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	*Welcome talks* *Prof. Lucas Papademos* *President of Biomedical Research Foundation, Academy of Athens* *Prof. Michael Stathopoulos,* *President of the Academy of Athens* *Prof. Christos Zerefos,* *General Secretary of the Academy of Athens* *Prof. Pavlos Sourlas, Academy of Athens, Chair of Bioethics*
10:30 – 11:00	*Introductory Remarks – Round table Discussion* *Dr. Olga Tzortzatou - Nanopoulou* *Director of the Summer School* *Prof. Papadimitriou Christos, Archimedes Director* *Dr Amal Matar, CRB, Scientific Advisor of the Summer School* *Dr. Spyros Kouvelis, EPLO*
11:00-11:40	Keynote speech Prof. Papadimitriou Christos, Columbia

	University, Archimedes Director
11:40-12:20	Introduction to Bioinformatics *Dr Aristotelis Chatziioannou, BRFAA*
12:20-13:00	Turing Equivalence and Artificial (Dog) Intelligence in Cancer Diagnostics *Dr Andreas Mershin, MIT Center for Bits and Atoms and Dimitrios Ioannidis, Roach, Ioannidis & Megaloudis LLC*
END OF OPEN DAY AT THE ACADEMY OF ATHENS **&** **BEGINNING OF CLOSED SESSIONS AT THE EUROPEAN PUBLIC LAW ORGANIZATION (EPLO)**	
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 *Dr. Maria Vakalopoulou & Dr. Stergios Christodoulidis, University Paris-Saclay, Archimedes Research Unit*
16:00-16:15	*Coffee Break*
16:15-18:00	Workshop: Hands on definition, training and testing of various machine learning algorithms for medical data. *Dr. Maria Vakalopoulou & Dr. Stergios Christodoulidis, University Paris-Saclay, Archimedes Research Unit*
21:00	*Cocktails & Finger food at the garden of the Academy of Athens, Panepistimiou 28*

BRFAA
BIOMEDICAL RESEARCH FOUNDATION
ACADEMY OF ATHENS

Second day – Tuesday 13th June

09:00-10:00	Fairness in AI *Prof. Evi Pitoura, University of Ioannina, Archimedes, Archimedes Research Unit*
10:00-11:00	Are AI models safe? *Prof. Sotiris Tsaftaris, University of Edinburgh, Archimedes Research Unit*
11:00-11:15	Coffee break
11:15-12:15	Perceptual Engineering and Myco-Everything *Dr Andreas Mershin, MIT Center for Bits and Atoms*
12:15-13:15	ELSI of big data in healthcare, *Dr. Amal Matar, CRB*
13:15-14:00	Lunch Break
14:00-15:00	Introduction to deep learning and medical imaging *Dr. Maria Vakalopoulou & Dr. Stergios Christodoulidis, University Paris-Saclay, Archimedes Research Unit*
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. *Dr. Maria Vakalopoulou & Dr. Stergios Christodoulidis, University Paris-Saclay, Archimedes Research Unit*

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

4th day – Thursday 15th June

4

09:00-10:00	The contribution of Artificial Intelligence, *Prof. Sellis Timos, Archimedes Research Unit*
10:00-11:00	Christos Troussas, UWA Knowledge Mining from data with Artificial Intelligence methods
11:00-11:15	Coffee break
11:15-12:15	Paediatrics & AI, *Prof. Charmandari, Biomedical Research Foundation of the Academy of Athensv*
12:15-12:30	Coffee break
12:15-13:15	AI-Enabled Digital Pathology for Precision Oncology. *Dr. Maria Vakalopoulou, University Paris-Saclay, Archimedes Research Unit*
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 *Dr Antoine Harfouche, Università degli Studi della Tuscia*
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. *Dr Antoine Harfouche, Università degli Studi della Tuscia and Farid Nakhle, Università degli Studi della Tuscia*

5th day – Friday 16th June

09:00-10:00	Responsible Research & Innovation (RRI) as a Bridge between Science and Society

	Dr.Panagiotis Kavouras, NTUA
10:00-11:00	RRI Governance: the way forward *Dr Eleni Spyrakou, NTUA*
11:00-11:15	Coffee break
11:15-11:45	The start-up experience: from RRI to ESG *Christina Deligianni, EPLO*
11:45-12:15	Legal and ethical challenges in accessing biobank data to develop AI tools *Dr. Ciara Stauton, EURARC, SciBioEU*
12:15-13:15	Data Protection, Biobanking & New Technologies, *Dr. Tom Southerington, University of Finland, SciBioEU*
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 *Dr Antoine Harfouche, Università degli Studi della Tuscia and Farid Nakhle, Università degli Studi della Tuscia*
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, *Andreas Mershin, Dimitrios Ioannidis, Broustas Marios*
17:15-18:00	Closing Ceremony, Keynote speaker *Prof. Costis Daskalakis, MIT, Archimedes Research Unit*