



# 6<sup>th</sup> International Conference On Information Communication Technologies in Health ICICTH Samos 2008

July 11-13, 2008, Samos Island, Greece

Selected Papers Published: "The Journal on Information Technology in Healthcare" (<http://www.hl7.org.tw/jith>)

#### Organizers:

- Research and Training Institute of the East Aegean (INEAG), Greece
- University of Athens - Faculty of Nursing, Greece
- Institute of Biomedical Engineering Bogazici University, Istanbul
- UMIT - University for Health Sciences, Medical Informatics and Technology, Austria
- GHIA - Greek Health Informatics Association

Under the Auspices of Hellenic Ministry of Health and Welfare

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## Invitation

Welcome to the the 6th INTERNATIONAL CONFERENCE ON INFORMATION COMMUNICATION TECHNOLOGIES IN HEALTH and to the beautiful Island of Samos.

The 2008 ICICTH SAMOS Conference will seek to address the many challenges and new directions presented by technological innovations in the Health Care Sector. Telemedicine and eHealth are among the hot topics of the conference – as insinuates the title of the conference.

Key note speakers of international recognition in the field of health informatics and health economics are expected to attend and all interested scientists with expertise in the theoretical and practical applications of technology in the healthcare sector are invited to participate.

The event constitutes an invaluable opportunity not only for knowledge exchange but also for the initiation of fruitful collaborations between scientists, researchers, faculty, doctors and other hospital staff, experts in telematics as well as other professionals from all over the world concerned with the application of technology in the healthcare sector.

The scientific papers approved by the Scientific Program Committee of the ICICTH 2008 as suitable for oral presentations in plenary sessions will be published in full in the conference proceedings. Selected Papers from the ICICTH Samos 2008 conference will be published in the Journal *“The Journal on Information Technology in Healthcare”* (<http://www.hl7.org.tw/jjith>).

Last but not least we invite you to participate at the social events of the Conference, which have been carefully selected by the Organizing Committee.

For us this effort was a source of creative joy and stimulating pleasure that we hope we will share with you during July 2008 in Samos Island.

We welcome you to Samos! Welcome to ICICTH SAMOS 2008!

Sincerely,

**Professor Kyriakos Emm. Kioulafas**

National and Kapodistrian University of Athens  
Chairman of the Organizing Committee

**Professor John Mantas**

Faculty of Nursing  
National and Kapodistrian University of Athens  
Chairman of the Scientific Committee



Prof. Elske Ammenwerth	Research Group Assessment of Health Information Systems University for Health Sciences, Medical Informatics & Technology, Austria
Prof. Yekta Ulgen	Institute of Biomedical Engineering, Bogazici University, Turkey
Albert Guvenis, Ph.D	Associate Professor Institute of Biomedical Engineering, Bogazici University, Turkey
Maria Katharaki, Ph.D	Operational Researcher, RN, MSc, Ph.D, National & Kapodistrian University of Athens, Greece

## Conference Coordinator

Ilias Delis	Conference Director (Email: <a href="mailto:icictth@ineag.gr">icictth@ineag.gr</a> ) Research and Training Institute of East Aegean
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## Local Organising Committee

Nikos Kiapes	Chairman, Research and Training Institute of East Aegean, Greece
Yiasmin Kioulafa	Samos Department, Secretary & Financials of the conference Research and Training Institute of East Aegean, Greece
Ilias Delis	Economist, Msc, Phd Candidate, National & Kapodistrian University of Athens, Greece
Stelios Daskalakis	PhD, National & Kapodistrian University of Athens, Greece
Athanasios Darras	MSc Student, National & Kapodistrian University of Athens, Greece, Web administrator, INEAG
George Katharakis	Mathematician, MSc in Health Informatics, Ph.D Student, University of Athens, Greece
Valadis Prachalias	Economist, MSc, Ph.D. Student, University of Athens, Greece
Joseph Liaskos, PhD	Research Fellow of the Health Informatics Laboratory - Faculty of Nursing, National & Kapodistrian University of Athens, Greece
Spyros Zogas	Health Informatics Laboratory, Faculty of Nursing National & Kapodistrian University of Athens
Antonis Frigas	Health Informatics Laboratory, Faculty of Nursing, University of Athens, Greece
Kostas Antypas	Health Informatics Laboratory, Faculty of Nursing, University of Athens, Greece
Athanasios Raptis	Physician, PhD Student National & Kapodistrian University of Athens, Greece

# Venue

The **ICICTH SAMOS 2008 CONFERENCE** takes place in the Conference Center of the Research and Training Institute of the East Aegean (INEAG, Samos Island, Greece), Hall "George Hanan".



