Lefteris Koumakis

Curriculum Vitae



Lefteris Koumakis

Assistant Professor specializing in Data Science and Machine Learning

Department of Electrical and Computer Engineering,

Hellenic Mediterranean University

Summary profile

Lefteris Koumakis is an Assistant Professor in the Department of Electrical and Computer Engineering at the Hellenic Mediterranean University, specializing in Data Science and Machine Learning. He holds a Ph.D. in Computational Biology from the Technical University of Crete, with a dissertation titled "*Computational methods for knowledge discovery from heterogeneous data sources: methodology and implementation on biological and molecular sources.*" He also holds a Master's degree (M.Sc.) and a Bachelor's degree (B.Sc.) from the Department of Computer Science at the University of Crete.

His research activity focuses on the development and application of advanced Machine and Deep Learning methods and computational techniques for the analysis of complex and multimodal datasets, with particular emphasis on applications in biomedical informatics, computational biology, and digital health.

He has extensive experience in the design and implementation of European research projects, having served as scientific and technical coordinator, technical coordinator, and work package leader in numerous Horizon programme projects. Overall, he has participated in more than 25 international and 4 national research projects. His scientific work includes more than 90 publications in international journals and conference proceedings.

In addition, he has significant teaching experience in undergraduate and postgraduate programs in the fields of machine learning, bioinformatics, and computational biology. He also actively participates in the international scientific community as a reviewer for international journals and as an evaluator of research proposals for the European Union's Horizon programme.

Education

2011–2014 **Doctorate of Philosophy (Ph.D.) in Systems biology**
Technical University of Crete Greece
Dissertation: Computational methods for knowledge discovery from heterogeneous data sources: methodology and implementation on biological and molecular sources.
Advisors: Vassilis Moustakis, George Potamias, Michael Zervakis.

2002–2004 **Master of Science (M.Sc.)**
Computer Science Department, University of Crete, Greece
Thesis: HealthObs: Health Observatory. Uniform Modelling and Intelligent Data Processing in Distributed and Heterogeneous Clinical Information Sources.
Advisors: Stelios Orfanoudakis, George Potamias

1996-2001 **Bachelor of Science (B.Sc.)**
Computer Science Department, University of Crete, Greece
Thesis: Automated Construction and Revision of Semantic Networks.
Advisor: George Potamias

Awards

- The publication entitled Modeling susceptibility to periodontitis received the "***IADR/AADR William J. Gies Award***" for **the best clinical research paper** published in the Journal of Dental Research (JDR) during the preceding year. The JDR is the top ranked journal (Impact Factor: 4.144) for original scientific articles in dentistry.
- The publication: L. Koumakis, G. Potamias, K. Marias and M. Tsiknakis. *"An Algorithmic Approach for the Effect of Transcription Factor Binding Sites over Functional Gene Regulatory Networks"* received the **Best Student Paper Award** at the 15th IEEE International Conference on Bioinformatics & Bioengineering (BIBE).
- The publication entitled «Donor's support tool: Enabling informed secondary use of patient's biomaterial and personal data» (doi: 10.1016/j.ijmedinf.2016.10.019) has been selected to be included in the IMIA Yearbook of Medical Informatics as **one of the best articles from the literature in the 'Consumer Health Informatics'** subfield of medical informatics published in the past year.

Scholarships

- **Ph.D. Scholarship (2011-2014): Heraclitus II**, Investing in knowledge society through the European Social Fund.
- **M.Sc. Student Research Fellowship (2002-2004)**, Foundation for Research and Technology – Hellas (FORTH) - Institute of Computer Science (ICS)
- **Erasmus Program Scholarship (2001)** at Universitat Politècnica de Catalunya (Spring 2001)
- **Undergraduate Student Research Fellowship (2000-2001)**, Foundation for Research and Technology – Hellas (FORTH) - Institute of Computer Science (ICS)

Leadership Activities

Jan 2026 - Now **Assistant Professor specializing in Data Science and Machine Learning**

Assistant Professor in the Department of Electrical and Computer Engineering at the Hellenic Mediterranean University, specializing in Data Science and Machine Learning.

