

Extended CV of

Aristotelis Chatziioannou

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Curriculum Vitae

Aristotelis Chatziioannou, Ph.D., Research Assistant Professor

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Degrees / Diplomas

- **2005:** Ph. D. on Metabolic Engineering, National Technical University of Athens, School of Chemical Engineering
- **1996:** Diploma in Electrical Engineering -direction Informatics (5 years 10 semesters official duration), National Technical University of Athens, School of Electrical Engineering (School with the Highest entrance barrier in the National Examination, among all Faculties in the Direction of Natural Sciences and Engineering)

Research Experience

2004-05: Research Fellow (Post-Doc) in the field of Bioinformatics (Transcriptomic analysis)-Institute of immunology, BSRC Alexander Fleming.

2000-04: Ph. D. on Metabolic Engineering, National Technical University of Athens, School of Chemical Engineering

Academic appointments (apart from Diploma thesis and Ph.D. thesis)

2013-today: Research Associate Professor, National Hellenic Research Foundation NHRF, Institute of Biology, Medicinal Chemistry and Biotechnology IBMCB (former IBRB), Metabolic Engineering and Bioinformatics Programme

02-16/03/2013: Short Time Scientific Mission (STSM) Scholarship for collaboration with the group of Professor G. Brockmann, in Breeding Biology and Molecular Genetics, at the Department for Crop and Animal Sciences, Faculty of Agriculture and Horticulture, von Humboldt University Berlin.

12/02/2013: Qualified (qualification number 13127248046 expiry date 31/12/2017) in the Domain Informatics (no27), for Full University Professorship for the French Universities according to the National Evaluation of the French Ministry of Education and Research.

2012-2013: Invited Researcher of LaBRI/CNRS, Inserm U149 and CBiB/CGFB of the University of Bordeaux (sabbatical leave 11/2012-05/2013)

2009-2013: Research Assistant Professor, National Hellenic Research Foundation NHRF, Institute of Biology, Medicinal Chemistry and Biotechnology IBMCB (former IBRB), Metabolic

Engineering and Bioinformatics Programme (under evaluation for promotion to Research Associate Professor)

2006-09: Research Lecturer, NHRF, Institute of Biological Research and Biotechnology IBRB, Metabolic Engineering and Bioinformatics Programme

2005-2006: Post-doctoral fellow, NHRF, IBRB, Metabolic Engineering and Bioinformatics Programme

The Greek Academic and Research System comprises four (4) echelons, the 4th level been considered a provisional period (similar to that of a PostDoc but with managerial rights and responsibilities regarding attraction of Research Funds), the 3rd level providing tenure track position and the upper two permanent employment.

Current activity

2010-today: Principal Investigator, (Research Associate Professor-2nd level), NHRF, IBRB, Metabolic Engineering and Bioinformatics Programme

Research Milestones

1. the development of the first in-silico tissue model internationally for the modeling of the biosynthesis of neurotransmitter glutamate (cover of the respective Metabolic Engineering journal),
2. The development of GRISSOM, the first Grid-based (high-performance computing) platform at European level, for the analysis and interpretation of DNA microarray experiments,
3. The web application KEGGConverter, which is the first one to enable the massive automated integration of KEGG pathway data into fully functional models appropriate for dynamic kintetic simulation (**featured article in BMC Bioinformatics, noted as Highly Accessed**).
4. The first in-silico SBML model internationally of the Brassica Napus central metabolism.
5. Finally, within the frames of his participation to the EU FP7 Hotzyme project, which targets the characterization of thermophilic metagenomic archaeobacterial data, he supervises the development of the pipeline ANASTASIA (Automated Nucleotide and Aminoacid Sequence Translational plAtform for Sytemic Interpretation and Analysis). The pipeline, being already under testing, provides versatile, fully automated, massive, computational analysis of genomic data from different sequencing reads, unifying the assembly and multi-faceted functional characterization tasks for data derived from Next Generation Sequencing Experiments of different technologies.

Career track

10/1996	Qualified in the Examination for the National License of the Electrical Engineer. Member of the Hellenic Technical Chamber	Hellenic Technical Chamber
1996-1997	Consultant for Computer Networks/ Web Activities	Labour Institute of Hellenic Federarion of Bank Employees Union
1997-1998	Full time Engineer for the IAS Mannheim (Industrial Consulting Firm for	Institute fuer Analytik der Shwachstellen (IAS)

	<p>optimized management of plant production lines. Liaison for the Hellenic activities(Unilever Branch Industries). My work entailed supervision of industrial maintenance works, software development of the industrial project management software DIVA application of reliability theory in the management of industrial as well as and business management</p>	Mannheim, Germany
10/1998-03/1999	<p>Tutor (200 hours) in computer training seminar circle entitled «Introduction to the use of Computers» certified by the Hellenic Center of Accreditation delivering an official certificate about computer skills, admitting individuals disposing a national baccalaureate</p>	Vocational Training Center of Haidari, Athens
12/1999-02/2005	<p>Organization/ authoring.Teaching of the laboratory part of the 9th semester main course Applied Biotechnology</p>	Biotechnology Laboratory, School of Chemical Engineering,National Technical University of Athens, Greece
05/ 2000 – 01/ 2002	<p>Military Service. Computer Network Administratort (expert in network security), for the computer network of the Direction of Public Relations of the General Staff of the Hellenic Air Force. Δημοσίων Σχέσεων του Γενικού Επιτελείου Αεροπορίας. Designer and Developer of the Electronic Mail Central Server Application of the General Staff of the Hellenic Air Force.</p>	Hellenic Air Force
2002	<p>Tutor (100 hours out of 325th whole cycle) in computer training seminar circle entitled «Specialization in Informatics and Computers» leading to an official certificate for computer skills, regarding the lifelong learning of secondary education professionals. The course provided Basic knowledge in Operational Systems (DOS, Windows), the MS Office platform (Word, Excel, Powerpoint, Access, MS Outlook) multimedia</p>	Hellenic Union of Physicists

	(Macromedia Adobe suite- Flash, Director, Premier) and web authoring (Dreamweaver, Micorsoft Frontpage), Totally 400 hours (200 hours per year)	
2003	Evaluator for the international research program PISA of the Organization for Economical Cooperation and Development, monitoring the performance of national educational systems	Education Research Centre of Greece
2001-2005	Freelance Electrical and Electronic Engineerç Expert in the compilation of microwave radiotransmission studies for terminal stations of mobile telecommunication networks,	Freelance Electrical/ Electronic Engineer
	as well as computer and electrical network studies for industrial installations (customers TIM Hellas mobile telecommuninations and the G. Moustakas Public Limited Industrial and Commercial company	
2004-2005	Research Fellow (Post-Doc) in the field of Bioinformatics (Transcriptomic analysis).	Institute of immunology, BSRC Alexander Fleming
2005-2009	Research Lecturer in the field of Bioinformatics and Metabolic Engineering	Institute of Biological Research and Biotechnology, National HellenicResearch Foundation
2009-2012	Research Assistant Professor in the Metabolic Engineering and Bioinformatics Programme. Since 2010 Principal Investigator of the Program	Institute of Biology, Medicinal Chemistry and Biotechnology, National HellenicResearch Foundation
15/10/2012 - 31/01/2013	Invited Researcher (echelon Associate Professor)	LaBRI/CNRS, Inserm U149 and CBiB/CGFB of the University of Bordeaux
12/02/2013	Qualified (qualification number 13127248046 expiry date 31/12/2017) in the Domain Informatics (no27), for Full University Professorship for the French Universities National Evaluation of the French Ministry of Education and Research.	National Evaluation of the French Ministry of Education and Research

02/03/2013	Short Time Scientific Mission (STSM)	Breeding Biology and
-	Scholarship for collaboration with the	Molecular Genetics, at the
16/03/2013	group of Professor G. Brockmann, in	Department for Crop and
	within the frames of the COST Action	Animal Sciences, Faculty of
	BM0901 “European systems genetics	Agriculture and Horticulture,
	network for the study of complex genetic	von Humboldt University
	human diseases using mouse genetic	Berlin
	reference populations (SYSGENET).	

