



Επιστημονικό Σωματείο,  
Έτος Ίδρυσης 1982, έδρα:  
Κάνιγγος 27, 106 82 Αθήνα  
(Ένωση Ελλήνων Χημικών)

**ΔΙΟΙΚΗΤΙΚΟ  
ΣΥΜΒΟΥΛΙΟ:**

Γ. Φακορέλλης, Ν. Ζαχαριάς,  
Κ. Πολυκρέτη, Θ. Βάκουλης,  
Γ. Μπασιάκος, Ε. Αλούπη, Ε.  
Κυριατζή

**Πληροφορίες:**

Γ. Φακορέλλης ΕΚΕΦΕ  
"Δημόκριτος", 153 10 Αγ.  
Παρασκευή Αττικής,  
Τηλ. 210-6503326  
FAX: 210-6519430

**E-mail:**

[yfacorellis@ims.demokritos.gr](mailto:yfacorellis@ims.demokritos.gr)

Scientific Association, Year  
of Establishment 1982,  
Headquarters: Kaniggos 27,  
106 82 Athens (Association  
of Greek Chemists)

**BOARD:** Y. Facorellis, N.  
Zacharias, K. Polikreti, T.  
Vakoulis, I. Bassiakos, E.  
Aloupi, E. Kiriati

**Information:** Y. Facorellis,  
NCSR "Demokritos", 153  
10 Ag. Paraskevi Attikis,  
Greece

**Tel.** (+30 210) 6503326

**Fax:** (+30 210) 6519430

**E-mail:**

[yfacorellis@ims.demokritos.gr](mailto:yfacorellis@ims.demokritos.gr)

# Πληροφοριακό Δελτίο της Ελληνικής Αρχαιομετρικής Εταιρείας

**- Μάρτιος 2004 -**

# Newsletter of the Hellenic Society of Archaeometry

**- March 2004 -**

**Nr. 37**

## ΠΙΝΑΚΑΣ ΠΕΡΙΕΧΟΜΕΝΩΝ – TABLE OF CONTENTS

### ΣΥΝΕΔΡΙΑ – CONFERENCES/WORKSHOPS

- POCA 2004, Archaeology Department, University of Reading, 19<sup>th</sup>-20<sup>th</sup>  
November 2004-02-26, ANNOUNCEMENT AND FIRST CALL FOR  
PAPERS ..... **page 4**
- NEW - MINOAN SEMINAR (Athens/Crete) ..... **page 5**
- National Park Service's 2004 Archeological Prospection workshop, May 17-21,  
2004, Spiro Mounds Archaeological State Park, Oklahoma ..... **page 6**
- XXVII European Congress on Molecular Spectroscopy, Krakow, Poland,  
September 5-10, 2004 ..... **page 7**
- 9<sup>th</sup> Management Commission Meeting of the COST Action G7, Nantes,  
France, 18-20 March 2004 ..... **page 8**
- Workshop on archaeometallurgy of the Italian Metallurgical Society, Cagliari,  
Sardinia 9-10 Sept. 2004..... **page 17**
- IAMS Summer school on extractive mining and metallurgy, Institute of  
Archaeology in London, 21 June to 2 July 2004..... **page 18**
- Summer school course on metals technology, microstructure and corrosion,  
UCLA, July 5th-16th 2004 ..... **page 19**
- EUROPEAN SEISMOLOGICAL COMMISSION, Working Group  
"Archaeoseismology", ARCHAEOSEISMOLOGY AT THE BEGINNING OF  
THE 21<sup>st</sup> CENTURY, Messina, Italy, June 9-11, 2004, 1<sup>st</sup> Circular ..... **page 20**
- DNA7 Conference, Brisbane, Australia, 12<sup>th</sup> - 17<sup>th</sup> July, 2004 ..... **page 22**

### ΘΕΣΕΙΣ ΕΡΓΑΣΙΑΣ/ΥΠΟΤΡΟΦΙΕΣ – JOB VACANCIES/FELLOWSHIPS

- Environmental lectureship at Edinburgh ..... **page 23**
- PhD Opportunity 2004, Centre for Maritime Archaeology, University of Ulster,  
Coleraine ..... **page 24**

### ΑΝΑΚΟΙΝΩΣΕΙΣ – ANNOUNCEMENTS

- Δελτίο Τύπου της Ελληνικής Ιζηματολογικής Ένωσης ..... **page 26**
- CSA Newsletter, Volume XVI, No. 3 ..... **page 28**

**INTERNET SITES**

Dating the eruption of Thera ..... **page 29**

Parthenon restitution website ..... **page 30**

New discoveries at Alalakh (Mycenaean wares) ..... **page 31**

---

---

## **ΣΥΝΕΔΡΙΑ - CONFERENCES/WORKSHOPS**

### **POCA 2004**

**Archaeology Department, University of Reading, 19th-  
20<sup>th</sup> November 2004-02-26**

### **ANNOUNCEMENT AND FIRST CALL FOR PAPERS**

POCA 2004 (Postgraduates in Cypriot Archaeology) will be hosted at the Archaeology Department, the University of Reading, from 19<sup>th</sup>-20<sup>th</sup> November.

Details will be posted on the POCA 2004 website, which will be up and running shortly. Anyone working in Cypriot archaeology of any period, or in related subjects, is welcome.

For more information, contact [l.hulin@reading.ac.uk](mailto:l.hulin@reading.ac.uk)

## **NEW - MINOAN SEMINAR** **(ATHENS/CRETE)**

The organizers of the new MINOAN SEMINAR series are pleased to include a circular about the aims of this venture.

We will be sending out a programme of Seminars (March to May) to post on notice-boards within the next week. Until then, we are pleased to announce that the 1st Seminar will take place at the Danish Institute in Athens on Tuesday 16th March at 19.30.

Speaker: Nanno Marinatou

Title: "Who sees the gods and why?"