Aug 2023 – Dec. 2025 **Sphynx capability manager - Security Information and Event Management**

Capability manager for the SIEM of Sphynx. As Capability Manager for the SIEM team, I provide strategic leadership to guide the development and integration of security monitoring solutions. I align team efforts with organizational goals, ensuring high performance, innovation, and technical excellence in continuous monitoring and event processing. Through close collaboration with cross-functional teams, I drive continuous improvement and roadmap planning to meet evolving security needs.

Sep 2023 – Feb 2025 **Technical and scientific coordinator for the HORIZON EUROPE project Smart Bear**

Technical and scientific coordinator on behalf of Sphynx at the EU Horizon EUROPE project Smart Bear (Smart Big Data Platform to Offer Evidence-based Personalised Support for Healthy and Independent Living at Home - 857172). Total budget of the project 22.3 Million euros (Sphynx budget 830.000).

Jul 2023 - now **Technical and scientific coordinator for the HORIZON EUROPE project RETENTION**

Technical and scientific coordinator on behalf of Sphynx at the EU Horizon EUROPE project RETENTION (heaRt failurE paTient managEment and iNTerventIOns usiNg continuous patient monitoring outside hospitals and real world data - 965343). Total budget of the project 6 Million euros (Sphynx budget 488.000).

2015 – April 2023 **IT Architect of the Greek Biobanks network (BBMR.gr)**

BBMRI-GR will create a network of Greek Biobanks and connect them with the BBMRI-ERIC. The IT architect is responsible for the coordination and connection of all the Greek Centers of biobank collections and their linkage with existing collections in other European Centers, via the BBMRI-ERIC. Furthermore, L. Koumakis represents Greece at the BBMRI-ERIC Common Services IT.

2022-April 2023 **Co-PI on behalf of FORTH for the HORIZON EUROPE project SafePolyMed**

Scientific coordinator on behalf of CBML at the EU Horizon EUROPE project SafePolyMed - Improve Safety in Polymedication by Managing Drug-Drug-Gene Interactions (HORIZON-HLTH-2021-CARE-05-01 No. 101057639) and **leader of the machine learning analysis working group.** Total budget of the project 5.65 Million euros (CBML-FORTH budget 600.000).

2020-April 2023 **Coordinator of the IDAology project (national RESEARCH - CREATE – INNOVATE)**

Scientific coordinator of FORTH for the national RCI project T2ΕΔΚ-03995 IDAology (Livestock farming culture in Ida communities (Psiloritis Geopark) as a reality coverage experience and digital repository of Intangible Cultural Heritage of the mountain.). Total budget 510.000 (FORTH budget 260.000).

2019-2022 **Co-PI on behalf of FORTH and Work package leader at the Horizon2020 project MyPal**

Work package leader on behalf of CBML at the H2020-SC1-2018-Single-Stage-RTD - SC1-BHC-23-2018 project MyPal (Fostering Palliative Care of Adults and Children with Cancer through Advanced Patient Reported Outcome Systems) and leader of the software architecture. Total budget of the project 4 Million euros (FORTH budget 330.000).

2017 - 2019 **Technical coordinator EU-Horizon2020 project BOUNCE**

Technical coordinator for the EU Horizon2020 project BOUNCE “Predicting Effective Adaptation to Breast Cancer to Help Women to BOUNCE Back” (SC1-PM-17-2017 No. 777167). Total budget of the project 5 Million euros (FORTH budget 700.000).

2015 – 2018 **PI on behalf of CBML for the Horizon2020 project iManageCancer**

Scientific coordinator on behalf of CBML at the EU Horizon2020 project iManageCancer - Empowering patients and strengthening self-management in cancer diseases (H2020-PHC-26-2014 No. 643529) and **leader of the Smart analytical data services work package**. Total budget of the project 4.8 Million euros (CBML-FORTH budget 750.000).

