form of discussion during the last day. The summary conclusions and suggestions are listed below coming from both the participants and the instructor:

- The course was practically taught by a sole instructor only. It would be advisable that more instructors should be involved in future courses.
- The time available for the course seems limited; participants expressed their suggestion of more laboratory work like radiography of random specimens provided by the participants themselves, further laboratory investigation of the penumbra effects etc.
- Participants expressed their suggestion to include radiography simulation, digital radiography and tomography in the course program. The discussion on this suggestion led to the recognition of a need to extend the course duration to 7 or 8 days. Alternatively, the course could still be held within 5 days only, if the ionizing radiation theory during the first day could be skipped for MSc level participants with a radiation physics background and if weld and cast defects analysis could be skipped for participants with a mechanical engineering background.
- The logistics of the course were quite satisfactory (web site, accommodation instructions, visa and health insurance info, Wi-Fi services, registration procedure, location, transportation means, bar and restaurant facilities, availability of the instructor for non-course guidance etc.)



5. Course future and sustainability

It is intended that this course will be held biannually, i.e. the next course should be held in 2017. However, this could change according to demand or interim courses could be organized at the request of an adequate number of participants.

An effort is being put so that funding shortage could change by the 3rd course and on. There will be examined the possibility of charging a rather symbolic fee (let's say ~50 EUR) to the participants to cover just the immediate logistic needs of the course conduct especially in the case when the students are more than five.

It is intended that the next (possibly in 2017) course will focus more on digital radiography, since relevant equipment has been purchased. At the moment this equipment has not yet been set-up for educational purposes.

Both international and local Greek students would be welcome. The international students would have priority. Eligible students' original discipline may be of Nuclear Engineering, Mechanical Engineering, Naval Engineering, Materials Engineering, Chemical Engineering, Physics and/or Medical Imaging. Other disciplines may be considered according to applications. Continuous education students may be accepted as well. Students originating from CHERNE partner higher education institutions are particularly welcome. All students levels would be accepted (3rd or 4th year Ba, Ma, PhD).

It has been worked out that the maximum number of course participants, taking into account the facilities and equipment available and the possibility of external funding or a fee system, could be set to twelve.

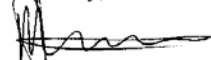
5. Overview and conclusions

The organization of the 2nd (interim) Course was rather successful. A major improvement, as compared to the 1st Course was the increased number of participants: eleven as compared to three respectively. Evaluation pointed out however, that the amount of knowledge to be transferred during this course barely fits to the course duration schedule. The course should be extended to 7 working days or so, if more radiography material is to be covered or if participants are asked to present a short project work. Furthermore, the involvement of more and rather international instructors would fulfill the explicit course aim to *"bring together students and teaching staff from higher education institutions involved in the nuclear engineering applications fields"*.

6. Acknowledgments

The signatory of this report would like to thank colleague Lecturer Panagiota ROUNI for her collaboration and assistance during the Laboratory Exercises organized for this course and colleague Associate Professor Marios ANAGNOSTAKIS, for supporting and pushing forward towards the organization of this 2nd IC-IRAD and for his continuous support and advice. Thanks are extended also to Professors Friedrich HOYLER and Ulrich SCHERER of FH-Aachen, Germany for encouraging and supporting their students to register and attend. Finally, thanks are due to all CHERNE network members for their support and advice.

Sincerely,



Nick P. Petropoulos

Assist. Professor NTUA