



BioMed-AI Summer School

Biomedicine & Bioethics supporting responsible innovation in the era of Big Data & AI

Athens, 12-16 June 2023

Draft Program

1st day – Monday, 12th June

09:00-10:00	Registration at the Premises of the Academy of Athens, Panepistimiou 28, Athens
10:00-10:30	<i>Welcome talks</i> <i>Prof. Lucas Papademos</i> <i>President of Biomedical Research Foundation, Academy of Athens</i> <i>Prof. Michael Stathopoulos,</i> <i>President of the Academy of Athens</i> <i>Prof. Christos Zerefos,</i> <i>General Secretary of the Academy of Athens</i> <i>Prof. Pavlos Surlas, Academy of Athens,</i> <i>Chair of Bioethics</i>
10:30 – 11:00	<i>Introductory Remarks – Round table</i> <i>Discussion</i> <i>Dr. Olga Tzortzatou - Nanopoulou</i> <i>Director of the Summer School</i> <i>Prof. Papadimitriou Christos, Columbia University and Arcimedes/Athena RC</i> <i>Principal Scientist</i> <i>Dr Amal Matar, CRB, Scientific Advisor of the Summer School</i> <i>Dr. Spyros Kouvelis, EPLO</i>

11:00-11:40	Keynote speech <i>Prof. Papadimitriou Christos, Columbia University and Arcimedes/Athena RC Principal Scientist</i>
11:40-12:20	Introduction to Bioinformatics <i>Dr Aristotelis Chatziioannou, BRFAA</i>
12:20-13:00	Turing Equivalence and Artificial (Dog) Intelligence in Cancer Diagnostics <i>Dr Andreas Mershin, MIT Center for Bits and Atoms and Dimitrios Ioannidis, Roach, Ioannidis & Megaloudis LLC</i>
<p>END OF OPEN DAY AT THE ACADEMY OF ATHENS</p> <p>&</p> <p>BEGINNING OF CLOSED SESSIONS AT THE EUROPEAN PUBLIC LAW ORGANIZATION (EPLO)</p>	
14:00-15:00	Lunch break at the premises of the EPLO, 2 Polygnotou and Dioskouron St., Plaka, Athens
15:00-16:00	Introduction to machine learning <i>Dr. Maria Vakalopoulou & Dr. Stergios Christodoulidis, University Paris-Saclay, Archimedes Research Unit</i>
16:00-16:15	<i>Coffee Break</i>
16:15-18:00	Workshop: Hands on definition, training and testing of various machine learning algorithms for medical data <i>Dr. Maria Vakalopoulou & Dr. Stergios Christodoulidis, University Paris-Saclay, Archimedes Research Unit</i>
21:00	<i>Cocktails & Finger food at the garden of the Academy of Athens, Panepistimiou 28</i>

2nd day – Tuesday 13th June

09:00-10:00	Fairness in AI <i>Prof. Evi Pitoura, University of Ioannina, Archimedes, Archimedes Research Unit</i>
10:00-11:00	Are AI models safe? <i>Prof. Sotiris Tsaftaris, University of Edinburgh, Archimedes Research Unit</i>
11:00-11:15	Coffee break
11:15-12:15	Perceptual Engineering and Myco-Everything <i>Dr. Andreas Mershin, MIT Center for Bits and Atoms</i>
12:15-13:15	ELSI of big data in healthcare <i>Dr. Amal Matar, CRB</i>
13:15-14:00	Lunch Break
14:00-15:00	Introduction to deep learning and medical imaging <i>Dr. Maria Vakalopoulou & Dr. Stergios Christodoulidis, University Paris-Saclay, Archimedes Research Unit</i>
15:00-15:15	Coffee Break
15:15-17:00	Workshop: Hands on definition, training and testing of deep learning algorithms for medical image segmentation <i>Dr. Maria Vakalopoulou & Dr. Stergios Christodoulidis, University Paris-Saclay, Archimedes Research Unit</i>
17:00- 18:00	Paediatrics & AI, Prof. Evangelia Charmandari, BRFAA & NKUA Medical School