2011 - 2015 **Work Package leader at the FP7 EU project EURECA**

Work package leader on behalf of CBML at the FP7 EU project EURECA - Enabling information re-Use by linking clinical REsearch and Care (FP7-ICT-2011.7 No 288048). Total budget of the project 13 Million euros (CBML-FORTH budget 960.000).

Employment

Jan 2026 - Now

Assistant Professor specializing in Data Science and Machine Learning

Assistant Professor in the Department of Electrical and Computer Engineering at the Hellenic Mediterranean University, specializing in Data Science and Machine Learning.

May 2023 – Dec 2025

EU Project manager & capability manager - Sphynx

EU Project manager & capability manager at Sphynx Technologies Solutions. My role bridges project coordination and technical leadership, ensuring successful project delivery while strengthening our product's cybersecurity posture. Current activities:

- Oversee the planning, execution, and reporting of 5 EU-funded projects
- Lead the Security Information and Event Management (SIEM) team within our product capability area, driving innovation and integration of advanced security solutions.

2019 – April 2023

Collaborating researcher ICS-FORTH

Collaborating researcher at Computational BioMedicine Laboratory (CBML) of Institute of Computer Science (ICS) at Foundation for Research and Technology - Hellas (FORTH). Current activities:

- IT Architect of the Greek Biobanks network (BBMR.gr)
- Leader of the "Patient Reported Outcome Tool for Adults" work package in the MyPal project and Co-PI for FORTH.
- Co-PI on behalf of FORTH for the SafePolyMed HORIZON EUROPE project.
- Coordinator of the national research project IDAology (RESEARCH - CREATE – INNOVATE).

2015 – 2019

Collaborating researcher ICS-FORTH

Collaborating researcher at Computational BioMedicine Laboratory (CBML) of Institute of Computer Science (ICS) at Foundation for Research and Technology - Hellas (FORTH):

- IT Architect of the Greek Biobanks network (BBMR.gr)
- Scientific coordinator on behalf of FORTH at the national RCI project cerHPVix.
- Scientific coordinator on behalf of FORTH at the EU Horizon2020 project iManageCancer and leader of the Smart analytical data services work package.

Sept 2014 -Dec 2014

Postdoctoral Researcher - University of Oxford

- Postdoctoral researcher at the Computational Biology and Integrative Genomics Group of the Department of Oncology, University of Oxford under the supervision of Dr. Francesca Buffa.

2011 - 2014

Senior Technical Staff ICS-FORTH

Participated in EURECA, P-medicine and ENCCA EU FP7 projects:

- **EURECA**: Leader of the evaluation and validation work package. Worked and coordinated the verification, validation and evaluation activities of the EURECA components and the clinical scenarios.
- **ENCCA**: Member of the biological research IT team of the EUROPEAN NETWORK for CANCER research in CHILDREN and ADOLESCENTS (ENCCA project FP7-HEALTH-F2-2011 No. 261474). Worked on the definition of the minimum common dataset for biobanks and on the implementation of a knowledge discovery algorithm for gene regulatory network.
- **P-Medicine**: Implemented bioinformatics and systems biology algorithms for miRNA datasets and their combination with gene regulatory networks. Designed and implemented a natural language processing framework for semantic biomedical resource discovery.

2010 - 2011 **Technical Staff ICS-FORTH**

- Worked in **REACTION** (Remote Accessibility to Diabetes Management and Therapy in Operational Healthcare Networks, FP7-IP-No 248590) for the design and implementation of predictive models and risk assessment for diabetes. Developed new general algorithms for predictive modelling and participated in the design of the predictive model platform.