Teaching activities

Throughout the whole period of my postgraduate studies I undertook teaching assignments, which concerned the organization and teaching of the laboratory part of the 9th semester main course Applied Biotechnology. The laboratory comprised six 3-hour sessions one each week, and is taught in two groups of 40 participants. It is organized in the computer center of the School of Chemical Engineering and aspires to familiarize the chemical Engineers with core regulatory principles of Biochemical Engineering like the concepts of binding affinity and catalytic turnover, the mode of action of different types of kinetic mechanisms in enzymic reactions (Michaelis-Menten, allosteric, Ordered Bi Bi, involvement of inhibitors and activators, competitive and non-competitive), the control that the whole network exerts to each reaction, the role of Control and Response coefficients according to Metabolic Control Analysis. It also familiarized the students with appropriate software for simulation of the Metabolism like the Gepasi, COPASI or later the Cell Designer and the SBML (Systems Biology Markup Language) format for cellular reaction model representation and simulation, as well as important repositories for information mining regarding kinetic properties of enzymes and standard concentrations of their substrates in various cell types, like the BRENDA or the Enzyme databases. After the obtainment of my PhD, I was recruited to research Institutions in Greece, as a full time researcher. Despite that I kept on being active in teaching activities in the form of lectures in various post-graduates programs, summer schools and workshops national and international. Another important training activity with a pronounced educative role, is the co-supervision of graduation projects of the School of Chemical Engineering of the National Technical University with a nominal duration of a full semester and with the proportional participation in the final graduation degree of the diploma. I have supervised 8 diploma projects of the School of Chemical Engineering, NTUA 1 (Agnes Kiener) diploma project of the School of Biomedicine of the University of Orebro Sweden, 1 (K Voutetakis) from the 2year Masters Programs in Bioinformatics of the Faculty of Biology and 1 (D Christodoulou) from the Faculty of Informatics and Telecommunications, of the National Kapodistrian University of Athens. All projects were lying in the fields of bioinformatics and computational biology (algorithms for transcriptomic analysis, DNA microarray analysis projects, epidemiological analysis, metabolic simulations). Becoming a career researcher allowed me to capitalize on my daily involvement with research managements tasks as the supervision and coordination of the activities of a group of people for a given projects or even for different projects which develop mutual collaboration and information exchange, thus gaining substantial expertise in advanced research training. In this context I have co-supervised the research work of various post-graduate students, who were members of MEBP. The mast majority of them have remained active, upon completion of their theses, as post-doctorate scientists or generally experts in the subject relevant with their thesis, in Greece, France and UK. A detailed account of my

teaching related activities can be found in the paragraphs entitled Teaching Experience, Other Teaching Experience, Supervision of Theses and supervision of Diploma Projects.

Management of Research Activities / Leadership

Since 2010, I am directing the research activities (Principal Investigator), of the Metabolic Engineering and Bioinformatics Programme (MEBP) of the Institute of Biology, Medicinal Chemistry and Biotechnology (IBM CB) of the National Hellenic Research Foundation (NHRF), of which I am a founding member. The MEBP represents an independent unit of the Institute of Biology, Medicinal Chemistry and Biotechnology (IBM CB) of the National Hellenic Research Foundation (NHRF). It was established with the aim:

- firstly to promote original research in the field of Bioinformatics and Computational Biology by developing new tools or methodologies for reliable molecular network inference, through integration of various sources of information (semantic, quantitative) across different layers of molecular description,
- secondly to introduce the design principles of Systems Biology in the study and interpretation of the biological mechanisms\diseases that are targeted by the other research groups of the Institute,. These mainly emphasize cancer and cellular aging related research.

MEBP is composed of a Principal Investigator, a Functional Research Scientist of 3rd grade (Dr. O. Papadodima) 3 Post Doc Research Fellows (E. Pilalis, I. Valavanis and E. Sifakis), 2 postgraduate students, 1 from the School of Chemical Engineering, National Technical University of Athens, Greece (E. Ladoukakis) and the other from the Dept. of Clinical Medicine of the School of Health and Medical Sciences of the University of Örebro (M. Logotheti) performing part of their thesis in MEBP and 2 post graduate (MSc) students (G. Kontogianni, Th. Koutsandreas). The Functional Research Scientist is a Systems Biologist with expertise in wet-lab experimental techniques, so that MEBP can conduct independent biological research and perform the validations requested for the efficient interpretation of omic experiments. At the same time, due to its expertise Dr O. Papadodima ensures the high quality of the translational research performed, contributing in the reliable interpretation of the computational findings to concrete, qualitative biological descriptions. The 3 Post Doc Fellows and 3 of the postgraduate students are oriented in bioinformatic algorithmic development, while M. Logotheti and Dr. O. Papadodima are involved in the analysis of the omic datasets exploiting the rich suite of proprietary analytical tools of MEBP. I direct the research activities in both aspects equally sharing my research effort in both. MEBP hosts numerous common research projects with other IBM CB groups, part of which has already been published or is in the phase of revision. This concerns original work committed either in the field of Molecular Endocrinology, Environmental Toxicology, RNA Processing, Cellular Aging and the Biomedical Applications Unit. It has also developed a very rich network of international collaborations within the frames of European funded projects and research networks (like the 2 COST initiatives in which I participate) but also supports many unfunded research collaborations with other groups in Greece and abroad (see paragraph research collaborations).

Regarding its independent research course, MEBP has exposed particular dynamism, as regards translational and integrative bioinformatic research, building original analytical methodologies for this scope, while in parallel it has proven successful in the attraction of research funding, either from European/International or from national sources, for research in the field of Systems Biology, Bioinformatics and Scientific Computing. Almost all of the publications of the work, I have coauthored and to a large extent supervised, has taken place in top-ranked (sources Microsoft Academic Search-MAS, or Google Scholar GS) international journals in the field of Genetics & Genomics (Genome Research 5th, BMC Genomics 11th-GS), bioinformatics & computational biology (BMC Bioinformatics 2nd 14th for the whole computer science, IEEE Trans Inform Tech Biomedicine 5th MAS), Biotechnology (Biotech & Bioeng 3rd MAS) biomedical engineering (IEEE Trans Biomed Engineering 1st, Metab Engineering 4th MAS) and grid computing (Journal of Grid Computing 6th MAS), or in promising new open access initiatives (Frontiers in Neuroscience -track Systems Biology, Hindawi Advances in Bioinformatics) that have not yet received an official ranking. It is in light of this activity, that since 2008 I participate in the activities of the Life Sciences Virtual Research community (national contact point for Greece consulting the Greek Research Network) that fosters distributed computing activities in the field of biomedicine at a European layer, through the European Grid Initiative. I have also been invited as a speaker in various conferences, scientific meetings, and workshops national and international (see the relevant paragraph).

In another context and regarding the design of national research policies, I am serving my second tenure as Vice President of the Hellenic Union of Researchers (2 tenures, 2009-2012) been elected by the Body of the Research working in the National Research Organizations, with the mission to participate actively in the strategic planning of national and international research policies, while since 2011 I have been elected in the Board (Vice President) of the NHRF Personnel Association.

Research objectives

My research effort has emphasized in the development of intelligent computational, signal processing and statistical approaches, enabling numerical solution or simulation of high-dimensional, complex problems from the field of Life Sciences. In this context, the exploitation of advanced, artificial intelligence algorithmic tools or workflows, exploiting quantitative and semantic information (biological ontologies, controlled vocabularies) for the inference of the underlying cellular circuitry in the context of genome wide experimental data (microarrays, or Next Generation Sequencing), is a critical objective. Large-scale metabolic reconstructions, exploiting network information related to cellular metabolism, to be used as virtual metabolic models for the functional profiling and the rational biotechnological modification of organisms, represents another focal point of my work. I am also interested in the mining of quantitative information from various biomedical imaging modalities that may reliably classify and score diseases/pathologies, revealing critical phenotypic patterns at the level of the image (morphology, colour, texture, etc.) that facilitate biomedical interpretation. These three, clearly defined directions are closely converge at the level of data and heterogeneous information integration, targeting to deliver a multi-faceted description of the biological mechanism interrogated. Moreover as the complexity of these datasets is enormous in terms of size, heterogeneity,

covariance, noise infiltration, interpretation scenario, the load of computation requests porting to appropriate environments for scientific computing. Overall, the challenges encountered during the study of biological complexity, forge a novel, generic paradigm, that could even propose elaborate design principles for complex problems, which may have a catalytic role in the area of scientific computing (artificial intelligence, distributed computing, knowledge-bases, semantic web) or that of generalized statistical analysis (numerical solution of statistical problems, values generators, virtual models, game theory).