Chairman: Wolf-Dietrich Niemeier

The paper will introduce a range of topics concerning Minoan religion. All who are interested in the subject are welcome to attend and contribute to the discussion. The organizers would appreciate it if those wishing to attend could inform Colin Macdonald by email ([cfmgr@her.forthnet.gr](mailto:cfmgr@her.forthnet.gr)).

Since we cannot hope to have a 'complete' mailing-list from the very beginning, it would be a great help if you could pass on this circular to others. They can then email Colin Macdonald (Eng) or Lefteris Platon (Gk) asking to be placed on the list.

### **MINOAN SEMINAR**

The Minoan Seminar is being established in Athens and Crete by Greek and foreign scholars to provide a regular forum in which aspects of Minoan archaeology can be discussed. Seminars will address current problems in the field as well as presenting new discoveries for discussion. They will normally be held once a month, initially at the Danish Institute in Athens. The first seminar is scheduled for 16 March. In the summer, 2-3 seminars will be held in Crete at appropriate locations. These may include site or museum visits.

The **Minoan Seminar** will have its own web-site where illustrated abstracts or full papers will be published. In the event of a *table ronde* or workshop, all the papers will be published in hardcopy in the manner of the 1994 Late Minoan III Pottery meeting at the Danish Institute. The languages of the Seminar will be Greek and English accompanied by bi-lingual abstracts.

A group of volunteers (listed below) is undertaking the work of organizing the **Minoan Seminar** and would appreciate any suggestions or comments you might have. These should be sent to Colin Macdonald ([cfmgr@her.forthnet.gr](mailto:cfmgr@her.forthnet.gr)) or Lefteris Platon ([eplaton@arch.uoa.gr](mailto:eplaton@arch.uoa.gr)).

**Organizers:** M. Andreadaki-Vlasaki; N. Demopoulou; E. Hallager; E. Hatzaki; C. Macdonald; W.-D. Niemeier; E. Platon.

# **NATIONAL PARK SERVICE'S 2004** **ARCHEOLOGICAL PROSPECTION** **WORKSHOP**

**May 17-21, 2004, Spiro Mounds Archaeological State Park,  
Oklahoma**

This is a reminder that the closing date for applications is April 23, 2004. The workshop is presently half full.

The National Park Service's 2004 workshop on archeological prospection techniques entitled Current Archeological Prospection Advances for Non-Destructive Investigations in the 21st Century will be held May 17-21, 2004, at the Spiro Mounds Archaeological State Park in Spiro, Oklahoma. Lodging will be in Fort Smith, Arkansas at the Holiday Inn. This will be the fourteenth year of the workshop dedicated to the use of geophysical, aerial photography, and other remote sensing methods as they apply to the identification, evaluation, conservation, and protection of archaeological resources across this Nation. The workshop this year will focus on data processing and interpretation in addition to the more basic topics involving the theory of operation, methodology, and on-hands use of the equipment in the field. There is a tuition charge of \$475.00. Application forms are available on the Midwest Archeological Center's web page at <<http://www.cr.nps.gov/mwac/>>.

For further information, please contact Steven L. DeVore, Archeologist, National Park Service, Midwest Archeological Center, Federal Building, Room 474, 100 Centennial Mall, North, Lincoln, Nebraska 68508-3873: tel: (402) 437-5392, ext. 141; fax: (402) 437-5098; email: <[steve\\_de\\_vore@nps.gov](mailto:steve_de_vore@nps.gov)>.

\*\*\*\*\*

Steven L. DeVore, Archaeologist  
National Park Service  
Midwest Archeological Center  
Federal Building, Room 474  
100 Centennial Mall North  
Lincoln, NE 68508-3873 USA

Phone: (402) 437-5392, ext. 141  
Fax: (402) 437-5098  
Email: [steve\\_de\\_vore@nps.gov](mailto:steve_de_vore@nps.gov)  
Website: <http://www.cr.nps.gov/mwac/>

\*\*\*\*\*



EUCMOS is the principal European conference on molecular spectroscopy, which since 1951 has brought together spectroscopists from across Europe together with colleagues from overseas. This time Organizing Committee invites you to Poland.

### CONFERENCE TOPICS

Plenary lectures given by the distinguished scientists as well as keynote speeches and posters will be present at eight theme sessions:

- Spectroscopy and molecular structure.
- Laser spectroscopy.
- Spectroscopy in materials science.
- Biospectroscopy.
- Spectroscopy of hydrogen-bonded systems.
- Spectroscopy in chemical analysis.
- Experimental methods and sampling techniques in spectroscopy.
- Theoretical and computational methods in spectroscopy.

Conference programme includes also interesting social events (e.g. Kraków sightseeing, Dinner in the Salt Mine Wieliczka. Both, Kraków and Wieliczka Salt Mine are on the UNESCO list of twelve most priceless world monuments).

### PROCEEDINGS

A special volume of Journal of Molecular Structure will be dedicated to the XXVII EUCMOS contributions.

MORE INFO on our website: [www.eucmos2004.agh.edu.pl](http://www.eucmos2004.agh.edu.pl)

Poland, Krakow, September 5-10, 2004

#### **Conference Address:**

EUCMOS XXVII

AGH - University of Science and Technology

Faculty of Materials Science and Ceramics

30 Mickiewicza, Av.

30-059 Krakow

Poland

tel: (4812) 617 24 87 fax: (4812) 633 71 61

email: [eucmos2004@agh.edu.pl](mailto:eucmos2004@agh.edu.pl)

# 9<sup>TH</sup> MANAGEMENT COMMISSION MEETING OF THE COST ACTION G7

## Nantes France, 18-20 March 2004

Dear colleagues,

It is a pleasure to announce the 9th Management Commission Meeting of the COST Action G7 to the wide scientific community interested in Artworks Conservation by Laser. The meeting will be held in Nantes with Working Groups meetings and a Workshop in the period 18-20 March 2004. In the attached files you will find the Agenda of the meeting, and the hotel booking form.