October 2005 - December 2009 **Technical Staff ICS-FORTH**

Worked at ACGT, Gen2Phen, InfoBioMed and MIMP EU projects as technical staff/research assistant:

- **ACGT** (Advancing Clinico-Genomic Clinical Trials on Cancer: Open Grid Services for Improving Medical Knowledge Discovery, EU-FP6-IST-026996): Worked on the design and implementation of a web based scientific workflow editor for the orchestration of bioinformatics web services and scripts. Integration of clinical (from clinical trials) and genomic data and implementation of bioinformatics algorithms for (i) gene selection (ii) classification.
- **InfoBioMed** (Structuring European Biomedical Informatics to Support Individualized Healthcare EU-FP6-IST-507585): Design and implementation of the online (web based) biobank database. Implementation of text mining algorithms for plain text data.
- **Gen2Phen** (Genotype-to-Phenotype Databases: A Holistic Solution, EU-FP7-HEALTH-200754): Research and evaluation of web based scientific workflow platforms for distributed environments.
- **MIMP** (Development of curriculum for a Master's degree in Medical Informatics in Egypt, TEMPUS JEP-31053-2003): Professor's assistant for the Master's degree in Medical Informatics in Egypt.
- **WS-Talk** (Web Services Communicating in the Language of Their User Community, EU-FP6-COOP-CT-00602615): Worked on natural language processing algorithms and web services orchestration.

2004 –2005	**Greek Air Force (**Mandatory) Military Service
September 2001 – April 2004	**Graduate scholarship** • Research assistant/R&D engineer. Designed and implemented a standalone (java-based) clinical decision support system targeting the seamless integration and intelligent processing of distributed and heterogeneous clinical and genomic data.
September 2000 – August 2001	**Undergraduate scholarship** • Worked on graph theory and semantic networks and implemented an automatic revision and construction system for semantic networks using supervised learning algorithms.

Teaching Experience

- **5 semesters** (spring 2022, autumn 2022, spring 2023, autumn 2024, spring 2025) **Adjunct professor -** course "**Algorithms in Molecular Biology and Structural Bioinformatics**" at the M.Sc. Bioinformatics and Neuroinformatics, Hellenic Open University
- ***6 semesters*** *(fall 2018, spring 2019, fall 2019, spring 2020, fall 202, spring 2021)*: **Adjunct professor -** course "**Mathematical Models in Biology**" at the M.Sc. Bioinformatics and Neuroinformatics, Hellenic Open University
- ***6 semesters*** *(spring 2017, spring 2018, spring 2019, spring 2020, spring 2021, spring 2022)*: **Adjunct professor -** course "**Bioinformatics and Simulation of Physiological Systems**" at the Department of Electrical and Computer Engineering of the Hellenic Mediterranean University.
- ***5 semesters*** *(spring 2018, spring 2019, spring 202, spring 2021, spring 2022)*: **Adjunct professor -** course "**Introduction to Biomedical Signals and Applications**" at the Department of Electrical and Computer Engineering of the Hellenic Mediterranean University.
- ***1 semester*** *(Fall 2017)*: **Adjunct professor -** course "**Multimedia eHealth Services**" at the Department of Informatics Engineering, Technological Education Institute of Crete.
- ***1 semester (Spring 2010):*** Adjunct Laboratory Collaborator/Instructor at the Department of Informatics Engineering, Technological Education Institute of Crete, course "**Object-oriented programming**"
- ***8 semesters*** *(Fall 2005, Spring 2006, Fall 2006, Spring 2007, Fall 2007, Spring 2008, Fall 2008, Spring 2009):* **Adjunct Laboratory Collaborator/Instructor** at Department of Sciences, Technological Education Institute of Crete for the course "**Advanced programming**" at Civil Engineering department
- ***4 semesters*** *(Fall 2001, Spring 2002, Fall 2002 & spring 2003):* **Teaching assistant** at Computer Science Department, University of Crete for the courses "Machine learning", "Logic in Computer Science" and "Digital Design".

Thesis supervision

• Undergraduate

1. Karakatsanov M. (HMU – 2022) 3D visualization of multiple gene regulatory networks for pathway analysis results.
2. Droumalia F. (HMU – 2022) A non-binary approach for pathway analysis algorithms.
3. Panagiotakis G. (HMU - 2021). Gene expression and regulation analysis using deep learning.
4. Giannakos, I. (HMU - 2021). Categorical embedding with Deep Learning for single-nucleotide polymorphism.