Participation in Funded Projects and Research Networks

European /International Projects

1. Collaborative Project (large scale integrating project), FP7- Call: KBBE-2010.3.5-04, Microbial diversity and metagenomic mining for biotechnological innovation, entitled « Systematic screening for novel hydrolases from hot environments (HotZyme)» (**480.000,00 €**, *Group budget, 2011-2015, responsible for the bioinformatic activities of the NTUA partner*).
2. Medium-scale focused research project, EU FP7, Theme: Environment, including climate change, Sub-activity: Environment and Health, entitled Envirogenomarkers, which aims at the development and application of a new generation of biomarkers to study the role of environmental agents in human disease (**474,000.00 €**, *Group budget, 2009-2013, responsible for the bioinformatic activities of the NHRF group*).
3. FP7- ICT-2007.4.4 Intelligent Content and Semantics, entitled «e-Laboratory for Interdisciplinary Collaborative Research in Data Mining and Data-Intensive Sciences (e-LICO)» (contract no:231519) (**369,308.00 €**, *Group budget, 2009-2012, institutional scientific coordinator*).
4. Franco-Hellenic Bilateral Research Program **2007-2008**. Application of Metabolic Engineering and Stochastic Modelling Methodologies for the Optimization of Fatty Acid Biosynthesis in Plants (**12,600.00 €**, *Group budget, 2007-2008, institutional scientific coordinator*).
5. European Commission NoE – LSHG-CT-2005-005203, Integrated functional genomics in mutant mouse models as tools to investigate the complexity of human immunological disease (MUGEN) 2005-2009 Network of Excellence (24 participating labs) (**11,000,000.00 €**, *Total budget, 2005-2009, member of the Al. Fleming working group*).

European /International Networks

6. COST Action BM0901 “European systems genetics network for the study of complex genetic human diseases using mouse genetic reference populations (SYSGENET) *Substitute committee member for Greece WG3 Bioinformatics (2010-2013)*.

7. COST Action FA1006. “Plant Metabolic Engineering for High Value Products *Substitute committee member for Greece (Working Group 3)(2012-2015)*).
8. ERA-Instruments consortium (16 members), for a pan-european coordination of the funding actions regarding large research infrastructures, in the field of Life Sciences. (<http://www.era-instruments.eu/>). *Expert in the field of Bioinformatics for the National Hellenic Research Foundation Partner (2008-2011)*

National Projects

1. Operational Program “Education and Lifelong Learning” Action “Excellence II”, “Targeting tumor stroma and cancer cell metabolic co-operation for Lung Cancer Therapy (Metaboli-CA)” (53,000 €, 2006-2009, *responsible for the bioinformatic activities*)
2. 09ΣΥΝ-11-675 Cooperation Research Program entitled “Development of novel Angiogenesis-Modulating Pharmaceuticals by screening of natural compounds and synthetic analogues-**DAMP**” (duration 2010-2014), sponsored by the Program “Competitiveness and Entrepreneurship” ΕΠΙΑΝ-II Act 1 of the Peripheral Entrepreneurial Program of Attiki, with co-funding by the European Fund of Regional Development and National Funds. (297,000.00 €, *Group budget*, 2010-2014, *institutional scientific coordinator*).
3. Operational Program “Education and Lifelong Training” Action “Thalis”, “MODELLING THE DYNAMIC PROGRESSION OF CELLULAR AGING THROUGH THE DEVELOPMENT OF SYSTEMS BIOLOGY AND BIOINFORMATICS TOOLS - MAESTRO” (250,200.00 €, *Group budget*, 2012-2015, *institutional scientific coordinator*).
4. 09ΣΥΝ-11-675 Cooperation Research Program entitled “PIK3CA Oncogenic Mutations in Breast and Colon Cancers: Development of Targeted Anticancer Drugs and Diagnostics -**POM**” (duration 2010-2014), sponsored by the Program “Competitiveness and Entrepreneurship” ΕΠΙΑΝ-II Act 1 of the Peripheral Entrepreneurial Program of Attiki, with co-funding by the European Fund of Regional Development and National Funds (332,100.00 €, *Group budget*, 2010-2014, *responsible for the bioinformatic activities of the NHRF group*).
5. Entrepreneurial Program Competitiveness & Entrepreneurship & Districts in Transition, (Action Developmental Proposals of Research Institutions –KRIPIS) “Targeted therapeutic Approaches against Degenerative Diseases with emphasis in Cancer and Ageing” (1500000,00 € *total budget*, 2012-2015, *responsible for the bioinformatic activities*).
6. **12CHN 204** Entrepreneurial Program Competitiveness & Entrepreneurship & Districts in Transition, (Action Bilateral Research and Technology Cooperation between Greece and China) “**Personalization of melanoma therapeutic management through the fusion of systems biology and intelligent data mining methodologies-PROMISE**” (523000,00 € *total budget*, 2013-2014, *scientific coordinator*).
7. ACT 119153 (NISR+T) 3rd Phase “Open Access Repositories and Electronic Journals” supervised by the Greek Information Society /FP6 Subtask 6 Development

of an integrated DNA microarray data processing and meta-analysis platform plus a microarray experimental data repository, in Grid. (365,243.00 €, *Group budget, 2007-2008, technical coordinator*).

8. G.S.R.T./ Development of pilot grid applications for the exploitation of the National Grid Infrastructure (GRID-APP)- “Processing of Distributed Genetic Information from virtualized Bioinformatic Databases (54,000.00 €, *Group budget, 2006-2007, technical coordinator*)
9. Operational Program “Competitiveness” Action “Excellence in the Research Centers of the GSRT 2nd round”, “Application/ Development of Bioinformatic Tools for Systems Biology Research” (885,106.00 €, *2006-2009, principal investigator*)

Economic Valorisation

1. ACT 119153 3rd Phase ”Open Access Repositories and Electronic Journals” supervised by the Greek Information Society /FP6 Subtask 6 Development of an integrated DNA microarray data processing and meta-analysis platform plus a microarray experimental data repository, in Grid. (365,243.00 €, *Group budget, 2007-2008, technical coordinator*).

Societal Valorisation

Vice President of the Hellenic Union of Researchers (2 tenures, 2010-2013) been elected by the General Assembly of Greek Researchers, with the mission to participate actively in the strategic planning of national and international research policies, and consultation of the Hellenic State in matters of research policies.

Vice President (2011-2013), of the NHRF Personnel Association, second consecutive tenure on the Board, since 2009.

Interviews

Interview about the current state of Hellenic research in times of fiscal economic reform, by Marcus Hansson (Science reporter for the Swedish radio) <http://sverigesradio.se/sida/avsnitt/104286?programid=412>

Interview about Bioinformatics and Systems Biology Research in the Hellenic Public Radio

Research Collaborations

1. University of Central Greece, Faculty of Biomedical Informatics, Biomedical Data Management Group, Assistant Professor I. Maglogiannis, in the field of high performance biocomputing and biomedical image processing.
2. University of Örebro, Sweden, Örebro Life Science Centre (ÖLSC) (Prof. P-E. Olsson, Prof. A. Sirsjö, Prof. N Venizelos) collaboration for the coorganization of the Swedish – Hellenic conferences and courses (2007-2011) plus research collaboration (providing translational bioinformatics and in-silico systems biology expertise) for systemic interpretation and analysis in the area of cardiovascular diseases and neuropsychiatric disorders.
3. University of Bordeaux I and II (Segalen), (K Petry, Director of Research INSERM, Neuroinflammation, Imaging and Therapy of Multiple Sclerosis-associated team and CNRS CRI M Nikolski, Laboratoire Bordelais de la Recherche en Informatique) on algorithms and formal models for the study of complex systems, designed to help biologists understand the relations

between genomes, and the underlying cellular circuitry with the emphasis given in translational therapeutic research in neuroinflammatory and neurodegenerative diseases.