INEAG has established a modern technological infrastructure, providing meeting facilities of the highest standards and it is ideally located in the best part of the Samos Island Greece, Kampos Vourlioton.

## CONTACT INFORMATION

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email: ineag@otenet.gr

CONFERENCE WEBSITE: <http://www.ineag.gr/icictth>

*The conference committee would like to thank for their support and kind cooperation:*

- *National and Kapodistrian University of Athens*
- *Hellenic Ministry of Health and Social Solidarity*
- *Ministry of Tourism, Greek National Tourism Organisation*
- *OTE – Hellenic Telecommunications Organization*
- *INTRACOM S.A.*
- *GIT VERLAG Publications, Germany - "Hospital Post Europe" (<http://hospital-post.com>)*



Special thanks to Clyde Saldanha, Editor of "The Journal on Information Technology in Healthcare"  
( <http://www.hl7.org.tw/jith> )

# Scientific Programme of 6<sup>th</sup> ICICTH Samos 2008

Friday, 11 July 2008

HALL G. HANAN

- 11.30 – 12.30** PICK UP OF CONFERENCE PARTICIPANTS FROM THEIR HOTELS AND TRANSFER TO THE RESEARCH AND TRAINING INSTITUTE OF EAST AEGEAN (INEAG)
- 12.30 – 13.30** REGISTRATION
- 13.30 – 14.15** WELCOME ADDRESS
- Dimitris Avramopoulos**  
Minister of Health and Social Welfare  
(Videoconference Athens - Samos)
- Prof. Kyriakos Kioulafas**  
National & Kapodistrian University of Athens, Greece
- Prof. Jonh Mantas**  
Director of the Health Informatics Laboratory, Faculty of Nursing,  
National & Kapodistrian University of Athens, Greece
- 14.15 – 14.45** KEYNOTE LECTURE  
DEBATING ON THE EVIDENCE-BASED MEDICINE INFORMATION SYSTEMS. THE CASE OF A EUROPEAN (INTERREG) PROJECT  
**Prof. Aris Sissouras**  
Health Policy and Planning Unit, University of Patras, Greece
- 14.45 – 15.45** INTEGRATED HEALTH INFORMATION SYSTEMS  
**Albert Guvenis (MODERATOR)**
- GENERAL PRACTITIONERS ELECTRONIC LAB TEST ORDERS REDUCES FAULT RATE FROM 18% TO 2 %  
**Ib Johansen, M. Rasmussen**
- THE RELIABILITY OF THE XMPP PROTOCOL EXTENSIONS AS FILE TRANSFER MECHANISMS IN DEDICATED HEALTHCARE NETWORKS  
**J. Gustav Bellika, Kr. Andreassen**
- APPROACH AND RISKS OF EHR-S INTEROPERABILITY AND INTEGRATION WITH THE LEGACY HEALTHCARE ICT SYSTEMS  
**S. B. Stakic, M. Weinhara**
- PROFILES AND ACTORS FOR THE LABORATORY DEPARTMENT  
**P. Kalagiakos**
- 15.45 – 16.15** COFFEE BREAK
- 16.15 – 18:30** TELEMEDICINE AND MOBILE APPLICATIONS  
**John Mantas (MODERATOR)**



## Saturday, 12 July 2008

HALL G. HANAN

**9:00 – 10:00**

PICK UP OF CONFERENCE PARTICIPANTS FROM HOTELS AND TRANSFER TO THE RESEARCH AND TRAINING INSTITUTE OF EAST AEGEAN (INEAG)

**10:00 – 11:30**

INTRODUCING ELECTRONIC MEDICAL RECORDS

**Rolf Engelbrecht (MODERATOR)**

DESIGN AND IMPLEMENTATION OF A CENTRAL ELECTRONIC HEALTH RECORD (EHR) IN SERBIA: EARLY STAGE TESTING OF USERS' SATISFACTION

