The Abdus Salam International Centre for Theoretical Physics

International Workshop on Science for Cultural Heritage

Organizer(s): Directors: J.-L. Boutaine, M. Martini, G. Furlan and C. Tuniz
Trieste - Italy, 23 - 28 October 2006

Final programme

Monday, October 23 (Room:Adriatico Guest House Kastler Lecture Hall)
23 October 2006

09:00 - 10:30 (Room: Adriatico Guest House (Lower Level 1))
--- Registration ---

(After Registration:all Adminstrative Formalities(payment of daily living allowances /travel reimbursements, bank transactions,etc.)- at the E. Fermi Building)[see General Info. for office hours]

10:30 - 11:00 --- Welcome/Opening: Remarks by Prof. C. Tuniz, Assistant Director-ICTP, and the Directors. Introduction of Participants ---

11:00 - 12:00 **Chair: J.-L. Boutaine** / *(C2RMF, Paris)*
Theme 1: Materials Science for Cultural Heritage

"Science for Cultural Heritage"

(M. Hernandez - UNESCO Science - Paris) 30'

"Early metallurgy and astronomy in Europe"
(E. Pernicka - Curt Engelhorn Zentrum Archäometrie, Mannheim, Germany) 30'

14:00 - 17:00 **Chair: F. Terrasi** / *CIRCE, II Universita di Napoli at Caserta, Italy*
Theme 1 (con't)

"IBA analysis for Cultural Heritage"
(P.-A. Mando' - INFN-LABEC, Florence, Italy) 30'

"Applications of nuclear analytical techniques for study of cultural heritage"
(D. Wegrzynek - the IAEA -Seibersdorf Laboratories, Austria) 30'

"Why and how science & technology for the cultural heritage?"
(J.-L. Boutaine - Centre of Research & Restoration of the Museums of France (C2RMF), Paris) 30'

Coffee Break 30'

"Accelerator Techniques for Cultural Heritage in Croatia"
(S. Fazinic - R. Boskovic Institute, Zagreb, Croatia) 30'

Discussion Session 30'

Tuesday, October 24 (Room:Adriatico Guest House Kastler Lecture Hall)

24 October 2006

09:30 - 12:00 **Chair: R. Salimbeni** / *(Istituto di Fisica Applicata 'Nello Carrara' - CNR, Florence, Italy)*
Theme 1 (con't)

"Ancient copper metallurgy: problems and perspectives"
(G. Artioli - Dept. of Earth Sciences "Ardito Desio", University of Milano) 30'

"The use of synchrotron radiation for cultural heritage"

(M. Pantos - Daresbury Synchrotron, United Kingdom) 30'

Coffee Break 30'

"X-ray digital radiography and computed tomography of Cultural Heritage"
(A. Pasini - University of Bologna, Italy) 30'

"Cold light from old rocks - luminescence dating in archaeology"
(G. Wagner - Forschungsstelle Archäometrie, Max Planck Institute for Nuclear Physics, Heidelberg, Germany) 30'

12:00 - 14:00 (Room: Adriatico Guest House Cafeteria)
--- Lunch ---

14:00 - 17:00 **Chair: M. Martini** / *(University of Milano-Biccoca, Italy)*
Theme 1 (con't)

"Laser technologies for investigating and preserving art and historical artefacts"
(S. Siano - IFAC-CNR, Bologna, Italy) 30'

"Accelerator analysis at the Louvre Museum"
(S. Röhrs - Centre of Research & Restoration of the Museums of France (C2RMF), Paris) 30'

"Non-invasive imaging of paint layers using optical coherence tomography"
(H. Liang - Nottingham University, United Kingdom) 30'

Coffee Break 30'

"Examination & analysis of easel paintings"
(U. Santamaria - University of La Tuscia, Viterbo, Italy) 30'

"Non-destructive methodology useful for the analysis of white marbles"
(M. Severi - University of Roma) 30'

Contributed Paper: "Surface Science Applied to Cultural Heritage"
(C. Coluzza - Italy) 15'

17:15 - 18:15 **V. Pesce Delfino** /
University of Bari, Italy
Special 3-D Presentation
"The Altamura Man"