4. University of Copenhagen, Denmark, Bioinformatics Center, Prof. A. Krogh, research collaboration within the frames of the EU-FP7 IP Hotzyme, for the development of algorithms suitable for the massive, automated genome sequencing (NGS) and functional annotation of metagenomic data.
5. University Koc, Istanbul, Turkey, College of Engineering, Prof. A Gursoy, research collaboration for the development of intelligent algorithms for the inference of dynamic network models of protein interactions, protein informatics, and their application in diseases and drug design.
6. National Technical University Athens, Greece, School of Chemical Engineering, Laboratory of Biotechnology, Prof. F.N. Kolisis, longstanding (1999-2012) research collaboration in the field of bioinformatics and in-silico systems biology for the development of large-scale to genome-wide virtual physiological models for rational targeted biotechnological modifications , which has brought off several national and international research grants, among which EU FP7 ICT e-LICO project (2009-2012)and EU FP7 IP Hotzyme (2011-2014).
7. University of Patras, Greece, School of Medicine, Biosignal Laboratory, Prof. A Bezerianos, research collaboration in the field of integrative bioinformatics and in-silico systems biology aiming at the development of intelligent mining algorithms for the inference of dynamic molecular networks, pervading many layers of experimental dissection, exploited for the system level understanding of cellular ageing.
8. University of Tennessee, Memphis, Center of Genomics and Bioinformatics, Prof. R Williams, research collaboration in the field of integrative bioinformatics and in-silico systems biology for the development of appropriate interface of the functional connection of the most popular web application for Qtl (systems genetics) analysis globally and the web applications developed by the group of Dr. A Chatziioannou.
9. National Hellenic Research Foundation, Athens, Greece, Molecular Epidemiology, Program, Director of Research S Kyrtopoulos, reserach collaboration within the frames of the EU FP7 IP Envirogenomarkers, concerning the epigenomic analysis of epidemiological data, to confer novel biomarkers highlighting the impact of the environment in disease manifestation and progression for chronic diseases as, breast cancer, Non Hodgkin's lymphoma, or childhood diseases including allergy, neurological and immune diseases, thyroid disruption.
10. Von Humboldt University, Berlin, Germany, Professor G. Brockmann, Breeding Biology and Molecular Genetics, Department for Crop and Animal Sciences, Faculty of Agriculture and Horticulture, sponsored by the COST Action BM0901 "European systems genetics network for the study of complex genetic human diseases using mouse genetic reference populations (SYSGENET).

Teaching Experience

2012 Invited Lecturer and Organizing Committee in the 6th International Summer School, entitled "Bioinformatics and Systems Biology Approaches for the Analysis of Complex Biological Networks", organized by the Biosignal Laboratory of the Medical School of the University of Patras in partnership with SYSGENET, COST Action (BM0901) during 1-6 July 2012.

2011 Member of the organizing committee and invited lecturer of the 4th Swedish Hellenic Conference and Course co-organized by the University of Örebro, Sweden and the Institute of biology, Medicinal Chemistry and Biotechnology of the National Hellenic Research Foundation.

2007- Invited Lecturer (5 years consecutively) to the course Special Topics in Bioinformatics/ Microarray Technologies and Applications. Masters Program in

- 2012** Bioinformatics of the Faculty of Biology of the National Kapodistrian University of Athens, directed by Prof. S Hamodrakas. (<http://bioinformatics.biol.uoa.gr/msc/gr/courses4.html#Anchor-47383>)
- 12/2007** Invited Lecturer, to the course Medicine, Human Genetics and Applied Bioinformatics of the International Masters Program of the School of Health and Medical Sciences of the University of Orebro (Prof. Sirsjö, Allan).
- 2000-2005** Co-author of the teaching material and lecturer for the laboratory part of the 9th semester main course Applied Biotechnology of the School of Chemical Engineering organized by the Laboratory of Biotechnology under the supervision of Prof. F. N. Kolisis (7 yrs consecutively).

Other Teaching Experience

- 2002-03** Tutor (100 hours out of 325th whole cycle) in computer training eminar circle entitled «Specialization in Informatics and Computers» leading to an official certificate for computer skills, regarding the lifelong learning of secondary education professionals, responsible for instruction of Basic knowledge of Operational Systems (DOS, Windows), the MS Office platform (Word, Excel, Powerpoint, Access, MS Outlook) multimedia (Macromedia Adobe suite- Flash, Director, Premier), HTML authoring (Dreamweaver, Micorsoft Frontpage), Totally 400 hours (200 hours per year)
- 10/1997-3/1998** Tutor (200 hours) in computer training seminar circle entitled «Introduction to the use of Computers» organized by the Vocational Training Center of Haidari, certified by the Hellenic Center of Accreditation delivering an official certificate about computer skills, admiting individuals disposing a national baccalaureate. The circle comprised Basic knowledge of Operational Systems (DOS, Windows), the MS Office platform (Word, Excel, Powerpoint, Access, MS Outlook) multimedia (Macromedia Adobe suite- Flash, Director, Premier), HTML authoring (Dreamweaver, Micorsoft Frontpage),

Supervision of Theses

Co-supervision of the following Phd students, who perform or have performed all or part of their theses research projects with the group of Dr A Chatziioannou:

E Pilalis (2007-2011): Phd in Bioinformatics, School of Chemical Engineering, National Technical University of Athens, Greece, now working as a Post Doc scientist in the group of Metabolic Engineering and Bioinformatics, National Hellenic Research Foundation.

P Moulos (2008-2011): Phd in Functional Bioinformatics, School of Chemical Engineering, National Technical University of Athens, Greece. After finishing his Phd he worked as a Post Doc scientist in the group of Metabolic Engineering and Bioinformatics, National Hellenic Research Foundation, then as a Marie Curie stipend in the School of Medicine, University of Toulouse, INSERM.

T Paparountas (2006-2010): Phd in Bioinformatics, School of Chemical Engineering, National Technical University of Athens, Greece, having worked afterwards as a Post Doc scientist in the Biomedical Research Foundation of the Academy of Athens, Greece, Centre of Basic Science II, Dr. Thanos D. Group and now as a Post Doc scientist in Dulbecco Telethon Institute - Epigenetics and Genome Reprogramming lab.

D Giannoussis (2006-2010): Phd in Cancer epidemiology, MD Surgeon, School of Medicine, National Kapodistrian University of Athens, now working as an Assistant Professor level scientist, in the Intensive Care Unit of the Hospital of Xanthi, Greece.

Em Sifakis (2006-2011): Phd in Bioinformatics, School of Electrical and Computer Engineering, National Technical University of Athens, Greece, now working as a Post Doc scientist in the group of Metabolic Engineering and Bioinformatics, National Hellenic Research Foundation.

K Moutselos (2008-2012): Faculty of Biomedical Informatics, University of Central Greece, Lamia, Greece, having completed his thesis and having been recruited by the University of Dundee, Scotland, UK in the group of computational Proteomics.

I Kanaris (2007-): School of Engineering, Department of Information and Communication Systems, University of the Aegean, Karlovassi, Samos, Greece, IT-expert.

M Logotheti (2011-): post-graduate student of the School of Health and Medical Sciences, University of Örebro (Prof. N Venizelos), in collaboration with the National Hellenic Research Foundation, Athens.

It should be noted here that all supervised fellows, who have completed their Theses are working as career researchers /scientists, at research establishments nationally and internationally.