3rd day – Wednesday 14th June

09:00-10:00	Are lawyers destined to become obsolete with AI replacements? <i>Dimitrios Ioannidis, Roach, Ioannidis & Megaloudis LLC</i>
10:00-11:00	International cooperation on regulating AI <i>Dr. Fotios Spyropoulos, University of West Attica</i>
11:00-11:15	Coffee break
11:15-12:15	AI & Equality: A Human Rights-Based Approach École Polytechnique Fédérale de Lausanne, <i>Sofia Kypraiou</i>
12:15-13:15	UN Sustainable Development Goals (SDGs) & AI <i>Dr. Spyros Kouvelis, EPLO</i>
13:15-14:00	Lunch Break
14:00-15:00	Human-centric explainable artificial intelligence approach in healthcare <i>Prof Antoine Harfouche, Università degli Studi della Tuscia</i>
15:00-15:15	Coffee break
15:15-18:00	Workshop: Learning by doing; planning, training, and interpreting an explainable artificial intelligence (X-AI)-based analysis in phenomic medicine <i>Prof Antoine Harfouche, Università degli Studi della Tuscia and Farid Nakhle, Università degli Studi della Tuscia</i>

4th day – Thursday 15th June

09:00-10:00	Socially Responsible Innovation in the era of Big Data and AI <i>Dr. Sellis Timos, Scientific Director Archimedes/Athena RC</i>
10:00-11:00	Knowledge Mining from data with Artificial Intelligence methods <i>Christos Troussas, UWA</i>
11:00-11:15	Coffee break
11:15-12:15	About trustworthiness, blackboxing and ethical layering in AI-driven biomedical research Round Table Discussion <i>Michaela Theresia Mayrhofer, Melanie Goisauf, Mónica Cano Abadía and Kaya Akyüz, BBMRI-ERIC.</i>
12:15-12:30	Coffee break
12:15-13:15	AI-Enabled Digital Pathology for Precision Oncology <i>Dr. Maria Vakalopoulou, University Paris-Saclay, Archimedes Research Unit</i>
13:15-14:00	Lunch Break
14:00-15:00	Get Motivated & able to design, create and implement AI ethically: take a seat in the AI Ethics virtual reality case classroom <i>Dr Antoine Harfouche, Università degli Studi della Tuscia</i>
15:00-15:15	Coffee break
15:15-18:00	Workshop: Ethical AI and ethical decision-making: have fun practising ethical reasoning: problematic algorithms vs algorithms that are doing ethics well in biomedical research case studies <i>Dr Antoine Harfouche, Università degli Studi della Tuscia and Farid Nakhle, Università degli Studi della Tuscia</i>

5th day – Friday 16th June

09:00-10:00	Responsible Research & Innovation (RRI) as a Bridge between Science and Society <i>Dr. Panagiotis Kavouras, NTUA</i>
10:00-11:00	RRI Governance: the way forward <i>Dr. Eleni Spyrou, NTUA</i>
11:00-11:15	Coffee break
11:15-11:45	The start-up experience: from RRI to ESG <i>Christina Deligianni, EPLO</i>
11:45-12:15	Legal and ethical challenges in accessing biobank data to develop AI tools <i>Dr. Ciara Stauton, EURARC, SciBioEU</i>
12:15-13:15	Data Protection, Biobanking & New Technologies <i>Dr. Tom Southerington, University of Finland, SciBioEU</i>
13:15-14:00	Lunch Break
14:00-15:00	Workshop: Creativity and innovation with constraints: unlock your creativity in the eXtended Reality and eXplainable Artificial Intelligence ('X-RAI') metaverse <i>Dr. Antoine Harfouche, Università degli Studi della Toscana and Farid Nakhle, Università degli Studi della Toscana</i>
15:00-15:15	Coffee break
15:15-17:15	Panel Discussion Byting the sense of smell and how law and technology should co-evolve <i>Andreas Merzhin, Dimitrios Ioannidis, Broustas Marios & Olga Tzortzidou - Nanopoulou</i>
17:15-18:00	Closing Ceremony, Keynote speaker <i>Prof. Constantinos Daskalakis, MIT and Archimedes/Athena RC Principal Scientist</i>