**M. Weinhara, L. Stoicu-Tivadar, Ch. Dagres**

A HYBRID TECHNIQUE FOR MRI BRAIN IMAGES CLASSIFICATION

**El-Sayed A. El-Dahshan, Tamer Hosny, Abdel-Badeeh M. Salem**

HEALTH INFORMATION SYSTEM FOR AN OCCUPATIONAL HEALTH AND SAFETY SERVICE IN GREECE

**D. Zikos, M. Diomidous, J. Liaskos, J. Pistoris, J. Mantas**

DEVELOPMENT AND EVALUATION OF A WEB-BASED CHILD HEALTH RECORD

**M. Theodosiou, M. Diomidous, D. Zikos, J. Liaskos, J. Mantas**

METHODOLOGY OF A PRIMARY HEALTHCARE INFORMATION SYSTEM EPIDEMIOLOGIC SUBSECTION

**D. Zikos, M. Diomidous, K. Kioulafas, J. Mantas**

UPDATE TECHNIQUES OF HOSPITAL DATABASE TABLES

**E. Mourtou**

**11:30 – 11:45**

COFFEE BREAK

**11:45– 12:15**

LECTURE

WEB BASED MEDICAL DEVICE MANAGEMENT SYSTEM WITH A MOBILE END USER

**Prof. Yekta Olgen, Evrim Ece Yardımcı and Mehmed Özkan**

**Institute of Biomedical Engineering, Turkey**

**12:15– 13:30**

WORKSHOP

SECURITY ASPECTS FOR THE E-HEALTH DOMAIN

**A Mense<sup>1</sup>, F. Wozak<sup>2</sup>**

<sup>1</sup> University of Applied Sciences Technikum Wien

<sup>2</sup> UMIT – University of Health Sciences, Medical Informatics and Technology

Goals of the WS: Security & Safety are some of the most important things implementing national and international ehealth applications. Regardless of this fact actual concepts and solutions are far away from fulfilling the requirements satisfyingly. Bases on experiences in the Austrian EHR project and the security framework presented by the IHE this workshop gives an overview of the requirements, currently offered technical concepts and international projects. Certain aspects should be discussed in an international expert group and results should be published.

**13:30 – 13:40**

COFFEE BREAK



## Sunday, 13 July 2008

HALL G. HANAN

- 09:00 – 10:00** PICK UP OF CONFERENCE PARTICIPANTS FROM HOTELS AND TRANSFER TO THE RESEARCH AND TRAINING INSTITUTE OF EAST AEGEAN (INEAG)
- 10:00 – 10:30** SPECIAL SESSION FOR NEW SCIENTISTS  
**K. Kioulafas (MODERATOR)**
- ASSESSING THE QUALITY OF HEALTH CARE SERVICES IN GREEK PUBLIC HOSPITAL USING SERVQUAL  
**El. Klamaria**
- ESTIMATION CONFIDENCE INTERVALS FOR DEA-TYPE SCORES OF GREEK HOSPITALS USING TWO-STAGE REGRESSION BOOTSTRAP  
**Ath. Raptis, M. Katharaki, K. Kioulafas**
- ENVIRONMENTAL APPROACH OF GREEK HOSPITAL UNITS' EFFICIENCY  
**M. Tsakas**
- 10:30 – 11:00** LECTURE  
 EHR AND OPEN SOURCE  
**Prof. Dr. Rolf Engelbrecht**  
 Professor associate USMF Chisinau Head of Department, Medical Information Systems, Institute for Biological and Medical Imaging, Germany
- 11:00 – 12:15** PATIENT EMPOWERMENT  
**M. Katharaki (MODERATOR)**
- EMPOWERING PATIENTS AND RELATIVES IN ELDERLY CARE BY INFORMATION ACCESS  
**M. Hägglund, Is. Scandurra, S. Koch**
- ENHANCING PATIENT EMPOWERMENT IN AN AGING SOCIETY THROUGH OPPORTUNITIES BROUGHT BY ICT  
**M. Ianculescu, M. Parvan**
- IMPROVED PATIENT EMPOWERMENT AND CONTINUITY OF CARE THROUGH ELECTRONIC DISEASE SURVEILLANCE  
**G. Hartvigsen, E. Arsand, T. Botsis, K. Van Vuurden, M. Johansen, J.G. Bellika**
- AN INTERNET BASED SYSTEM FOR MONITORING PATIENTS AND RELATIVES' SATISFACTION RATES IN HEALTH SERVICES  
**U. Demirci, A. Guvenis**
- ICT IN DEVELOPING COUNTRIES AND ITS USE FOR HEALTHCARE SERVICES  
**Ashir Ahmed, Associate Professor, Kyushu University, Japan**
- 12:15– 12:30** COFFEE BREAK
- 12:30 – 13:00** WORKSHOP