Supervision of Diploma projects

Co-supervision (main supervisor Prof F. N.Kolisis) of the following students of School of Chemical Engineering, National Technical University of Athens, Greece, in their Diploma work at the field of Bioinformatics, Functional Genomics, Metabolic Engineering and Systems Biology, implemented in the Metabolic Engineering and Bioinformatics Program, NHRF:

S Tsantilyannis (2005), E Markou (2005), M Foukaraki (2006), A Mitsiou (2006), A Kanellos (2007), M Hatzidaki (2009), E Ladoukakis (2010), Y Kottara (2012), Th Coutsandreas (2012)

Co-supervision (main supervisor Prof F. A. Sirsjoe) of the student of the School of Biomedicine of the University of Örebro, Sweden, implemented in the Metabolic Engineering and Bioinformatics Program, NHRF:

A Kiener (2009),

Diploma work , implemented in the Metabolic Engineering and Bioinformatics Program, NHRF, for the Masters Program in Bioinformatics of the Faculty of Biology of the National Kapodistrian University of Athens, directed by Prof. S Hamodrakas, (university supervisor I. Trougkakos) **K Voutetakis (2012)**

(in the Masters Program in Information Technologies in Medicine and Biology of the Department of Informatics and Telecommunications of the National and Kapodistrian University of Athens (UoA), in cooperation with the Technological Educational Institute (TEI) of Athens, and in collaboration with the Foundation for Biomedical Research of the Academy of Athens (BRFAA) and the Institute of Informatics and Telecommunications of the National Centre for Scientific Research "Demokritos" **D Christodoulou (2012).**

Invited Speaker

1. Invited Speaker by the University of Orebro (Life Science Seminars), 19 December 2012, Orebro, Sweden. "Comparative transcriptomic analysis of 3 cancer cell lines (colorectal, lung, leukemic) for the investigation of common tumor promoting mechanisms, through the application of a generic, computational, systematic framework".
2. SYSGENET Scientific Meeting, Bilbao, 7th MC Meeting, 10-12 December 2012, CIC bioGUNE, Bilbao. "Feature Selection for Heterogeneous Data Fusion in High-volume Integrative Datasets".
3. LaBRI /CNRS circle of seminars, 6 December 2012, Bordeaux, France. "Promoting systems biology research through intelligent information mining of omic datasets".
4. Joint Workshop BM0901 / BM0907 "Immunophenotyping in humans", European Systems Genetics Network for the Study of Complex Genetic Human Diseases using Mouse Genetic Reference Populations, November 9th, 2012 - Frankfurt, Germany.
5. 6th International Summer School, entitled "Bioinformatics and Systems Biology Approaches for the Analysis of Complex Biological Networks", organized by the Biosignal Laboratory of the Medical School of the University of Patras in partnership with SYSGENET, COST Action (BM0901) during 1-6 July 2012, Patras, Greece. "Bioinformatic methodologies for a systems level interpretation and derivation of the active biological networks in high-volume molecular datasets".
6. Leeds Institute of Genetics, Health and Teharapeutics, Workshop on Statistical bioinformatics and approaches to the challenges of high-dimensional data, sponsored by the world Universities Network, Tuesday 26th June 2012, Leeds, UK. "Development of a systematic composite framework for the analysis and interpretation of DNA methylation epidemiological data".
7. LaBRI /CNRS circle of seminars, January 2012, Bordeaux, France. "Comparative transcriptomic analysis of 3 cancer cell lines (colorectal, lung, leukemic) for the investigation of common tumor promoting mechanisms, through the application of of a generic, computational framework".
8. Biosciences and Cancer. From Prevention to Therapy, 4-5 November, 2011, Athens Hilton, Athens, Greece. "Comparative transcriptomic analysis of lung cancer, colorectal cancer and leukemia for the investigation of tumor suppressor mechanisms".
9. 4th Swedish-Hellenic Conference and Course, 10-14 October 2011, Athens, Greece. "An in-silico compartmentalized metabolic model of Brassica napus enables the systemic study of regulatory aspects of plant central metabolism".
10. SYSGENET Working Group 3 Meeting "Bioinformatic aspects of systems genetics". COST ACTION BM0901:European Systems Genetics Network for the Study of Complex Genetic Human Diseases using Mouse Genetic Reference Populations, July 06th-07th, 2011 Groningen, Netherlands. "Promoting translational research through integrative bioinformatic analysis"
11. International expert meeting ERA-Net infrastructures in Life Sciences, 24-26 July , 2009, EBI, Hixton, Cambridge, UK.
12. 1st IEEE Student Branch meeting in University of Central Greece, Lamia, Greece, March, 2009.
13. International expert meeting ERA-Net infrastructures in Life Sciences, 12 -14 October , 2008, Santorini, Greece. "Systems Biology the –omics era of Biology"
14. 1st Swedish-Hellenic Conference and Course , Örebro, Sweden, 24-26 May, 2007. "How Bioinformatics can help to pave the way for Systems Biology".

Oral Presentations in Scientific Workshops /Conferences -

1. 12th International IEEE/BIBE Conference in Bioinformatics and Bioengineering, 12-15 November, 2012, Larnaca, Cyprus. "A Composite Statistical Framework for the Analysis of DNA Methylation Epidemiological Data".
2. 12th International IEEE/BIBE Conference in Bioinformatics and Bioengineering, 12-15 November, 2012, Larnaca, Cyprus. "Data Integration and Feature Selection in High- volume Molecular and Imaging Datasets".
3. 8th AIAI (Artificial Intelligence Applications and Innovations) Conference, sponsored by the IFIP (International Federation for Information Processing), Chalkidiki, Greece, 27-30 September 2012. "Feature Selection Study on Separate Multi-Modal Datasets. Application on Cutaneous Melanoma".
4. 1st Annual Hotzyme Meeting, 26-28 September, Wageningen, Netherlands. "Workflows for enzyme detection and annotation- ANASTASIA platform".
5. 7th Hellenic Conference on Artificial Intelligence (SETN 2012), Lamia, Greece, May 28-31, 2012. Main organizer of the special session entitled "Advancing Translational Biological Research through the incorporation of Artificial Intelligence methodologies".
6. Envirogenomarkers Project Management Board meeting, HuGeF, April 2012, Turin, Italy.
7. Envirogenomarkers Data Analysis meeting, St Mary's Hospital, Imperial College HealthCare NHS, January 2012, Paddington, London, UK.
8. 7th AIAI (Artificial Intelligence Applications and Innovations) Conference ,sponsored by the IFIP (International Federation for Information Processing), Corfu, Greece, 15-18 September 2011.
9. 33rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society (IEEE EMBC 2011), Boston, 30 August - 3 September 2011 (associate Editor), responsible for the invited session entitled "Addressing Complexity in Biomedical Research: Data Processing and Mining for Large Biomedical Datasets".
10. ITAB 2010, 10th International Conference on Information Technology and Applications in Biomedicine, Theme "Emerging Technologies for Patient Specific Healthcare", November 2-5, 2010, Corfu, Greece. "Analysis of pediatric obstructive nephropathy using protein antibody arrays and computational techniques".
11. ITAB 2010, 10th International Conference on Information Technology and Applications in Biomedicine, Theme "Emerging Technologies for Patient Specific Healthcare", November 2-5, 2010, Corfu, Greece. "An Epidemiological population study reveals a sex-related differential effect of PAH exposure and gene polymorphisms on bulky DNA adducts formation".
12. ITAB 2010, 10th International Conference on Information Technology and Applications in Biomedicine, Theme "Emerging Technologies for Patient Specific Healthcare", November 2-5, 2010, Corfu, Greece. "An Epidemiological population study reveals a sex-related differential effect of PAH exposure and gene polymorphisms on bulky DNA adducts formation".
13. ITAB 2010, 10th International Conference on Information Technology and Applications in Biomedicine, Theme "Emerging Technologies for Patient Specific Healthcare", November 2-5, 2010, Corfu, Greece. "Intelligent planning of biomedical image mining workflows"
14. 28th HealthGrid 2010, June 28-30 2010, University Paris XI in Orsay, France. "Enabling distributed Processing and Management of Biological Data through fusion of Grid and Web Technologies".
15. 5th EGEE User Forum/OGF25 & OGF-Europe's 2ç international meeting, Upsalla, Sweden 12-15 April, 2010.
16. ITAB 2009, 9th International Conference on Information Technology and Applications in Biomedicine, Theme "Citizen Centered e-Health Systems in a Global Healthcare Environment", November 5-7, 2009, Larnaca, Cyprus.

