

**FOUNDATION FOR RESEARCH AND TECHNOLOGY
FORTH**



8th SYMPOSIUM

**Rethymnon, Rithymna Beach Hotel
October 12-13, 2007**

PROGRAM

Friday, October 12, 2007

9:30 – 10:00 Opening remarks

10:00 – 11:00 Presentations by the Institute Directors (I)

Looking into the future: Challenges and perspectives

Coordinator: Panos Tsakalides, ICS

10:00-10:15 Foundation for Research and Technology (FORTH)
Alkiviades Pagiatakis, President

10:15-10:30 Institute of Electronic Structure and Laser (IESL)
Costas Fotakis, Director

10:30-10:45 Institute of Computer Science (ICS)
Constantine Stephanidis, Director

10:45-11:00 Institute of Chemical Engineering and High Temperature Chemical Processes
(ICE-HT)
Costas Galiotis, Acting Director

11:00 – 11:30 Coffee break

11:30 – 13:30 Session 1: Sensing and Actuation: Merging the Physical and Virtual Worlds (I)

Coordinator: Dimitris Anglos, IESL

11:30-12:30 Keynote Speaker:
Christian Boller, Dept. of Mechanical Engineering, University of Sheffield
«Structure integrated sensing and actuation options for enhanced transport vehicle performance»

12:30-12:45 Manolis Lourakis, ICS
«Augmented reality and 3D model reconstruction based on structure and motion estimation»

12:45-13:00 Dimitris Tsakiris, ICS
«Biomimetic propulsion in granular media»

13:00-13:15 Maria Farsari, IESL
«Multi-photon polymerization and applications»

13:15-13:30 Jorge Ripoll, IESL & Clio Mamalaki, IMBB
«Biological applications of optical tomography»

13:30 – 15:00 Lunch

15:00 – 16:45 Session 1: Sensing and Actuation: Merging the Physical and Virtual Worlds (II)

Coordinator: Yiota Poirazi, IMBB

15:00-16:00 Keynote Speaker:
George Malliaras, Department of Materials Science and Engineering,
Cornell University
«Biosensors: The next big thing for organic electronics? »

16:00-16:15 Electra Gizeli, IMBB
«Acoustic biosensors: A powerful tool for biology and biotechnology»

16:15-16:30 Alexandros Georgakilas, IESL
«GaN based chemical sensors»

16:30-16:45 Vladimiro Nikolakis, ICE-HT
«ICE-HT activities related to sensing and actuation»

16:45 – 17:00 Coffee break

17:00 – 18:30 FORTH awards

Honorary Fellows of the Institute of Mediterranean Studies: E. Zachariadou,
V. Dimitriadis, N. Hadjinicolaou, and Th. Hadjipantazis.

Research excellence award

Award for contribution to IESL: E. Karali and M. Kokolaki

Award for contribution to IACM: E. Zaharioudaki

Award for contribution to IMBB: S. Papadovasilakis

Award for contribution to Central Administration: V. Athanasiou

18:30 – 18:45 Coffee break

18:45 – 20:45 Session 2: Energy and Environment

Coordinator: Manolis Skarsoulis, IACM

- 18:45-19:45 Keynote Speaker:
Costas Synolakis, Department of Environmental Engineering, Technical
University of Crete and Tsunami Research Center, University of Southern
California
«"Extreme" natural disasters»
- 19:45-20:00 Nektarios Chryssoulakis, IACM
«Estimation of atmospheric humidity from satellite measurements»
- 20:00-20:15 Theofilos Ioannides, ICE-HT
«Hydrogen and fuel cells: Technological challenges»
- 20:15-20:30 Spyros Pandis, ICE-HT
«Air Quality Engineering: From Air Pollution to Global Change»
- 20:30-20:45 Kriton Kalantidis, IMBB
«Is GMO technology threatened by gene silencing? Lessons from an RNA-
mediated regulatory mechanism»

21:00 Dinner

Saturday, October 13, 2007

09:00 – 10:00 Presentations by the Institute Directors (II)

Looking into the future: Challenges and perspectives

Coordinator: Panos Tsakalides, ICS

- 09:00-09:15 Institute of Mediterranean Studies (IMS)
Thanasis Kalpaxis, Director
- 09:15-09:30 Institute of Applied & Computational Mathematics (IACM)
Vassilios Dougalis, Director
- 09:30-09:45 Biomedical Research Institute (BRI)
Theodore Fotsis, Director

09:45-10:00 Institute of Molecular Biology & Biotechnology (IMBB)
George Thireos , Director

10:00 – 13:00 Session 3: Systems Biology

Coordinator: Maria Klapa, ICE-HT

10:00-11:00 Keynote Speaker:
Gorka Ochoa, Research & Development Manager, Progenika, Spain
«Current and future applications of DNA microarrays from the perspective of a small biotech company»

11:00 – 11:30 Coffee break

11:30 – 13:00 Session 3: Systems Biology (cntd)

11:30-11:45 Yiota Poirazi, IMBB
«The biological puzzle: finding and putting the pieces together»

11:45-12:00 Ioannis Tsamardinos, ICS
«Machine learning and causal discovery in bioinformatics»

12:00-12:15 Frank Fackelmayer, BRI
«Nuclear Architecture: The dynamic infrastructure of gene expression and DNA replication»

12:15-12:30 Theodore Christopoulos, ICE-HT
«Multiplex quantitative polymerase chain reaction»

12:30-12:45 Daphne Manoussaki and Eleni Mylona-Lagoudaki, IACM
«Tumor growth and metastasis: an interdisciplinary approach»

13:30 – 15:00 Lunch

15:00 – 17:00 Session 4: General Session

Coordinator: Marinos Sarigiannis, IMS

15:00-15:15 Olga Gratziou, IMS
«The research of Venetian monuments of Crete and its importance»

15:15-15:30 Maria Papadopouli, ICS

«Dial M for mobile computing»

- 15:30-15:45 Maria Kafesaki, IESL
«METAMATERIALS: New possibilities in electromagnetic wave manipulation»
- 15:45-16:00 Benoit Lopinet, IESL
«Solid-Liquid: A dynamic interface»
- 16:00-16:15 M. Taroudakis, IACM & P. Tsakalides, ICS
«Classification of underwater acoustic signals via statistical modeling of the wavelet coefficients»
- 16:15-16:30 George Fouskas, ICE-HT
«Assessment of dispersion of pollutants in water resources using Information and Communication Technologies»
- 16:30-16:45 Vassilios Tsakalos, IRC Help-Forward
«Technology transfer brokerage by IRC Help-Forward: Progress – success stories - perspectives»

17:00 – 17:30 Coffee break

17:30 – 19:00 Session 5: Round Table: Communicating and funding research

Coordinator: Alkiviades Pagiatakis, FORTH president

Participants:

Charalambos Savakis, FORTH-IMBB & European Research Council

Charalambos Doumanidis, Department of Mechanical and Manufacturing Engineering, University of Cyprus

Vassilios Tsakalos, IRC Help-Forward

20:00 Dinner