Best regards,

Renzo Salimbeni, Chairman

\*\*\*\*\*

Dr. Renzo Salimbeni  
IFAC-CNR  
Via Madonna del Piano (edificio C)  
50019 Sesto Fiorentino (FI), Italy  
Tel. +39 055 522 5312  
Fax +39 055 522 5305  
Mob.00393204316615

\*\*\*\*\*

---

Dear All,

Renzo inform you that the 9th COST G7 meeting will take place in Nantes (France) from 18-20 March 2004 and send you the hotel booking form.

Please return it back to **our agency (De Bouard, Contact : ANNE) as soon as possible** by e-mail or by fax (and forget the previous date of february, 6th).

If you send it by fax, notice that the fax number has changed last week : it's now **Fax : +33 (0) 2 40 48 85 79**

We have selected hotels that are located in city centre areas next to the tram. You will find enclosed two maps, the first one with the location of the hotel, the second one with the location of the General Council and Arc'Antique.

The General Council is around 15-20 min by walk from the city centre and 5 min by tramway n°2 (direction Orvault Grand Val).

Arc'Antique is around 15 min from the city centre by tramway n°2 and the University is really closed from Arc'Antique.

You may consult the following web site to get information about Nantes ([www.nantes-tourisme.com](http://www.nantes-tourisme.com)).



Do not hesitate to contact us for further information (Nathalie HUET or Cécile CHRISTODOULOU phone number + 33 (0) 2 51 81 09 40 or fax number + 33 (0) 2 51 81 09 36 or email [arc.antique@wanadoo.fr](mailto:arc.antique@wanadoo.fr)).

We will send you other information soon.

Yours sincerely

Nathalie HUET

---



## COST G7

### ARTWORK CONSERVATION BY LASER

### NINTH MANAGEMENT COMMITTEE MEETING and 8th WORKING GROUPS MEETING

**18-20 March 2004**

(Organised with Working Groups meeting and workshop)

Dates : 18-20 March 2004  
Place : General Council of Loire-Atlantique  
2, Quai de Versailles, Nantes, France  
and Arc' Antique  
26, rue de la Haute Forêt, Nantes, France

Inviting Delegation : French (person responsible: Nathalie Huet – Arc' Antique)

Chairman : Renzo Salimbeni – IFAC-CNR

Scientific Officer : Gunther Siegel – ESF/COST Secretariat - Brussels

**DRAFT AGENDA OF THE COST G7 MEETING  
18-20 March 2004**

**Workshop, Management Committee, Working Groups**

**Thursday 18 March 2004**

*Place:* General Council of Loire Atlantique, 2 Quai de Versailles

16.00-17.30 Management Committee meeting

1. Welcome to the participants (10 min)
2. Presentation of Mr. Gunther Siegel, new scientific officer for ESF/COST (15 min)
3. Presentation of new Delegations (15 min)
4. Adoption of the agenda (5 min)
5. Approval of the draft minutes of the 8th meeting of the Management Committee (13-15/11/2003 - Lisbon) (5 min)
6. Budgetary situation within ESF/COST Programme (15 min)
7. Report on the Plan of Activities and Expenditures for the year 2004 – Open discussion and approval (20 min)
8. Collection of the STSM requests

17.30-17.50 Coffee break

17.50-19.00 Common meeting of Working Group 1, 2 and 3

1. Events Statement on the LACONA 6 conference (J. Nimmrichter: 10 minutes),
2. Introduction and distribution of a complete mailing list of WG1 /WG2/WG3 members (20 min) (Kautek / Andreoni /Ahmad/Castillejo)
3. Presentation of two tasks during the common WG's meeting:
  - TASK 1: COST G7 web site : project on the bibliographical data and organisation of the relevant databases; (20 min)
  - TASK 3: Inquiry concerning the demand for new research in the field of artwork conservation by laser : New forms and data collected (20 min)

## Friday 19 March 2004

Place Arc'Antique – 26, rue de la Haute Forêt

9.00-11.30 Working Group 1 meeting

9.00-10.30

1. Report on the activity within WG1 : Véronique Vergès-Belmin (10 min)
2. New members(5 minutes each)
3. TASK 2: Collection of information on the laser tools available for cleaning purposes in Artwork conservation. State of the art: new systems, new data on systems (Cooper/Radvan), Discussion 5 minutes
4. TASK 4: Progress in validation of laser and optical techniques. Synthesis of data collected: Renzo Salimbeni, on behalf of Roberto Pini 10 minutes +10 minutes discussion.
5. TASK 5: Safety issues  
(Cooper, Pires, 10 minutes) Advancement state: Martin Cooper (30 min )

10.30-10.45 Coffee break

10.45-11.30 CONCLUSION: constitution of an homework list: 25 minutes

11.30-12.30 Working Group 2 meeting Laser and Optical Systems in Analysis and Diagnostics (1<sup>st</sup> part)

- 1) Review of TASKS 1, 2 and 3, of the WG2 mailing list and comments on the minutes of previous meeting (Andreoni/ Sliwinski ) (10 minutes)
- 2) Invited speaker: (30 minutes)  
P. Schroeder, N.Copernicus Univ., Torun  
Pigment analysis by means of Raman spectra (tentative title)
- 3) Short presentations by WG2 members of the latest results obtained (open call to all members – 20 min)

Wojciech Skrzeczanowski, Institute of Optoelectronics, Military University of Technology, Warsaw, Poland (10 min.)