17. 4th EGEE User Forum/OGF25 & OGF-Europe's 2^ç international meeting Catania, Sicily, Italy, 2-6 March 2009 (Bioinformatics and Biomedicine Session)
18. 8th International IEEE/BIBE Conference in Bioinformatics and Bioengineering , Athens, Greece 2008.
19. 15th International Conference on Conceptual Structures, 22-27 July, 2007, Hallam University, Sheffield, UK. "Extending the Interpretation of Gene Profiling Microarray Experiments to Pathway Analysis Through the Use of Gene Ontology Terms".

Reviewer of the scientific journals

Metabolic Engineering,
 Bioinformatics,
 Molecular Informatics,
 IEEE Transactions on Information Technology in Biomedicine,
 IEEE Transactions on Biomedical Engineering,
 Computers in Biology and Medicine,
 BMC Bioinformatics,
 BMC Systems Biology,
 Journal of Biomedical Semantics, (BMC Series)
 PLOS One,
 Frontiers in Systems Biology,

Advances in Bioinformatics

Editorships

Associate Editor of the journal Frontiers in Systems Biology
 Editorial Board member of the Open Access Journal of Information Technology and Software Engineering of the OMICS Publishing Group.
 Editorial Board Member of the Scientific Journal OA Bioinformatics

Research Grant Reviewer

Knowledge Foundation, Sweden (Funding Organization for the support of Swedish National Research)
 Agence Nationale de Recherche, France, call RPDOC for reintegration of PostDoctorate Scientists
 Medical Research Council UK, Experimental Medicine Challenge Full Grants Sep 2012
 Population & Systems Medicine Board

Organization of conferences/meetings/ workshops

1. Associate Editor for the 33rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society (IEEE EMBC 2011), organizer the selected invited session entitled "Addressing Complexity in Biomedical Research: Data Processing and Mining for Large Biomedical Datasets Boston, 30/08 -03/09/2011,

2. Chief organizer of the special session entitled “Advancing Translational Biological Research through the incorporation of Artificial Intelligence methodologies” of the international artificial intelligence SETN 2012 conference, Lamia, Greece, 29/05-31/05 2012.
3. Invited Lecturer and Organizing Committee in the 6th International Summer School, entitled "Bioinformatics and Systems Biology Approaches for the Analysis of Complex Biological Networks", organized by the Biosignal Laboratory of the Medical School of the University of Patras in partnership with SYSGENET, COST Action (BM0901) during 1-6 July 2012.
4. Member of the organizing committee and invited lecturer of the 4th Swedish Hellenic Conference and Course co-organized by the University of Örebro, Sweden and the Institute of biology, Medicinal Chemistry and Biotechnology of the National Hellenic Research Foundation.
5. Member of the organizing committee and invited lecturer of the International 8th AIAI 2012 Conference, 27-30 September 2012, Chalkidiki, Greece.
6. Member of the program committee and invited lecturer of the International 9th AIAI 2013 Conference, 26-28 September 2013, Pafos, Cyprus.
7. Member of the program committee and invited lecturer of the 3rd international Workshop on Artificial Intelligence Applications in Biomedicine (AIAB 2013), which is held in conjunction with the 9th AIAI 2013 Conference, 26-28 September 2013, Pafos, Cyprus.
8. Member of the international program committee and invited lecturer of the 13th international IEEE BIBE 2013 conference, Chania, Crete, Greece, 11-13 November 2013.
9. Bioinformatics Chair in the 13th international IEEE BIBE 2013 conference, Chania, Crete, Greece, 11-13 November 2013.

European /International Research Networks

1. COST Action BM0901 “European systems genetics network for the study of complex genetic human diseases using mouse genetic reference populations (SYSGENET) Substitute committee member for Greece WG3 Bioinformatics (400.000,00 €, budget 2010-2013).
2. COST Action FA1006. “Plant Metabolic Engineering for High Value Products Substitute committee member for Greece (Working Group 3)(400.000,00 € budget 2012-2015).
3. ERA-Instruments consortium (16 members), for a pan-european coordination of the funding actions regarding large research infrastructures, in the field of Life Sciences. (<http://www.era-instruments.eu/>). Expert in the field of Bioinformatics for the National Hellenic Research Foundation Partner (2008-2011).

Awards, Stipends, Scholarships, Editorships

- **Short Time Scientific Mission (STSM) Scholarship** for collaboration with the group of Professor G. Brockmann, in Breeding Biology and Molecular Genetics, at the Department for Crop and Animal Sciences, Faculty of Agriculture and Horticulture, von Humboldt University Berlin, within the frames of the COST Action BM0901 “European systems genetics network for the study of complex genetic human diseases using mouse genetic reference populations (SYSGENET).
- **2nd award for the study “A compartmented in silico model of Rapeseed central metabolism”**, Plant Bioinformatics, Systems and Synthetic Biology Summer School, 27-31 July 2009 - University of Nottingham, UK, under the auspices of the **European Science Foundation**
- **Young Investigator Award** in two International Systems Biology Conferences organized by the Aegean Conferences non-profit organization, entitled: « Pathways, Networks and Systems: Theory and Applications», Santorini, Greece 29 September-2 October 2003 and Rhodes, Greece, 29 September-2 October 2005.
- **Scholarship for the EMBO workshop** entitled ‘Making sense out of the transcriptomes’, University of Milano-Bicocca, 14-19 February, 2005.
- **Scholarship for the FEBS Advanced summer school** entitled ‘New trends, in quantitative molecular Biosciences’, organized by the University of Manchester, Spetsai, 2008, 10-17 September 2008.
- **Associate Editor of the international scientific journal Frontiers in Systems Biology** regarding Systems Biology Research in the area of Neurosciences (<http://www.frontiersin.org/>).
- **Member of the Webmed Central Bioinformatics Faculty** (<http://www.webmedcentral.com/faculty/profile/2900>)

Programming Languages

Pascal, C++, Ansi C, Lisp, Cobol, Delphi, Visual Basic, SQL, Java, scripting languages (Perl, Python, Javascript, PHP) HTML,DHTML, XML, Microsoft Windows,MacOS, Unix, Linux (Scientific, Ubuntu, Mandrake, Debian, Red Hat), JDL, Matlab, Octave.

I. Publications during the thesis

1. Chatziioannou A, Palaiologos G, Kolisis FN: Metabolic flux analysis as a tool for the elucidation of the metabolism of neurotransmitter glutamate. Metab Eng 2003, 5(3):201-210. (5yr IF 5.911)

2. Argyropoulos C, [Chatziioannou AA](#), Nikiforidis G, Moustakas A, Kollias G, Aidinis V: Operational criteria for selecting a cDNA microarray data normalization algorithm. *Oncol Rep* 2006, 15 Spec no.:983-996. (5yr IF 1.827)
3. [Chatziioannou A](#), Palaiologos G, Kolisis FN: An in-silico model of the biosynthesis of neurotransmitter glutamate, elucidates the complex regulatory role of glucocorticoids in neurotransmitter glutamate release. *Comput Biol Med* 2009, 39(6):501-511. (5yr IF 1.302)

