

5th International Advanced Research Workshop on *In Silico* Oncology and Cancer Investigation

The TUMOR Project Workshop

October 22-23, 2012
Athens, Greece



<http://www.5th-iarwisoci.iccs.ntua.gr>

Venue:

Royal Olympic Hotel

www.royalolympic.com

Programme

The workshop is sponsored by the European Commission through the transatlantic TUMOR research project and technically co-sponsored by the Institute of Electrical and Electronics Engineers (IEEE) - Engineering in Medicine and Biology Society (EMBS)

Organizing Committee

- G. Stamatakos, PhD, ICCS - National Technical University of Athens (GR), General Chair
- N. Graf, MD, University Hospital of Saarland (DE)
- K. Marias, PhD, Foundation for Research and Technology – Hellas (GR)
- M. Akay, PhD, University of Houston (USA)
- R.Radhakrishnan, PhD, University of Pennsylvania (USA)
- D. Dionysiou, PhD, ICCS - National Technical University of Athens (GR)
- V. Sakkalis, PhD, Foundation for Research and Technology – Hellas (GR)
- N. Uzunoglu, PhD, ICCS - National Technical University of Athens (GR)

PRESENTATION INSTRUCTIONS

PLEASE NOTE that each PowerPoint® presentation of the technical program will last *30 minutes*. *15 additional minutes* will be devoted to discussion, questions and answers.

PLEASE bring your own laptop along with a memory stick containing your presentation.

Monday, 22 October

8:30-9:00 Participants' Arrival – Registration (no admission fee) - Coffee

WELCOME AND INTRODUCTORY TALK

9:00-9:25 *Welcome Address*

Introductory talk: “Towards in silico medicine: the in silico oncology paradigm”

by G.Stamatakis, Institute of Communication and Computer Systems - National Technical University of Athens, Greece

9:25-9:30 *Opening greeting by Norbert Graf, University Hospital of Saarland, Germany*

9:30-9:35 *Opening greeting by Kostas Marias, Foundation for Research and Technology Hellas, Greece*

9:35-9:40 *Opening greeting by Vangelis Sakkalis, Foundation for Research and Technology Hellas, Greece*

9:40-9:45 *Opening greeting by Nikolaos Uzunoglu, Institute of Communication and Computer Systems - National Technical University of Athens, Greece*

TECHNICAL PROGRAM

9.45-10.30 *Norbert Graf, University Hospital of Saarland, Germany (Invited talk)*

“Clinical evaluation of the DoctorEye platform in nephroblastoma”

by Ruslan David, Norbert Graf, Ioannis Karatzanis, Holger Stenzhorn, Georgios C. Manikis, Vangelis Sakkalis, Georgios S. Stamatakis and Konstantinos Marias

10.30-11.15 *Metin Akay, University of Houston, USA (Invited talk)*

“3D high throughput in vitro cancer models”

by Feng Xu, Yasemin Akay and Metin Akay

11.15-11.45 *Coffee Break*

11.45-12.30 *Roger Dale, Imperial College London, UK (Invited talk)*

“Quantification of cytotoxic chemotherapy effects within the linear-quadratic model of radiotherapy”

by Roger Dale

12.30-13.15 Ravi Radhakrishnan, University of Pennsylvania USA (Invited talk)
“Computational methodology for mechanistic profiling of kinase domain mutations in cancers”
 by Peter J. Huwe, and Ravi Radhakrishnan

13.15-14.15 Lunch

14.15-15.00 Stavroula Giatili, Institute of Communication and Computer Systems - National Technical University of Athens, Greece

“The continuous mathematics based glioblastoma oncosimulator: application of an explicit three dimensional numerical treatment of the skull-glioblastoma Neumann boundary condition on real anatomical data”

by Stavroula G. Giatili and Georgios S. Stamatakos

15.00-15.45 Caterina Guiot, University of Torino, Italy

“Prostate tumour growth modelled by a statistically –modulated PUN scheme”

by C. Guiot, E. Garibaldi, D. Gabriele and P. Gabriele

15.45-16.30 Steve McKeever, University of Oxford, UK

“Modular markup for simulating vascular tumour growth”

by David Johnson, Anthony J. Connor and Steve McKeever

16.30-17.00 Coffee Break

17.00-17.45 Eleftherios Ouzounoglu, Institute of Communication and Computer Systems - National Technical University of Athens, Greece

“Towards patient personalization of an acute lymphoblastic leukemia model during the oral administration of prednisone in children. Initiating the ALL oncosimulator”

by Eleftherios N. Ouzounoglou, Dimitra D. Dionysiou, Martin Stanulla and Georgios S. Stamatakos

17.45-18.30 Eleftheria Tzamali, Foundation for Research and Technology Hellas, Greece

“Solving the PIHNA model while accounting for radiotherapy”

by Alexandros Roniotis, Vangelis Sakkalis, Eleftheria Tzamali, Georgios Tzedakis, Michalis Zervakis and Kostas Marias