“A new project: Complex set of non-destructive optoelectronic diagnostics for testing and conservation of museum objects in Poland”

+ 3-4 selected, another short presentations in response to the open call

12.30-14.00 Lunch



**COST ACTION G7**

**ARTWORK CONSERVATION BY LASER**

---

**WORKSHOP “  
“Progress in laser technology during the last years :  
new methodologies or systems”**

**19<sup>th</sup> march – University of Nantes  
(Faculty of Sciences Amphitheater G)**

14:00 – 14:10 Welcome

**Cleaning**

14:10 - 14:35 Laser cleaning of stone with a two-wavelength system P. Pouli, (French Architect)

14:35 – 15:00 Laser cleaning of gilded surfaces and silver S. Siano, (French conservator)

15:00 – 15:25 Cleaning of paper with a remote-control laser system (W. Kautek), V. Quillet

15:25 – 15:50 Laser cleaning of painting and one-line monitoring (H. Scholten, R. Hesterman) / French conservator

15:50 – 16:10 Coffee Break

**Characterisation and Diagnostic**

16:10 – 16:35 Laser Induced Breakdown Spectroscopy LIBS/LMTI (D. Anglos or C. Fotakis)

16:35 – 17:00 Raman Spectroscopy in the authentication of easel paintings (P. Szroeder / Cl. Coupry)

17:00 – 17:25 Laser Doppler Vibrometry as a tool for non invasive diagnostic of Cultural Heritage E. Esposito, (M. Stefanaggi)

17:25 – 17:50 Presentation of the laser safety guidelines (M. Cooper, V. Vergès-Belmin) / M. Labouré

17:50-18:00 Concluding

## Saturday 20 March 2004

Place Arc'Antique – 26, rue de la Haute Forêt

9.00-10.30 WG 2 meeting Laser and Optical Systems in Analysis and Diagnostics (2<sup>nd</sup> part)

9.00-10.15

1. Discussion with volunteers participation:

draft preparation on available analytical techniques (15 min)

- Raman, Rafi Ahmad
- LIF, Marta Castillejo
- LIPS, Vivi Pouli
- Holography, V.Tornari + V. Zafiroopoulos

10.15-10.30

TASK 4 (validation of laser and optical techniques, M. Schreiner, M. Strlic - BOOKLET/CD – 25 min)

- relevance for TASKS 3 & 4 of the contacts with end-users;
- improving dissemination to end-users must become a new task?

2. A. O. B.

10.30-10.45 Coffee break

10.45-12.45 Working Group Meeting “Real-time Optical Equipment for Environmental Aspects and Response to Artwork”.

10.45 – 11.00 (15 min.): Update on previous tasks, M. Castillejo and S. Rafi Ahmad.

11.00– 11.20 (20 min.): “Recent advances in LIBS for elemental analysis in water environment”, S. Rafi Ahmad.

11.20- 11.35 (15 min.): Report given by M. Castillejo on the “International Workshop on Air Pollution and Cultural Heritage”, held in Seville, Spain, 1-3 December 2003.

11.35– 11.50 (15 min.): Proposal for the formation of a R&D consortium. S. Rafi Ahmad.

11.50–12.10 (20 min.): Presentations and contributions from WG3 members.

12.10–12.45 (35 min.): General discussion. Way forward and conclusion.

12.45-14.00 Lunch (Arc'Antique – 26, rue de la Haute Forêt)

14.00 -16.30 - Management Committee meeting (2<sup>nd</sup> part)

14.00-14.30

9. Short-Term Scientific Missions – Discussion and decision  
Possibility to ask for a prolongation of the STSM contract to the Commission  
14.30-14.45
  10. Report of the work/decisions undertaken by the working groups.  
14.45-15.00
  11. Discussion on the activity report  
15.00-16.00
  12. Forthcoming meetings of the Management Committee and of the Working  
Groups - Preparation of forthcoming meetings/workshops  
16.00-16.30
  13. Any other business
- 16.30 Conclusion of the 9<sup>th</sup> MCM
- 
-

# ARC'ANTIQUE

**COST G7 2004**  
**Nantes - Arc'Antique**  
**18 - 20 March, 2004**

## HOUSING FORM

**To be returned before February, 29th, 2004**

### Contact

AGENCE DE BOUARD

3 place Delorme 44000 Nantes - France

Tel : + 33 (0) 2 40 48 22 52 Fax : + **33 (0) 2 40 48 85 79**

Email : [debouard-nantesaffaires@selectour.com](mailto:debouard-nantesaffaires@selectour.com)

### Participants

Title : MR  MRS  Ms

Family name : \_\_\_\_\_ First name : \_\_\_\_\_

Institution : \_\_\_\_\_

Address : \_\_\_\_\_

City : \_\_\_\_\_ Country : \_\_\_\_\_

Phone : \_\_\_\_\_ Fax : \_\_\_\_\_ E-mail : \_\_\_\_\_

HOTEL (map enclosed)	Twin	Single
① Grand Hôtel Mercure 4**** - 4, rue du Couëdic 44000 Nantes	110 €	99 €
② Best Western 2** - 3 rue du Couedic 44000 Nantes	83,60 €	74 €
③ Ibis 2** - 3, allée Baco 44000 Nantes	66 €	66 €
④ Mercure *** - 50-51, quai Malakoff 44000 Nantes	65 to 81 €	63 €

Arrival date  Departure date  Nb. Nights

### CREDIT CARD

#### Credit card details (mandatory)

Number :

Expire date :

Name :

Signature :

Date :



# **WORKSHOP ON** **ARCHAEOMETALLURGY OF THE** **ITALIAN METALLURGICAL SOCIETY**

**Cagliari, Sardinia 9-10 Sept. 2004**

A workshop on archaeometallurgy in Sardinia will be held in Cagliari 9-10 sept. 2004, organised by the Italian Metallurgical Society (AIM).