II. Publications after completion of the thesis

4. Tzouveleakis A, Harokopos V, Paparountas T, Oikonomou N, [Chatziioannou A](#), Vilaras G, Tsiambas E, Karameris A, Bouros D, Aidinis V: Comparative expression profiling in pulmonary fibrosis suggests a role of hypoxia-inducible factor-1 α in disease pathogenesis. *American Journal of Respiratory and Critical Care Medicine* 2007, 176(11):1108-1119. (5yr IF 10.424)
5. [Chatziioannou A](#), Moulos P, Kolisis FN: Gene ARMADA: An integrated multi-analysis platform for microarray data implemented in MATLAB. *BMC Bioinformatics* 2009, 10:354. (5yr IF 3.493)
6. Moutselos K, Kanaris I, [Chatziioannou A](#), Maglogiannis I, Kolisis FN: KEGGconverter: a tool for the in-silico modelling of metabolic networks of the KEGG Pathways database. *BMC Bioinformatics* 2009, 10:324. (5yr IF 3.493)
7. Moulos P, Papadodima O, [Chatziioannou A](#), Loutrari H, Roussos C, Kolisis FN: A transcriptomic computational analysis of mastic oil-treated Lewis lung carcinomas reveals molecular mechanisms targeting tumor cell growth and survival. *BMC Med Genomics* 2009, 2:68. (5yr IF 3.879)
8. [Chatziioannou AA](#), Moulos P: Exploiting Statistical Methodologies and Controlled Vocabularies for Prioritized Functional Analysis of Genomic Experiments: the StRAnGER Web Application. *Front Neurosci* 2011, 5:8. (5yr IF 2.275)
9. Pilalis E, [Chatziioannou A](#), Thomasset B, Kolisis F: An in silico compartmentalized metabolic model of Brassica napus enables the systemic study of regulatory aspects of plant central metabolism. *Biotechnol Bioeng* 2011, 108(7):1673-1682. (5yr IF 3.856)
10. Moutselos K, Maglogiannis I, [Chatziioannou A](#): GOREvenge: a novel generic reverse engineering method for the identification of critical molecular players, through the use of ontologies. *IEEE Trans Biomed Eng* 2011, 58(12):3522-3527. (5yr IF 2.597)
11. Rao NAS, McCalman MT, Moulos P, Francoijs KJ, [Chatziioannou A](#), Kolisis FN, Alexis MN, Mitsiou DJ, Stunnenberg HG: Coactivation of GR and NF κ B alters the repertoire of their binding sites and target genes. *Genome Research* 2011, 21(9):1404-1416. (5yr IF 12.486)

12. Tenta R, Katopodis H, Chatziioannou A, Pilalis E, Calvo E, Van L-T, Labrie F, Kollis F, Koutsilieris M: Microarray analysis of survival pathways in human PC-3 prostate cancer cells. *Cancer Genomics and Proteomics* 2007, 4(4):309-317. (IF 1.027)
13. Pilalis E, Grigoroudis AI, Chatziioannou A, Panagiotidis CA, Kollis F, Kyriakidis D: E-coli genome-wide promoter analysis in search for potential AtoC target elements. *FEBS JOURNAL* 2008, 275(Suppl 1):286. (5yr IF 3.341)
14. Maglogiannis I, Sarimveis H, Kiranoudis CT, Chatziioannou AA, Oikonomou N, Aidinis V: Radial basis function neural networks classification for the recognition of idiopathic pulmonary fibrosis in microscopic images. *IEEE Trans Inf Technol Biomed* 2008, 12(1):42-54. (5yr IF 1.825)
15. Doukas CN, Maglogiannis I, Chatziioannou AA: Computer-supported angiogenesis quantification using image analysis and statistical averaging. *IEEE Trans Inf Technol Biomed* 2008, 12(5):650-657. (5yr IF 1.825)
16. Kanaris I, Mylonakis V, Chatziioannou A, Maglogiannis I, Soldatos J: HECTOR: Enabling microarray experiments over the hellenic grid infrastructure. *Journal of Grid Computing* 2009, 7(3):395-416. (IF 1.310)
17. Grigoroudis AI, Panagiotidis CA, Pilalis E, Chatziioannou A, Kollis F, Papadopoulos G, Kyriakidis DA: Identification of additional Escherichia coli AtoC binding target elements gives new insight to bacterial regulatory networks: molecular modeling of AtoC-DNA binding domain amino acids. *Amino Acids* 2009, 37(Suppl 1):S102-S103. (5yr IF 3.138)
18. Chatziioannou AA, Kanaris I, Doukas C, Moulos P, Kollis FN, Maglogiannis I: GRISSOM platform: Enabling distributed processing and management of biological data through fusion of grid and web technologies. *IEEE Transactions on Information Technology in Biomedicine* 2011, 15(1):83-92. (5yr IF 1.825)
19. Pilalis E, Chatziioannou AA, Grigoroudis AI, Panagiotidis CA, Kollis FN, Kyriakidis DA: Escherichia coli genome-wide promoter analysis: Identification of additional AtoC binding target elements. *BMC Genomics* 2011, 12. (5yr IF 4.328)
20. Sifakis EG, Lambrou GI, Prentza A, Vlahopoulos S, Koutsouris D, Tzortzatou-Stathopoulou F, Chatziioannou AA: Elucidating the identity of resistance mechanisms to prednisolone exposure in acute lymphoblastic leukemia cells through transcriptomic analysis: A computational approach. *J Clin Bioinforma* 2011, 1:36. (not IF yet)
21. Lambrou GI, Chatziioannou A, Vlahopoulos S, Moschovi M, Chrousos GP: Evidence for Deterministic Chaos in Aperiodic Oscillations of Acute Lymphoblastic Leukemia Cells in Long-Term Culture. *Chaotic Modeling and Simulation (CMSIM)* 2011, 1:119-126. (not IF yet)

22. Sifakis EG, Prentza A, Koutsouris D, Chatziioannou AA: Evaluating the effect of various background correction methods regarding noise reduction, in two-channel microarray data. *Computers in Biology and Medicine* 2012, 42(1):19-29. (5yr IF 1.302)
23. Valavanis I, Maglogiannis I, Chatziioannou AA: Intelligent Utilization of Biomarkers for the Recognition of Obstructive Nephropathy. *Intelligent Decision Technologies*, 2013, 7(1):11-22. (not IF yet)
24. Maglogiannis I, Goudas T, Doukas C, Chatziioannou A: A Collaborative Biomedical Image Mining Framework: Application on the Image Analysis of Microscopic Kidney Biopsies. *IEEE Trans Inf Technol Biomed* 2013, 17(1): 82-91. (5yr IF 1.825)
25. Logotheti M, Papadodima O, Venizelos N, Chatziioannou A, Kolisis F: A comparative genomic study in schizophrenic and bipolar disorder patients, based on microarray expression profiling meta-analysis. *Scientific World Journal* 2013, Article ID 685917, <http://dx.doi.org/10.1155/2013/685917> (IF 1.730)
26. Papadodima O, Sirsjö A, Kolisis FN, Chatziioannou A: Application of an integrative computational framework in transcriptomic data of atherosclerotic mice suggests numerous molecular players. *Advances in Bioinformatics* 2012, doi:10.1155/2012/453513. (not IF yet)
27. Pampalakis G, Obasuyi O, Papadodima O, Chatziioannou A, Zoumpourlis V, Sotiropoulou G: The KLK5 protease suppresses breast cancer by repressing the mevalonate pathway. *Oncotarget* 2013, 4(9). (IF 6.6)
28. Papadodima O, Chatziioannou A, Patrinoú-Georgoula M, Kolisis FN, Pletsá V, Guialis A: HuR-Regulated mRNAs Associated with Nuclear hnRNP A1-RNP Complexes. *International Journal of Molecular Sciences* 2013, 14(10), 20256-20281. (5yrIF 2.732)
29. Moutselos K, Maglogiannis I, Chatziioannou A: Integration of High-volume Molecular and Imaging Data for Composite Biomarker Discovery in the study of Melanoma, *Biomed Res International* 2013, (in press). (IF 2.880)
30. Valavanis I, Sifakis EG, Georgiadis P, Kyrtopoulos S, Chatziioannou AA. A Composite Framework for the Statistical Analysis of Epidemiological DNA Methylation Data with the Infinium Human Methylation 450K BeadChip, *Journal of Biomedical and Health Informatics* (former *IEEE Trans on Inform Tech in Biomed*) 2013, (in press). (5yr IF 1.825)

Peer reviewed international conference proceedings

31. Kanaris I, Chatziioannou A, Maglogiannis I, and Kolisis F: SBML-Bridge: An XML Pathway Converting Tool, 11th Panhellenic Conference on Informatics (PCI 2007), Patras Greece, 2007, 39-48.
32. Moutselos K, Chatziioannou A: Identifying and Deploying Kinetics Internally with SBML. 11th Panhellenic Conference in Informatics (PCI 2007), Patras Greece, 2007, 29-37.