5. Pavlidou E. (HMU - 2020) Implementation of a mobile app for psycho-emotional assessment (Co-supervision)
6. Koutoulakis M. (HMU - 2020) Implementation of a federated workflow execution engine for life sciences through virtualization services (Co-supervision)
7. Aibaliotis T. (HMU - 2019) An Android application for monitoring and identification of sleep patterns (Co-supervision)
8. Nika O. (HMU - 2019) e-Questionnaire Platform (Co-supervision)
9. Sante E. (HMU - 2018) Well-being estimation using data from smart mobile devices (Co-supervision)

- **M.Sc.**

1. Ioannou M. (HOU – 2026) Applications of Machine Learning in Parkinson's Disease
2. Saganas N. (HOU – 2025) Evaluation of Biomarkers from Microbial Heat Shock Proteins Using Machine Learning in the Gut Microbiome of Dairy Cows
3. Karakoumis B. (HOU – 2023) Analysis of free gene expression data from RNA Sequencing and DNA microarrays with qualitative comparison of results.
4. Keramidas (HOU – 2023) Machine learning on integrated multi-omics data
5. Laskaridis A. (HOU – 2023) Biosumulatios: the representation formats for communicating and storing computational models of biological processes and the applications that run simulations based on them.
6. Vanis A. (HOU – 2023) Application of Deep Learning for Polyp Detection
7. Konstantinidou D. (HOU – 2023) Gene network summarization
8. Karathimios G. (HOU – 2022) Knowledge Discovery from Biological Graphs for Identifying Network Biomarkers in Complex Diseases
9. Stylianou A. (HOU – 2023) Pre-processing and Feature Extraction from Magnetoencefalography (MEG). Development and Training of a Deep Learning Model for MEG Signal Classification into Healthy and Epileptic.
10. Konstantinidou D. (HOU – 2023) Gene network summarization
11. Pityanou K. (HMU - 2022) A set of mechanisms to collect, display and analyze quality metrics of Research Objects as a method to augment reproducibility and openness in bioinformatics research (Co-supervision)
12. Karagiannakou V. (HOU - 2021) RNA-seq gene expression and enrichment analysis for the detection of differentially expressed gene sets of Leukemia public data.
13. Kirres P. (HOU - 2021) Analysis of Publicly Available Gene Expression Data Regarding Oral Squamous Cell Carcinoma
14. Tsichlaki S. (HMU - 2021) Type 1 diabetes hypoglycaemia prediction based on continuous glucose monitoring and heart rate variability (Co-supervision)

- **Ph.D.**

1. Hatzimina M. (HMU - Ongoing) Intelligent Conversational Agents in Healthcare (Co-supervision)

Skills

- **Languages**: Greek (Native), English-ILR level 4 (Full professional proficiency), Spanish-ILR level 0 (Basic)
- **Programming languages**: python (3 year), Java (15 years), R-statistic (4 years), JavaScript (7 years), C++ (5 years), C, C#, php (1 year), V. Basic, .net, Pascal
- **Markup languages/Data Models**: XML, RDF, OWL, HTML, CSS, json
- **Other tools/platforms:** Weka, SPSS, Tomcat/servlets, web/rest services, Unix

Publications

Statistics (January 2026):

- **95 publications** at international peer reviewed journals and conferences (google scholars link)
- **Cumulative impact factor over 100**
- **H-index: 26**
- **i10-index: 54**
- **Over 2400 Citations**

The following table shows the impact factor of the journals that I have publish.