Details of the programme can be found at AIM' webpage:

<http://www.aimnet.it/english/allhtml/arcsard.htm>

Mauro Cavallini

\*\*\*\*\*

Prof. Mauro Cavallini

Dip.ICMMPM - Università di Roma "La Sapienza"

Via Eudossiana, 18

00184 Roma (Italia)

+ 06 44585643

e-mail: [mauro.cavallini@UNIROMA1.IT](mailto:mauro.cavallini@UNIROMA1.IT)

\*\*\*\*\*



# **IAMS SUMMER SCHOOL ON** **EXTRACTIVE MINING AND** **METALLURGY**

**Institute of Archaeology in London, 21 June to 2 July 2004**

We invite to the annual Summer School on Extractive Mining and Metallurgy at the Institute of Archaeology in London. Running from Monday 21 June to Friday 2 July, it offers one week on mining technology, taught by Professors Tim Shaw and Beno Rothenberg, and one week on extractive metallurgy, taught by Beno Rothenberg, Vince Pigott, H-G Bachmann, John Merkel and Thilo Rehren (in chronological order of appearance...).

The Summer School is organised and sponsored by the Institute for Archaeo-Metallurgical Studies, aiming at students and professionals with an interest in ancient technology and archaeometallurgy. The admission fee covers handouts and biscuits and a small contribution towards the costs; it is kept low to encourage and enable student participation. Admission for one week is GBP 75, for both weeks GBP 120 (single day attendance GBP 30). Unfortunately, we can not provide support for accomodation or travel costs.

Details of the programme can be found at IAMS' webpage: <http://www.ucl.ac.uk/iams>

For registration, please contact [h.veldhuijzen@ucl.ac.uk](mailto:h.veldhuijzen@ucl.ac.uk)

\*\*\*\*\*

Thilo Rehren  
Professor of Archaeological Materials and Technologies  
Institute of Archaeology  
University College London  
31-34 Gordon Square  
London WC1H 0PY  
Great Britain

(44) 20 7679 4757

(44) 20 7383 2572 fax

[th.rehren@ucl.ac.uk](mailto:th.rehren@ucl.ac.uk)

[www.ucl.ac.uk/archaeology/staff/profiles/rehren.htm](http://www.ucl.ac.uk/archaeology/staff/profiles/rehren.htm)

\*\*\*\*\*

# **SUMMER SCHOOL COURSE ON METALS TECHNOLOGY, MICROSTRUCTURE AND CORROSION**

**UCLA, July 5th-16th 2004**

This summer course at UCLA from July 5th-16th 2004 provides an overview of the technology of ancient metals, aspects of their extraction and alloying, the corrosion that ancient metals undergo and how this impacts their preservation. Understanding metallic structure and its inter-relationship with technology is essential in the interpretation of evidence, often of importance in archaeological investigations or the conservation of metallic artifacts.

This two-week course explored the crucial knowledge and research work of the last two decades that has substantially advanced our understanding of the processes of extraction, alloying, surface patination, metallic coatings, corrosion, and microstructure. The course involves laboratory work in the preparation and examination of metallic samples under the microscope, as well as lectures on the technology of metallic works of art. Instruction also explores phase diagrams and stability diagrams of the common alloying systems and environments. Metallographic samples available for study represent most of the major cultural areas of the world, including Bronze Age Europe, ancient silver, Renaissance bronzes, iron, China from the Warring States to the Tang Dynasty, Japanese sword samples, Indian high-tin bronzes, and South American and North American copper and gold-copper alloys.

The course is limited to 20 participants. Course fee is \$900.00

Enroll on-line at : [www.summer.ucla.edu/institutes](http://www.summer.ucla.edu/institutes)

**EUROPEAN SEISMOLOGICAL COMMISSION**  
**Working Group "Archaeoseismology"**

**ARCHAEOSEISMOLOGY AT THE**  
**BEGINNING OF THE 21<sup>st</sup> CENTURY**

**Messina, Italy, June 9-11, 2004, 1<sup>st</sup> Circular**

Dear Colleagues,

Please find below the 1<sup>st</sup> Circular of the meeting of the Working Group "Archaeoseismology" (European Seismological Commission, Sub-commission A).

Best regards,

Fabrizio Galadini

\*\*\*\*\*

Fabrizio Galadini  
CNR - IGAG  
Istituto di Geologia Ambientale e Geoingegneria  
Area di Ricerca di Roma - Tor Vergata  
via del Fosso del Cavaliere  
00133 - Roma, Italy

phone (39) 06 4993 4479  
fax (39) 06 4993 4211  
e-mail [f.galadini@igag.cnr.it](mailto:f.galadini@igag.cnr.it)

\*\*\*\*\*

*EUROPEAN SEISMOLOGICAL COMMISSION*

*Working Group "Archaeoseismology"*

**ARCHAEOSEISMOLOGY AT THE BEGINNING  
OF THE 21<sup>st</sup> CENTURY**

*Messina, Italy  
June 9-11, 2004*

*1st Circular*

*Scientific Committee: A. Bottari (Italy), F. Galadini (Italy), S. Marco (Israel) S. Stiros  
(Greece), A. Teramo (Italy)*

*Organizing Secretariat: C. Bottari (cbottari@unime.it), A. Marullo, G. Arrigo*

The meeting is organized within the framework of activities of the Working Group "Archaeoseismology" (Sub-Commission A "Seismicity of the European-Mediterranean Area").

Since some decades "Archaeoseismology" defines the investigation of earthquake effects on ancient structures emerging within the monumental heritage since the time of their foundation or uncovered during archaeological excavations. It is clear, therefore, that Archaeoseismology represents a powerful tool to increase our knowledge on the past (ancient) earthquakes. Notwithstanding the great number of publications reporting archaeoseismological data, the general feeling is that much work has to be done to define a reliable methodology of investigation. The methodological aspect represents the main goal of the ESC WG "Archaeoseismology". We also aim at recruiting scholars from other disciplines (e.g., historians, archaeologists, engineers, sociologists) to cooperate in multidisciplinary research, increase the awareness on archaeoseismology in many scientific communities, train young researchers in cooperative studies and to develop and disseminate archaeoseismology as an independent discipline having the same rank of Historical Seismology and Paleoseismology in the enrichment of the long-term seismicity datasets.