Wednesday,October 25 (Room:Adriatico Guest House Kastler Lecture Hall)

25 October 2006

09:30 - 11:00 **Chair: G. Furlan** / *(ICTP & University of Trieste)*
Theme 2: Archaeological Prospection

"Earth observation from space for Cultural Heritage"
(M. Hernandez - UNESCO, Paris) 30'

Coffee Break 30'

"Cosmic rays for archaeological prospection"
(G.-R. Giannini (University of Trieste) - University of Trieste) 30'

11:00 - 13:00 **Contributed Papers (15 minutes each)**

"Greenstone artefacts in prehistory: recent geo-archaeological and archaeometrical studies in northern Italy, Slovenia and Croatia?" (E. Montagnari Kokelj (C. D?Amico, A. Alberti, F. Bernardini, M. Buri, G. Demarchi, D. Komso, F. Pri) 15'

'Science in Culture: "Archaeometallurgical and archaeo-astronomical studies on south Indian metal icons" (S. Srinivasan (India)) 15'

The characterisation of ancient mortars and mural paintings (A. Candeias (Portugal)) 15'

"XRF applications in archaeometry" (C. Calza (Brazil)) 15'

"Study on the ancient punch-marked silver coins of India" (D.K. Basa (India)) 15'

"Application of field portable XRF for the Identification of pigments in 16th century wall paintings" (N. Civici (Albania)) 15'

"Laser sampler during the process of art pigment identification with ICP-OES technique" (E.V. Klyachkovskaya (Belarus)) 15'

"FT-IR & Micro Raman Spectroscopic Study of Decorated Potteries from VI & VII Centuries BC & Instrumental Neutron Activitation Analysis of the Metal Coins Dating Back to Roman Age from Ancient Aions T (S. Akyüz (Turkey)) 15'

13:00 - 14:00 (Room: Adriatico Guest House Cafeteria)
--- Lunch ---

14:00 - 18:00 (Room: ICTP-INFN Laboratory (Mlab))
PRACTICAL SESSIONS (ICTP - MLab) [there will be an extra Shuttle Service from the AGH to the Lab at 13:50]

(Groups A & B)
9) MOLAB : Exhibition of a transportable energy-dispersive XRF equipment by IAEA
01h00'

(Group A)
1. EDXRF
(Group B)
5. XR
01h30'

Group A)
4. ND
(Group B)
3. TL
01h30'

Thursday, October 26 (Room:Adriatico Guest House Kastler Lecture Hall)

26 October 2006

09:00 - 12:00 **C**
Theme 4: Prehistory & Human Evolution sub-session:"Techniques in Paleoanthropology"

"Early neolithic tradition of dentistry"
(A. Coppa - University of Rome 'La Spaienza') 01h00'

"The impact of new C-14 dating on the European Neanderthal vs. Modern Human discussion"
(W. Kutschera - University of Vienna, Austria) 01h00'

Coffee Break 30'

"X-ray synchrotron microtomography in paleoanthropology"
(P. Tafforeau - ESRF, Grenoble, France) 30'

12:00 - 14:00 (Room: Adriatico Guest House Cafeteria)
--- Lunch ---

14:00 - 17:15 (Room: Main Building Main Lecture Hall)
Chair: C. Tuniz
Keynote Session

"Early Humans in Europe"
(Prof. Chris Stringer - FRS, Department of Palaeontology, The Natural History Museum, London) 01h00'

"Homo Floresiensis: A New Human Species
(Prof. Michael Morwood - Archaeology, SHES, University of New England, Armidale, Australia) 01h00'

Coffee Break 15'

"Hominid Fossils as Universal & National Cultural Hertiage"
(video presentation)
(Prof. Phillip V. Tobias - University of Witwatersrand, South Africa) 01h00'

17:15 - 17:45 (Room: Main Building Main Lecture Hall)
Sharada Srinivasan / *National Insitute of Advanced Studies, Bangaore, India*
Special Cultural Heritage Seminar Recital "Science in Culture: Rock music and ritual dance" - Video Presentation 'World heritage site temple complex at Hampi and its the musical pillars ' (15 min.) - Ritual Dance