33. Maglogiannis I, Soldatos J, Chatziioannou A, Milonakis V, Kanaris Y: A Web Based System Enabling Distributed Access and Intelligent Processing of Biological Data in Grid Environments, Artificial Intelligence and Innovations 2007: from Theory to Applications IFIP The International Federation for Information Processing Volume 247, 2007, 117-126.
34. Chatziioannou A, Moulos P: ANDROMEDA: A MATLAB automated cDNA microarray data analysis platform. Artificial Intelligence and Innovations 2007: from Theory to Applications IFIP The International Federation for Information Processing Volume 247, 2007, 127-136.
35. Kanaris I, Moutselos K, Chatziioannou A, Maglogiannis I, Kolisis FN: Building in-silico pathway SBML models from heterogeneous sources. BioInformatics and BioEngineering, 2008. BIBE 2008. 8th IEEE International Conference on, 1-6.
36. Doukas CN, Maglogiannis I, Chatziioannou A, Papapetropoulos A: Automated angiogenesis quantification through advanced image processing techniques. Engineering in Medicine and Biology Society, 2006. EMBS'06. 28th Annual International Conference of the IEEE, 2345-2348.
37. Maglogiannis, I., Chatziioannou, A., Soldatos, J., Milonakis, V., and Kanaris, Y: An Application Platform Enabling High Performance Grid Processing of Microarray Experiments. 20th IEEE International Symposium on Computer-Based Medical Systems, (CBMS'07), 2007, pp.477-482.
38. Chatziioannou A, Kanaris I, Maglogiannis I, Doukas C, Moulos P, Pilalis E, Kolisis F: GRISSOM web based grid portal: Exploiting the power of grid infrastructure for the interpretation and storage of DNA microarray experiments. Information Technology and Applications in Biomedicine (ITAB), 2009, 9th IEEE International Conference, 10.1109/ITAB.2009.5394410.
39. Lambrou GI, Sifakis EG, Prentza A, Chatziioannou A, Koutsouris D, Koulouki E, Tzortzotou-Stathopoulou F: Comparative computational methods for identification of inherent or acquired mechanisms of resistance to prednisolone in acute lymphoblastic leukemia cells. Information Technology and Applications in Biomedicine (ITAB), 2009 9th IEEE International Conference, 2009, 10.1109/ITAB.2009.5394359.
40. Doukas C, Maglogiannis I, Chatziioannou A: An open web services -based framework for data mining of biomedical image data. Information Technology and Applications in Biomedicine (ITAB), 2009 9th IEEE International Conference, 2009, 10.1109/ITAB.2009.5394403.
41. Chatziioannou A, Kanaris I, Doukas C, Maglogiannis I: Using Grid Infrastructure for the Promotion of Biomedical Knowledge Mining. XII Mediterranean Conference on Medical and Biological Engineering and Computing 2010, 2010, 438-441.
42. Lambrou GI, Chatziioannou A, Vlahopoulos S, Moschovi M, Chrousos GP: Evidence for Deterministic Chaos in aperiodic Oscillations of Acute Lymphoblastic Leukemia Cells in

Long-Term Culture. 3rd Chaotic Modeling and Simulation International Conference, (CHAOS 2010) 2010, Chania , Crete, Greece 1-4 June 2010:239-245.

43. Moutselos K, Maglogiannis I, Chatziioannou A: Delineation and interpretation of gene networks towards their effect in cellular physiology- A reverse engineering approach for the identification of critical molecular players, through the use of ontologies. Engineering in Medicine and Biology Society (EMBC), 2010 Annual International Conference of the IEEE, 6709-6712.
44. Ladoukakis E, Georgiadis P, Chatziioannou A: An epidemiological population study reveals a sex-related differential effect of PAD exposure and gene polymorphisms on bulky DNA adducts formation. Technology and Applications in Biomedicine (ITAB), 2010 10th IEEE International Conference, 10.1109/ITAB.2010.5687782.
45. Valavanis I, Caubet C, Maglogiannis I, Klein J, Schanstra J, Chatziioannou A: Analysis of pediatric Obstructive Nephropathy using protein antibody arrays and computational techniques. Technology and Applications in Biomedicine (ITAB), 2010 10th IEEE International Conference, 10.1109/ITAB.2010.5687660.
46. Papadodima O, Chatziioannou A, Sirsjo A, Kolisis FN: Bioinformatic transcriptomic analysis of apoE deficient mice suggests alterations in atherosclerosis related molecular mechanisms Technology and Applications in Biomedicine (ITAB), 2010 10th IEEE International Conference, 10.1109/ITAB.2010.5687785.
47. Lambrou GI, Chatziioannou A, Adamaki M, Moschovi M, Kouloutouki E, Karakonstantakis T, Chrousos GP, Vlahopoulos S: Studying the nonlinearities of T-cell leukemia growth and the underlying metabolism upon glucocorticoid treatment through the application of dynamic mathematical methodologies. Technology and Applications in Biomedicine (ITAB), 2010 10th IEEE International Conference, 10.1109/ITAB.2010.5687768.
48. Doukas C, Chatziioannou A, Maglogiannis I: Intelligent planning of biomedical image mining workflows. Information Technology and Applications in Biomedicine (ITAB), 2010 10th IEEE International Conference on, 10.1109/ITAB.2010.5687677.
49. Doukas C, Goudas T, Fischer S, Mierswa I, Chatziioannou A, Maglogiannis I: An open data mining framework for the analysis of medical images: Application on Obstructive Nephropathy microscopy images. Engineering in Medicine and Biology Society (EMBC), 2010 Annual International Conference of the IEEE, 4108-4111.
50. Valavanis I, Moulos P, Maglogiannis I, Klein J, Schanstra J, Chatziioannou A: Intelligent selection of human miRNAs and mouse mRNAs related to obstructive nephropathy. Artificial Intelligence Applications and Innovations., vol. 364 12th INNS EANN-SIG International Conference, EANN 2011 and 7th IFIP WG 12.5 International Conference, AIAI 2011, Corfu, Greece, September 15-18, 2011, Proceedings , Part II 2011, 464-471.
51. Moulos P, Valavanis I, Klein J, Maglogiannis I, Schanstra J, Chatziioannou A: Unifying the integration, analysis and interpretation of multi-omic datasets: exploration of the disease

networks of Obstructive Nephropathy in children. Conference proceedings : Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Conference 2011, 2011:3716-3719.

52. Pilalis E, Ladoukakis E, Kolisis FN, Chatziioannou A: A Galaxy workflow for the functional annotation of metagenomic samples. Artificial Intelligence: Theories and Applications 7th Hellenic Conference on AI, SETN 2012, Lamia, Greece, May 28-31, 2012. Proceedings, 247-253.
53. Papadodima O, Sirsjo A, Chatziioannou A: Bioinformatic analysis of expression data of ApoE deficient mice. Theories and Applications 7th Hellenic Conference on AI, SETN 2012, Lamia, Greece, May 28-31, 2012. Proceedings: 254-261.
54. Goudas T, Doukas C, Chatziioannou A, Maglogiannis I. Advanced characterization of microscopic Kidney biopsies utilizing image analysis techniques. Engineering in Medicine and Biology Society (EMBC), 2012 Annual International Conference of the IEEE, 4414-4417.
55. Goudas T, Maglogiannis I, Chatziioannou A: Advanced Block Detection and Quantification of Fibrotic Areas in Microscopy Images of Obstructive Nephropathy. 24th IEEE International Conference on Tools with Artificial Intelligence ICTAI 2012.
56. Moutselos K, Chatziioannou A ,Maglogiannis I: Feature Selection Study on Separate Multi-modal Datasets: Application on Cutaneous Melanoma. Artificial Intelligence Applications and Innovations. AIAI 2012 International Workshops: AIAB, AIEA, CISE, COPA, IIVC, ISQL, MHDW, and WADTMB, Halkidiki, Greece, September 27-30, 2012, Proceedings, Part II,36-45.
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