Considering these aspects, a meeting of the Working Group "Archaeoseismology" is organized in Messina, in order to discuss these goals and to promote archaeoseismological investigations. In this light, the organizing committee cordially invites the researchers involved or interested in the WG activities to participate in the meeting, present their work dealing with archaeoseismological investigations, with special emphasis for the methodological issues and the improvement of the knowledge about poorly known or unknown historical earthquakes.

An archaeoseismological fieldtrip will be organized in Sicily just after the meeting, in order to examine traces of large earthquakes which occurred during the Antiquity.

A message expressing interest for the meeting should be sent within 20 days to the Organizing Secretariat ([cbottari@unime.it](mailto:cbottari@unime.it)) in order to receive the second circular.

A website of the meeting will be constructed soon.

Look forward to meeting you in Messina for a successful and useful meeting.

## **DNA7 CONFERENCE**

**Brisbane, Australia, 12<sup>th</sup> - 17<sup>th</sup> July, 2004**

Dear Colleagues,

Just a quick reminder that the 7th International ancient DNA and associated biomolecules conference is being held in Brisbane, Australia from the 12th to the 17th of July this year. Topics include population genetics, forensics, ancient disease, palaeomicrobiology, residues, new technologies, biomolecules, evolution and issues of preservation.

We are currently accepting abstracts for paper and poster sessions. The deadline for paper abstracts is the 30th of April so to avoid missing out submit you abstract today to [abstracts.dna7@uq.edu.au](mailto:abstracts.dna7@uq.edu.au)

On-line registration is now available from the conference website at <http://dna7.ansoc.uq.edu.au> or for further information contact [enquiries.dna7@uq.edu.au](mailto:enquiries.dna7@uq.edu.au).

The organising committee

---

---

**ΘΕΣΕΙΣ ΕΡΓΑΣΙΑΣ/ΥΠΟΤΡΟΦΙΕΣ –**  
**JOB VACANCIES/FELLOWSHIPS**

**ENVIRONMENTAL LECTURESHIP AT**  
**EDINBURGH**

The University of Edinburgh will soon be appointing a lecturer in environmental archaeology. For details see:

<https://www.jobs.ed.ac.uk/jobs/index.cfm?action=jobdet&jobid=3001321>

Yours,

Eddie Peltenburg

---

---

## **PHD OPPORTUNITY 2004, CENTRE FOR MARITIME ARCHAEOLOGY, UNIVERSITY OF ULSTER, COLERAINE**

The following PhD research project is available through the Centre for Maritime Archaeology, University of Ulster, Coleraine.

Details on the CMA are available at: <http://www.science.ulst.ac.uk/crg/cma.htm>

Details of the UU research projects and funding opportunities:

<http://www.science.ulster.ac.uk/gradschool/resprojects04-21.htm>

Regards,

Rory

**PhD Project Title: The role of scour in shipwreck site formation processes**

**Start Date: September 2004**

Supervisors Rory Quinn: ([RJ.Quinn@ulster.ac.uk](mailto:RJ.Quinn@ulster.ac.uk)) and Colin Breen ([CP.Breen@ulster.ac.uk](mailto:CP.Breen@ulster.ac.uk))

### **Rationale**

The introduction of an object to the seabed results in a disturbance of the local flow field. The initiation of a scour follows, where sediment is preferentially eroded from the seabed area around the object in response to forcing by waves and tidal currents. Scouring is attributable to two processes: increase in flow velocity in the vicinity of the object and increase in turbulent intensity of the flow due to the generation of flow vortices (Whitehouse, 1998).

The critical role of scour in site-formation processes at shipwreck sites remains a poorly understood process, although scour pits are reported from all shipwreck sites in medium and high energy environments (see for example Caston, 1979; Quinn et al. 1997). Scouring at wreck-sites occurs at both local and global spatial scales (individual artefacts to complete wreck structures) and on a variety of temporal scales (from tidal to decadal). This research project will focus on the fundamental role of the scour process in site formation and on the preservation potential of scour hollows at shipwreck sites.

To date, the majority of research conducted on the topic of scouring at shipwreck sites has been conducted on a qualitative and semi-quantitative field basis (see for example Caston, 1979) or from a physical modelling perspective (Dix and Toswell, 2000). Little research has been conducted on quantifying the causative processes and consequent features that are preserved in the sedimentary record at shipwreck sites (Quinn et al., 1997).

### **Objectives**

1. To elucidate the role of local and global scour processes in wreck-site formation;
2. To quantify the three-dimensional (length, breadth and depth) spatial extent of scouring in varying substrate and flow conditions;



3. To quantify the temporal scales at which scour pits are formed, washed out and/or preserved;
4. To assess the preservation potential of filled and preserved scour pits for archaeological material.

### Methodology

Phase 1 The project will utilise extant high-resolution geophysical data-sets (multi-beam, backscatter and seismic) acquired by the project supervisors over the past 5 years from a range of wreck-sites. Phase 1 will involve the processing and interpretation of these data. Phase 2 The results from the processing and interpretation of the extant data will be used to plan phase 2 of the project, during which time supplementary high-resolution geophysical and archaeological surveys will be conducted over targeted sites. These data will be acquired to address and quantify shortcomings recognised in the extant data-sets. Phase 3 will involve the deployment of oceanographic equipment to acquire sedimentary and flow data to constrain the interpretation of geophysical data. Phase 4 will involve data integration and the production of site formation models.