## Post Conference Activities

### TOUR OF SAMOS ISLAND

The participants will have the opportunity to visit the most important sights of the island such as:  
 the Archaeological Museum  
 the Tunnel of Eupalinos  
 the Heraion of Samos  
 the Byzantine Monastery of Timios Stavros,  
 Karlovassi which is the second biggest city of the island,  
 one of the wineries of the island, the Potami (River) area at the North Coast and Kokkari village one of the most romantic small ports.



### DAILY EXCURSION TO KUSADASI AND THE ANCIENT CITY OF EPHEBUS

Only 18 miles and a few minutes separate Samos from a totally different world, the world of East.  
 After the sort custom formalities (do not forget your passports!) we will go on board and we start our trip. The trip lasts 1 hour and 15 minutes and the boat is following a wonderful course in the virgin coasts of Samos and the small islands situated in the area. We arrive in the port of Kusadasi. Again after the sort custom formalities we are ready to meet the town with the low price market and also the ancient Ephesus.



#### Kusadasi

Kusadasi is the most tourist area of Turkey after Constantinoupolis. There is a market where you can find several sort of goods. Famous is the "bazaar of price", never buy something at the original price, normally it costs half the money and you have to bargain before you pay. In shops in Kusadasi you can pay either in euro or with any other coin, credit cards are accepted.





# Transportation Timetable

## 11<sup>TH</sup> OF JULY 2008

HOTEL	July 11 <sup>th</sup> 2008
SAMOS	11:30
AEOLIS	11:30
VENUS	11:40
OLYMPIA	11:40
KALIDON HOTEL	11:40
KOKARI BEACH	11:40
MILOS HOTEL	11:40
KALIDON PALACE	11:45
ARION	11:45
VILLA KAMBOS	11:45
AGNANDI	WALKING DISTANCE
IRO	11:50
AGIOS KONSTANTINOS	11:50

- **18:30 - Opening Reception (in INEAG)**
- **20:00 - Transfer back to Hotels**

## 12<sup>TH</sup> AND 13<sup>TH</sup> OF JULY 2008

HOTEL	July 12 <sup>th</sup> & 13 <sup>th</sup> 2008	July 12 <sup>th</sup> 2007 (Greek night)
SAMOS	09:00	20:30
AEOLIS	09:00	20:30
VENUS	09:10	20:35
OLYMPIA	09:10	20:35
KALIDON HOTEL	09:10	20:35
KOKARI BEACH	09:10	20:35
MILOS HOTEL	09:10	20:35
KALIDON PALACE	09:15	20:40
ARION	09:15	20:40
VILLA KAMBOS	09:15	20:40
AGNANDI	WALKING DISTANCE	20:40
IRO	09:20	20:45
AGIOS KONSTANTINOS	09:20	20:45

### 12/07 & 13/07 2008

- **14:20 - 16:00 - Lunch in INEAG**
- **16:30 - Transfer back to hotels**

### 12/07 2008

- **20:30 - Transfer from hotels for the Greek night in Paradisos Restaurant Agios Konstantinos Village**
- **23:00 - Transfer from GREEK NIGHT back to Hotels**



Founded in 1995 on Samos Island, by the Samian Professor of the National and Kapodistrian University of Athens Kyriakos Kioulafas, the Research and Training Institute of East Aegean (INEAG) has engaged in activities aimed at contributing to the development of the East Aegean.



*INEAG has established a modern technological infrastructure and has been involved in the organization of international world gatherings, including, conferences, educational seminars*



*and summer schools. The Institute also participates in European Programs and is in continuous cooperation with scientific bodies from across the world.*

INEAG's main activities during 1996 - 2007 can be summarised as follows:

- *Research*
- *Publications*
- *Conferences*
- *One day Seminars*
- *Telematics Services*
- *Education - Training*