END OF THE SCIENTIFIC PROGRAMME OF THE FIRST DAY

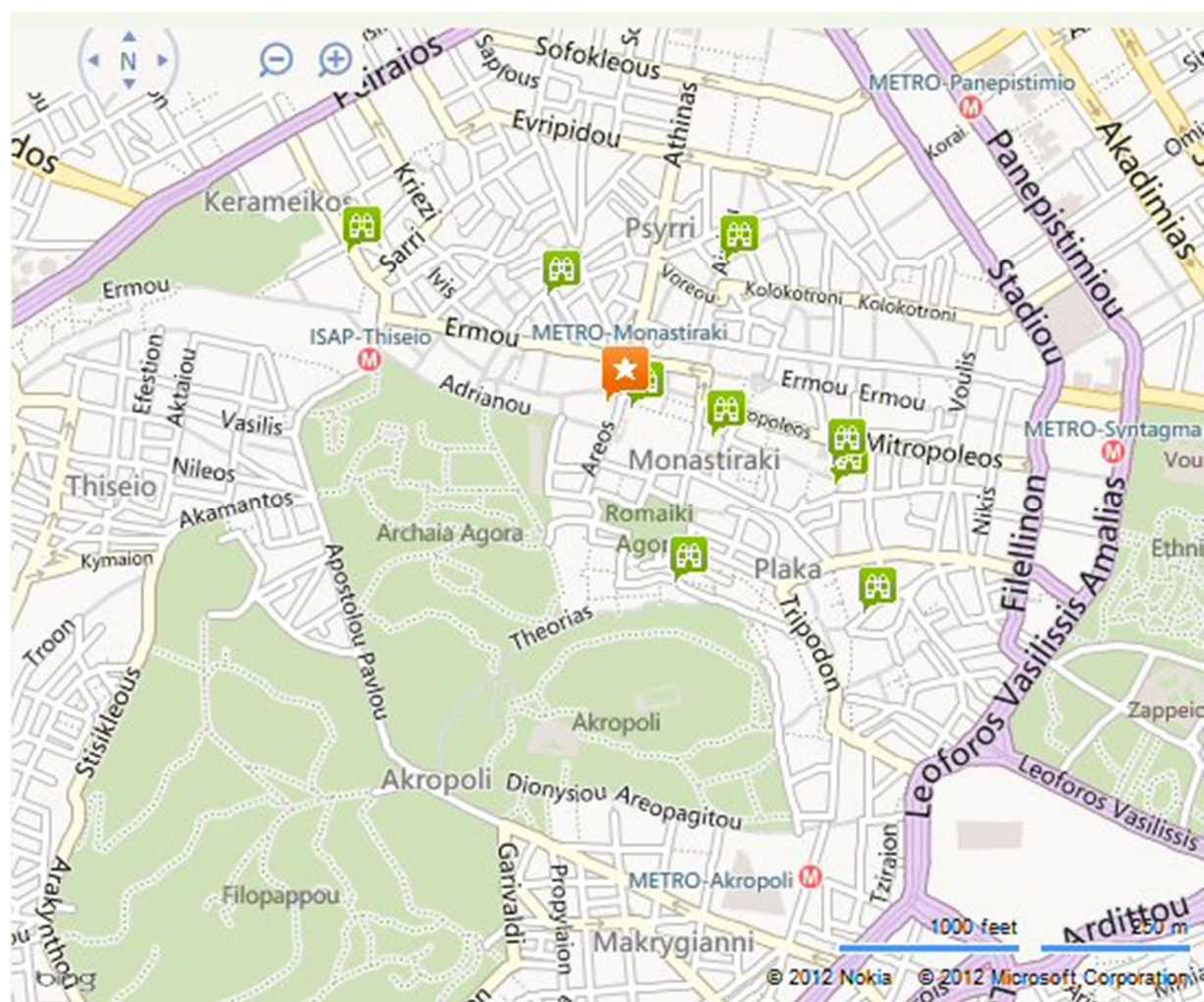
SOCIAL PROGRAMME

19.30 Start of walk from the venue to the KUZINA restaurant through the Acropolis archeological sites (for those interested in “peripatetic sightseeing”)

20:00 Workshop Dinner at the KUZINA restaurant (marked by the star on the following map)

Address: Adrianou 9 Thessio tel. +(30) 210-3240133, fax +(30) 210-3240135

<http://www.kuzina.gr/>



Tuesday, 23 October

8:30-9:00 Participants' arrival – Coffee

TECHNICAL PROGRAM

9.00-9.45 Eleni Georgiadi, Institute of Communication and Computer Systems - National Technical University of Athens, Greece

“Modeling nephroblastoma treatment response cases with in-silico scenarios”

by Eleni Ch. Georgiadi, Dimitra D. Dionysiou, Norbert Graf and Georgios S. Stamatakos

9.45-10.30 Emilio Sanfilippo, University of Saarland

“The Health Data Ontology Trunk (HDOT). Towards an ontological representation of cancer-related knowledge”

by Emilio M. Sanfilippo, Ulf Schwarz and Luc Schneider

10.30-11.15 Katerina Argyri, Institute of Communication and Computer Systems - National Technical University of Athens, Greece

“Modeling the interplay between pathological angiogenesis and solid tumor growth: the anti-angiogenic treatment effect”

by Katerina D. Argyri, Dimitra D. Dionysiou and Georgios S. Stamatakos

11.15-11.45 Coffee Break

11.45-12.30 Eleftheria Tzamali, Foundation for Research and Technology Hellas, Greece

“Hybrid model for tumor spheroids with intratumoral oxygen supply heterogeneity”

by Georgios Tzedakis, Eleftheria Tzamali, Vangelis Sakkalis, Alexandros Roniotis, and Kostas Marias

12.30-13.15 Vangelis Sakkalis, Foundation for Research and Technology Hellas, Greece

“Scientific workflows to support in silico modeling in cancer research”

by Stelios Sfakianakis, Vangelis Sakkalis and Kostas Marias

13.15-14.15 Lunch

14.15-15.00 Diego Liberati, Technical University of Milan, Italy

“A quantitative numerical model for TNF-alpha mediated cellular apoptosis”

by Davide Mezzaa; Marco Pappalettera and Diego Liberati

15.00-15.30 Round table discussion

15.30-16.00 Coffee

END OF THE WORKSHOP