Publication	**Journal (& year of publication)**	Impact Factor	Scimago
41	Algorithms MDPI (2023)	2.36	Q1
40	JMIR Diabetes (2022)	7.08	Q1
39	JMIR mHealth and uHealth (2022)	4.95	Q1
38	Applied Sciences (2021)	2.67	Q1
37	Frontiers in Digital Health (2021)	2.21	Q1
36	JCO Clinical Cancer Informatics (2021)	2.95	Q1
35	Computational and Structural Biotechnology Journal (2020)	6.01	Q1
34	International Journal of Oncology (2020)	3.89	Q1
28,33	Journal of Biomedical Informatics (2020)	2.95	Q1
30	IEEE reviews in biomedical engineering (2019)	6.18	Q1
23	Biopreservation and Biobanking (2018)	1.90	Q1
22	*Nucleic Acids Research* (2017)	10.16	Q1
21	*International journal of medical informatics* (2017)	3.21	Q1
20	*PLoS computational biology* (2016)	4.54	Q1
19	*EBioMedicine* (2016)	6.68	Q1
18	BMC Medical Informatics and Decision Making (2016)	1.64	Q1
17	Journal of biomedical informatics (2016)	2.12	Q1
14	*BMC medical informatics and decision making* (2015)	1.83	Q1
12,24,25,26,27	*ecancermedicalscience* (2019)	1.78	Q2
11	*Computers in biology and medicine* (2013)	2.28	Q1
10	*Journal of dental research* (2013)	4.14	Q1
8	*Journal of Diabetes and its Complications* (2013)	3.00	Q1
2	In *Methods and Applications of Artificial Intelligence* (2004)	0.25	Q3
1	*Information Communication Technologies in Health* (2004)	1.82	Q2

Journal Articles(J)

45 Chatzikonstantinou, Thomas, Maria Vasilopoulou, Dimitrios Kyrou, Georgios Karakatsoulis, Panagiotis Argyropaidas, Sotiria Besikli-Dimou, Panos Bonotis, **Lefteris Koumakis**, et al. "Assessing an eHealth Intervention on Quality of Life in Patients With Chronic Lymphocytic Leukemia and Myelodysplastic Syndromes: The MyPal Randomized Controlled Trial." *JCO oncology practice* (2025): OP-25.

44 Petrakis, Aristeidis, **Lefteris Koumakis**, Eleni Kazantzaki, and Haridimos Kondylakis. "Transforming healthcare: A comprehensive review of augmented and virtual reality interventions." Sensors 25, no. 12 (2025): 3748.

43 Manta, Ourania, Nikolaos Vasileiou, Olympia Giannakopoulou, Konstantinos Bromis, Ioannis N. Kouris, Maria Haritou, **Lefteris Koumakis** et al. "Architectural Design for Enhancing Remote Patient Monitoring in Heart Failure: A Case Study of the RETENTION Project." In BIOSTEC (2), pp. 708-715. 2024.

42 Georgia Trouli, Eirini, Alexandros Pappas, Georgia Troullinou, **Lefteris Koumakis**, Nikos Papadakis, and Haridimos Kondylakis. "SumMER: Structural Summarization for RDF/S KGs." *Algorithms* 16, no. 1 (2023): 18.

41 Tsichlaki, Stella, **Lefteris Koumakis**, and Manolis Tsiknakis. "Type 1 Diabetes Hypoglycemia Prediction Algorithms: Systematic Review." JMIR diabetes 7, no. 3 (2022): e34699.

40 Payne, Cathy, Haridimos Kondylakis, and **Lefteris Koumakis**. "Digital Health for Palliative Care." Frontiers in Digital Health 4 (2022): 888419.

39 Triantafyllidis, Andreas, Haridimos Kondylakis, Dimitrios Katehakis, Angelina Kouroubali, **Lefteris Koumakis**, Kostas Marias, Anastasios Alexiadis, Konstantinos Votis, and Dimitrios Tzovaras. "Deep Learning in mHealth for Cardiovascular Disease, Diabetes, and Cancer: Systematic Review." *JMIR mHealth and uHealth* 10, no. 4 (2022): e32344.

38 Alexandros Kanterakis, Nikos Kanakaris, Manos Koutoulakis, Konstantina Pitianou, Nikos Karacapilidis, **Lefteris Koumakis**, and George Potamias. "Converting Biomedical Text Annotated Resources into FAIR Research Objects with an Open Science Platform." *Applied Sciences* 11, no. 20 (2021): 9648.