### Selected References

- Caston, G.F. (1979) Wreck marks: indicators of net sand transport. *Marine Geology*, 33: 193-204.
- Dix, J.K. and Toswell, P. (2000) Modelling Scour around Shipwrecks, URL: <http://www.arch.soton.ac.uk/Research/justin/scour.html> [25.11.03]
- Quinn, R., Bull, J.M. and Dix, J.K. (1997) Buried scour marks as indicators of palaeo-current direction at the Mary Rose wreck site. *Marine Geology*, 140: 405-413.
- Trembanis, A. C. and McNinch, J.E. (2003) Predicting Scour and Maximum Settling Depths of Shipwrecks: A Numeric Simulation of the Fate of Queen Anne's Revenge. *Proceedings of Coastal Sediments '03*. ASCE Press. Clearwater Beach, Florida.
- Sumer, B.M., Whitehouse, R. and Torum, A. (2001) Scour around coastal structures: a summary of recent research. *Coastal Engineering*, 44: 153-190.
- Whitehouse, R. (1998) *Scour at marine structures*, Thomas Telford Ltd., London.

\*\*\*\*\*

Rory Quinn  
Centre for Maritime Archaeology (CMA)  
Coastal Studies Research Group (CSRG)  
Centre for Coastal and Marine Research  
School of Environmental Science  
University of Ulster, Coleraine  
BT52 1SA, Co. Derry, Northern Ireland  
Tel: (028)70-324884 or 70-324143  
e-mail: [RJ.Quinn@ulster.ac.uk](mailto:RJ.Quinn@ulster.ac.uk)  
CMA [www.science.ulst.ac.uk/crg/cma.htm](http://www.science.ulst.ac.uk/crg/cma.htm)  
CSRG [www.science.ulst.ac.uk/crg/](http://www.science.ulst.ac.uk/crg/)

\*\*\*\*\*

## ΑΝΑΚΟΙΝΩΣΕΙΣ - ANNOUNCEMENTS



### ΕΛΛΗΝΙΚΗ ΙΖΗΜΑΤΟΛΟΓΙΚΗ ΕΝΩΣΗ

Τηλ. : 210 7274187

Φαξ : 210 7274187

Email : [fpomoni@geol.uoa.gr](mailto:fpomoni@geol.uoa.gr)

Πανεπιστήμιο Αθηνών – Τμήμα Γεωλογίας

## ΔΕΛΤΙΟ ΤΥΠΟΥ

Στις 15 Νοεμβρίου 2003 πραγματοποιήθηκε στην Αθήνα (Τμήμα Γεωλογίας) η πρώτη Τακτική Γενική Συνέλευση της εγκεκριμένης από το Πρωτοδικείο Αθηνών Ελληνικής Ιζηματολογικής Ένωσης (Ε.Ι.Ε.). Πρόκειται για ένα ανεξάρτητο, μη κερδοσκοπικό επιστημονικό Σωματείο με έδρα την Αθήνα και με σκοπό την εδραίωση και προώθηση της επιστήμης της Ιζηματολογίας στον ευρύτερο χώρο των γεωεπιστημών στην Ελλάδα.

Η Γενική Συνέλευση εξέλεξε επταμελές Διοικητικό Συμβούλιο το οποίο συγκροτήθηκε σε σώμα όπως παρακάτω:

Πρόεδρος: Φωτεινή Πομόνη, Αναπλ. Καθηγήτρια Ε.Κ.Π.Α.

Αντιπρόεδρος: Ανανίας Τσιραμπίδης, Καθηγητής Α.Π.Θ.

Γραμματέας: Γεώργιος Αναστασάκης, Αναπλ. Καθηγητής Ε.Κ.Π.Α.

Ταμίας: Βασίλειος Καρακίτσιος, Καθηγητής Ε.Κ.Π.Α.

Μέλος: Αβραάμ Ζεληλίδης, Αναπλ. Καθηγητής Παν/μίου Πατρών

Μέλος: Ακίνδυνος Κελεπερτζής, Καθηγητής Ε.Κ.Π.Α.

Μέλος: Ανδρέας Παυλόπουλος, Καθηγητής Γεωπονικού Παν/μίου Αθηνών.

Το νέο Διοικητικό Συμβούλιο συνεδρίασε αμέσως μετά και αποφάσισε:

1. Να εκδώσει 4σέλιδο ενημερωτικό Δελτίο πριν από τα Χριστούγεννα. Οποιοδήποτε μέλος μπορεί να αποστείλει σχετικό κείμενο (μέχρι 25 σειρές) για δημοσίευση.
2. Να κάνει η Ε.Ι.Ε. την πρώτη δημόσια εμφάνισή της κατά τη διάρκεια του 10<sup>ου</sup> Διεθνούς Συνεδρίου Στη Θεσ/νίκη (15-17 Απριλίου 2004).
3. Να εγκρίνει την εγγραφή 22 νέων μελών, κυρίως νέων επιστημόνων.
4. Να ορίσει την Πρόεδρο κ. Φ. Πομόνη ως Εθνική Αντιπρόσωπο στη Διεθνή Ένωση Ιζηματολόγων (IAS).
5. Να αποστείλει έγγραφο σε όλες τις Δημόσιες αρχές (Υπουργεία, ΔΕΚΟ, Περιφέρειες κ.ά.), καθώς και σε επιστημονικά Σωματεία, Επιμελητήρια και επιστημονικά περιοδικά για να γνωστοποιεί τη δημιουργία της.
6. Να αποστείλει έγγραφο για οικονομική ενίσχυση τόσο σε φορείς του Δημόσιου όσο και ιδιωτικού τομέα.