37 Lefteris Koumakis, Fatima Schera, Heather Parker, Panos Bonotis, Maria Chatzimina, Panagiotis Argyropaidas, Giorgos Zacharioudakis et al. "Fostering palliative care through digital intervention: a platform for adult patients with hematologic malignancies." *Frontiers in Digital Health* 3 (2021): 730722.

36 Bonotis, Panos, Achilleas Chytas, Giorgos Zacharioudakis, Christina Karamanidou, **Lefteris Koumakis**, Kostas Stamatopoulos, and Pantelis Natsiavas. "Randomization of Clinical Trial Participants via an Integrated Web Service." In Public Health and Informatics, pp. 1124-1125. IOS Press, 2021.

35 **Koumakis, Lefteris**. "Deep learning models in genomics; are we there yet?." *Computational and Structural Biotechnology Journal* (2020).

34 Trivizakis, Eleftherios, Georgios Z. Papadakis, Ioannis Souglakos, Nikolaos Papanikolaou, **Lefteris Koumakis**, Demetrios A. Spandidos, Aristidis Tsatsakis, Apostolos H. Karantanas, and Kostas Marias. "Artificial intelligence radiogenomics for advancing precision and effectiveness in oncologic care." *International Journal of Oncology* 57, no. 1 (2020): 43-53.

33 Kondylakis, Haridimos, **Lefteris Koumakis**, Manolis Tsiknakis, and Stephan Kiefer. "Personally managed health data: Barriers, approaches and a roadmap for the future." *Journal of Biomedical Informatics* (2020): 103440-103440.

32 Kouroubali, Angelina, **Lefteris Koumakis**, Haridimos Kondylakis, and Dimitrios G. Katehakis. "Smart Healthcare Apps for Quality Cancer Patient Support." *International Journal of Big Data and Analytics in Healthcare (IJBDAH)* 5, no. 1 (2020): 28-48.

31 Kondylakis, Haridimos, Santiago Hors-Fraile, **Lefteris Koumakis**, Angelina Kouroubali, George Notas, Alejandro Rivero-Rodriguez, Prodromos Sidiropoulos, Panagiotis Simos, and Dimitrios G. Katehakis. "An Innovative, Information and Communication Technology Supported Approach, Towards Effective Chronic Pain Management." In *Alternative Pain Management: Solutions for Avoiding Prescription Drug Overuse*, pp. 125-145. IGI Global, 2020.

30 **Lefteris Koumakis**, Chariklia Chatzaki, Eleni Kazantzaki, Evangelia Maniadi, and Manolis Tsiknakis "Dementia care frameworks and assistive technologies for their implementation: A Review." IEEE reviews in biomedical engineering (2019).

29 Kouroubali, Angelina, **Lefteris Koumakis**, Haridimos Kondylakis, and Dimitrios G. Katehakis. "An Integrated Approach Towards Developing Quality Mobile Health Apps for Cancer." In Mobile Health Applications for Quality Healthcare Delivery, pp. 46-71. IGI Global, 2019.

28 Haridimos Kondylakis, **Lefteris Koumakis**, Manolis Tsiknakis, and Stephan Kiefer. "The Vision of Personally Managed Health Data: Barriers, Approaches and Roadmap for the Future." Journal of Biomedical Informatics, v. 81, p. 131-132 (2018).

27 Flavia Faccio, Chiara Renzi, Chiara Crico, Eleni Kazantzaki, Haridimos Kondylakis, **Lefteris Koumakis**, Kostas Marias, and Gabriella Pravettoni. "Development of an eHealth tool for cancer patients: monitoring psycho-emotional aspects with the Family Resilience (FaRe) Questionnaire." *ecancermedicalscience* 12 (2018).