Η Ελληνική Ιζηματολογική Ένωση έχει ως στόχο να γίνει χώρος προβληματισμού και ανταλλαγής απόψεων, καθώς και χώρος διαμόρφωσης λόγου παρέμβασης για υφιστάμενα ή ανακύπτοντα ζητήματα που αφορούν τη χώρα μας ή την ευρύτερη επιστημονική κοινότητα. Ταυτόχρονα, έχει ως πρωταρχικό στόχο την ενημέρωση στις εξελίξεις, στα εκπονούμενα προγράμματα ερευνητικού ή εφαρμοσμένου χαρακτήρα και γενικότερα στα τεκταινόμενα του ιζηματολογικού κόσμου, αλλά και την προώθηση συνεργασιών όπου αυτές είναι αναγκαίες και εφικτές. Επίσης, έχει σκοπό να αποτελέσει

στο μέλλον το επίσημο βήμα παρουσίασης των αποτελεσμάτων των ιζηματολογικών ερευνών με σεμινάρια, ημερίδες και συνέδρια.

Η Ελληνική Ιζηματολογική Ένωση επιθυμεί να συμβάλλει στην προώθηση των στόχων και των επιδιώξεων των ομολόγων επιστημονικών ενώσεων της Ελλάδας και προσβλέπει στην ουσιαστική υποστήριξή τους και συνεργασία. Οι συνάδελφοι που αναγνωρίζουν τον σοβαρό ρόλο που μπορεί να διαδραματίσει η ιζηματολογία στα γεωλογικά δρώμενα καλούνται να πλαισιώσουν δυναμικά την Ελληνική Ιζηματολογική Ένωση.

Η Πρόεδρος

Ο Γραμματέας

Φωτεινή Πομόνη

Γεώργιος Αναστασάκης

## **CSA NEWSLETTER, VOLUME XVI, NO. 3**

Announcing the Winter, 2004, issue of the \_CSA Newsletter. Volume XVI, No. 3, of the \_CSA Newsletter\_ is now available at <http://csanet.org/newsletter/index.html#winter04>  
Included in this issue are the following articles:

"A Final Survey Experiment on the NW Wing of the Propylaea" Slightly less hi-tech, but more effective. <http://csanet.org/newsletter/winter04/nlw0401.html>

"From One Context to Another: Building a Common Information Environment for Archaeology" Different users accessing data for different purposes. (William Kilbride) <http://csanet.org/newsletter/winter04/nlw0402.html>

"Archiving Data from the Older Propylon Project" Important lessons learned. (Harrison Eiteljorg, II) <http://csanet.org/newsletter/winter04/nlw0403.html>

"Note-Taking with Total Station Survey Work" Having the right survey coordinates isn't enough. <http://csanet.org/newsletter/winter04/nlw0404.html>

"Email Files Again" A format translator that works. (Harrison Eiteljorg, II) <http://csanet.org/newsletter/winter04/nlw0405.html>

---

---

## *INTERNET SITES*

### **DATING THE ERUPTION OF THERA**

The most up-to-date information concerning the eruption of Thera and proxy dating by Dendrochronology, Ice-core dating and direct dating by Radiocarbon analysis can be found on Sturt Manning's very helpful website that he constructed in the wake of "A Test of Time". He has updated it regularly explaining why 1628 BC is no longer a candidate and how there is no connection between the event identified in the Ice-cores and the eruption of Thera. At the moment, ice-cores and dendrochronology are not helpful. The problems of C14 dating are addressed and Manning remains in favour of a 17th century date.

The traditional method of looking at archaeological synchronisms is still a valuable approach which may yet surprise us.

<http://www.personal.rdg.ac.uk/~lasmanng/testoftime.html>

Colin Macdonald

e-mail: [cfmgr@her.forthnet.gr](mailto:cfmgr@her.forthnet.gr)

## **PARTHENON RESTITUTION WEBSITE**

Please visit the Parthenon restitution website at the following URL:

<http://www.parthenonuk.com/index.php>



## **NEW DISCOVERIES AT ALALAKH** **(MYCENAEAN WARES)**

Dear colleagues,

Alalakh (Tell Atchana), now in Turkey's Hatay province, is being excavated again, with some surprising results. The following is from the 2001-2002 Annual Report, published at: [http://www-oi.uchicago.edu/OI/AR/01-02/01-02\\_Amuq.html](http://www-oi.uchicago.edu/OI/AR/01-02/01-02_Amuq.html)

"However wonderful it was to be working on the legendary site of Atchana, what actually caught our imagination this season was the discovery of Woolley's long-forgotten and mostly inaccessible dig house depot situated on top of the mound. A rare few scholars had known that the abandoned dig house contained some of the study collections from the 1930s and 1940s, but a small padlock and its remote location kept this material unavailable for decades ... When our eyes adjusted to the dim surroundings, what we saw was quite extraordinary! Bags of carefully labeled ceramic sherds from the deep soundings were stacked up on wooden shelves from floor to ceiling and when opened, revealed unpublished Mycenaean and Cypriot wares as well as Anatolian Assyrian trading colony period and Hittite ceramics. The window sills hid multi-faceted stone molds for metal casting as well as three copper bun (fig. 6), crescent, and disk-shaped ingots, which resembled ingots from the Uluburun-Kas shipwreck. Ample seaward commerce between various coastal regions, and perhaps Alalakh, is indicated by the stylistically comparable ivory toiletries, jewelry, and metals found on the shipwreck. The appearance of copper-tin-bronze and other preciousities (fig. 7) suggest the existence of a developing or thriving exchange production in the eastern Mediterranean. Charcoal from the copper bun ingot revealed a date between 1620 and 1430 Cal BC (2 sigma). Wooden drawers in the dig house depot contained other small finds including copper artifacts, beads of glass, amber, and faience, as well as implements of iron, lead, and silver...

The flood of unexpected finds continued unabated when I was given permission to enter the usually inaccessible Hatay Archaeological Museum depot. Scores of still-unpublished small cuneiform tablet fragments from earlier Atchana excavations were carefully wrapped in cotton (fig. 9) and when joined may contain vital information about the social, economic, and political environment of this region."

Best wishes,

Bjarte Kaldhol  
e-mail: [bjarkal@online.no](mailto:bjarkal@online.no)