26 Galatia Iatraki, Haridimos Kondylakis, **Lefteris Koumakis**, Maria Chatzimina, Eleni Kazantzaki, Kostas Marias, and Manolis Tsiknakis. "Personal Health Information Recommender: implementing a tool for the empowerment of cancer patients." *ecancermedicalscience* 12 (2018).

25 Chiara Crico, Chiara Renzi, Norbert Graf, Alena Buyx, Haridimos Kondylakis, **Lefteris Koumakis**, and Gabriella Pravettoni. "mHealth and telemedicine apps: in search of a common regulation." ecancermedicalscience 12 (2018).

24 Fatima Schera, Michael Schäfer, Anca Bucur, Jasper van Leeuwen, Eric Herve Ngantchjon, Norbert Graf, Haridimos Kondylakis, **Lefteris Koumakis**, Kostas Marias, and Stephan Kiefer. "iManageMyHealth and iSupportMyPatients: mobile decision support and health management apps for cancer patients and their doctors." ecancermedicalscience 12 (2018).

23 Holub, Petr, Florian Kohlmayer, Fabian Prasser, Michaela Th Mayrhofer, Irene Schlünder, Gillian M. Martin, Sara Casati, **Lefteris Koumakis** et al. "Enhancing reuse of data and biological material in medical research: from FAIR to FAIR-health." *Biopreservation and biobanking* 16, no. 2 (2018): 97-105.

22 **Koumakis, Lefteris**, Panos Roussos, and George Potamias. "minepath. org: a free interactive pathway analysis web server." *Nucleic Acids Research*(2017). (to appear July 2017)

21 Kondylakis, Haridimos, **Lefteris Koumakis**, Stephanie Hänold, Iheanyi Nwankwo, Nikolaus Forgó, Kostas Marias, Manolis Tsiknakis, and Norbert Graf. "Donor's support tool: Enabling informed secondary use of patient's biomaterial and personal data." *International journal of medical informatics* 97 (2017): 282-292

20 **Koumakis, Lefteris**, Alexandros Kanterakis, Evgenia Kartsaki, Maria Chatzimina, Michalis Zervakis, Manolis Tsiknakis, Despoina Vassou et al. "MinePath: mining for phenotype differential sub-paths in molecular pathways." *PLoS computational biology* 12, no. 11 (2016): e1005187.

19 Mehta, Shaveta, Nick P. Hughes, Sonia Li, Adrian Jubb, Rosie Adams, Simon Lord, **Lefteris Koumakis** et al. "Radiogenomics monitoring in breast cancer identifies metabolism and immune checkpoints as early actionable mechanisms of resistance to anti-angiogenic treatment." *EBioMedicine* 10 (2016): 109-116.

18 Bucur, Anca, Jasper van Leeuwen, Nikolaos Christodoulou, Kamana Sigdel, Katerina Argyri, **Lefteris Koumakis**, Norbert Graf, and Georgios Stamatakos. "Workflow-driven clinical decision support for personalized oncology." *BMC medical informatics and decision making* 16, no. 2 (2016): 87.

17 Haridimos Kondylakis, Brecht Claerhout, Mehta Keyur, Lefteris Koumakis, Jasper van Leeuwen, Kostas Marias, David Perez-Rey, Kristof de Schepper, Manolis Tsiknakis, Anca Bucur. "The INTEGRATE Project: Delivering solutions for efficient multi-centric clinical research and trials." Journal of biomedical informatics 62, 32-47.

16 Kondylakis, Haridimos, **Lefteris Koumakis**, Manolis Tsiknakis, Kostas Marias and Stephan Kiefer. "Big Data in Support of the Digital Cancer Patient". ERCIM News, 104, 27-28, January 2016.

15 **Koumakis, L.**, K. Sigdel, G. Potamias, S. Sfakianakis, J. van Leeuwen, G. Zacharioudakis, V. Moustakis et al. "Bridging miRNAs and pathway analysis in clinical decision support: a case study in nephroblastoma." *Network Modeling Analysis in Health Informatics and Bioinformatics* 4, no. 1 (2015): 1-12.

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