



University of Ioannina



Summer School/Workshop

3 - 9 July 2023

International Center of Hellenic Education-

Culture & Vocational Center "Stavros Niarchos"

University Of Ioannina, Greece



SUMMER SCHOOL PROGRAMME

MONDAY, 3th JULY 2023

Start Time

9:00-10:00 am



Welcome/Intro to Summer School

D.I. Fotiadis FIEEE, FEAMBES, FIAMBE, FAAIA

Prof. of Biomedical Engineering, University of Ioannina / BRI-FORTH

Head of the Unit of Medical Technology and Intelligent Information Systems

Editor in Chief IEEE Journal of Biomedical and Health Informatics

10:00-11:00 am



Digital twins in Healthcare

A. Sakellarios

Assistant Prof. of Biomedical Engineering, University of Patras

Associate researcher in the department of Materials Science and Engineering, University of Ioannina/FORTH

11:00-11:30 am

Coffee Break

11:30-1:30 pm

Peripheral arterial disease: the basics



K. Naka

Prof. of Cardiology MD, PhD, FESC, University of Ioannina

1:30-2:30 pm

Lunch

2:30-4:00 pm

Aspects on vessel hemodynamics. Modelling in physiology and pathology condition



C. Manopoulos

Assistant Prof., National Technical University of Athens

Director of Biofluid Engineering & Biomedical Technology Laboratory

A.Raptis

Laboratory Teaching Staff (Dr. - E.D.I.P. D'), National Technical University of Athens

4:00-4:30 pm

Coffee Break

4:30-5:30 pm

Aspects on vessel hemodynamics. Modelling in physiology and pathology condition



C. Manopoulos

Assistant Prof., National Technical University of Athens

Director of Biofluid Engineering & Biomedical Technology Laboratory

5:30-6:00 pm

Open Discussion

6:00-8:00 pm

Welcome Reception

Beer & Cheese

SUMMER SCHOOL PROGRAMME

TUESDAY, 4th JULY 2023

Start Time

9:00-10:00 am



The TAXINOMISIS PROJECT

V. Potsika

*Senior Researcher, Unit of Medical Technology and Intelligent Information Systems
Managing Editor, IEEE Journal of Biomedical and Health Informatics*

10:00-11:00 am



In-silico multiscale modeling of Carotid Artery Disease - The Taxinomis integrated Cloud Platform

V. Tsakanikas

Senior Engineer, Unit of Medical Technology and Intelligent Information Systems

11:00-11:30 am

Coffee Break

11:30-1:30 pm

Plaque Growth Modeling



D. Pleouras

Researcher, Unit of Medical Technology and Intelligent Information Systems

1:30-2:30 pm

Lunch

2:30-4:00 pm

ML in non – imaging data



V. Kigka

PhD student, Unit of Medical Technology and Intelligent Information Systems

4:00-4:30 pm

Coffee Break

4:30-5:30 pm

Plaque rupture modelling



P. Siogkas

Senior Researcher, Unit of Medical Technology and Intelligent Information Systems

5:30-6:00 pm

Open Discussion

9:00-12:00 pm

Dinner (at the restaurant "Filemata")

SUMMER SCHOOL PROGRAMME

WEDNESDAY, 5th JULY 2023

Start Time

9:00-10:00 am



Multimodality Imaging of Peripheral Arteries

K. Vlachos

Radiologist Cardiovascular Imaging Department-IPPOKRATEIO IOANNINON

10:00-11:00 am



Multimodality Imaging of Peripheral Arteries

K. Vlachos

Radiologist Cardiovascular Imaging Department-IPPOKRATEIO IOANNINON

11:00-11:30 am

Coffee Break

11:30-1:30 pm



MRI 3D Reconstruction

V. Tsakanikas

Senior Engineer, Unit of Medical Technology and Intelligent Information Systems

1:30-2:30 pm

Lunch

2:30-4:00 pm



CT 3D Reconstruction

V. Kigka

Researcher, PhD student, Unit of Medical Technology, and Intelligent Information Systems

4:00-4:30 pm

Coffee Break

4:30-8:00 pm

A Visit in Ancient Theatre of Dodoni

SUMMER SCHOOL PROGRAMME

THURSDAY, 6th JULY 2023

Start Time

9:00-10:00 am



In silico Drug Eluting Stent Deployment

B. Loukas

Researcher, Unit of Medical Technology, and Intelligent Information Systems

10:00-11:00 am



3D Coronary Artery Reconstructions and Parametric Tissue Modelling

B. Loukas

Researcher, Unit of Medical Technology, and Intelligent Information Systems

11:00-11:30 am

Coffee Break

11:30-13:30 pm

Stent Drug Elution Modeling



D. Pleouras

Researcher, Unit of Medical Technology, and Intelligent Information Systems

1:30-2:30 pm

Lunch

2:30-4:00 pm

ESR Work Presentations

4:00-4:30 pm

Coffee Break

4:30-5:30 pm

ESR Work Presentations

5:30-6:00 pm

ESR Work Presentations

6:00-6:30 pm



Closing of the Summer School – Presentation of DECODE future activities

D.I. Fotiadis FIEEE, FEAMBES, FIAMBE, FAAIA

Prof. of Biomedical Engineering, University of Ioannina / BRI-FORTH

Head of the Unit of Medical Technology and Intelligent Information Systems

Editor in Chief IEEE Journal of Biomedical and Health Informatics

WORKSHOP PROGRAMME

FRIDAY, 7th JULY 2023

Start Time

9:00-10:00 am



Welcome/Opening

D.I. Fotiadis FIEEE, FEAMBES, FIAMBE, FAAIA
Prof. of Biomedical Engineering, University of Ioannina / BRI-FORTH
Head of the Unit of Medical Technology and Intelligent Information Systems
Editor in Chief IEEE Journal of Biomedical and Health Informatics

10:00-11:00 am



The PRECIOUS HPC infrastructure

T. Kalatzis
Senior Researcher, Unit of Medical Technology, and Intelligent Information Systems

11:00-11:30 am

Coffee Break

11:30-1:30 pm

Can holography and immersive techniques revolutionize modern surgical medicine?



A. Skalski
Associate Professor, AGH University of Krakow, Poland, CTO at MedApp

1:30-2:30 pm

Lunch

2:30-4:00 pm

Modelling of scaffold-aided bone tissue regeneration



D. Polyzos
Professor, Dept. of Mechanical Engineering & Aeronautics, Division of Applied Mechanics and Biomechanics, University of Patras

4:00-4:30 pm

Coffee Break

4:30-5:30 pm

Computer methods in tissue regeneration processes



T. Gkortsas
Post-doctoral researcher at the Department of Mechanical Engineering & Aeronautics, Division of Applied Mechanics and Biomechanics, of the University of Patras in Greece

5:30-6:00 pm

Interaction

6:00-8:00 pm

Welcome Reception

Wine & Cheese

WORKSHOP PROGRAMME

SATURDAY, 8th JULY 2023

Start Time

9:00-10:00 am



Multiscale Modelling

A. Sakellarios

Assistant Prof. of Biomedical Engineering, University of Patras

Associate researcher in the department of Materials Science and Engineering, University of Ioannina/FORTH

10:00-11:00 am



InSilc - An in-silico trials platform for drug-eluting BVS design, development, and evaluation

G. Karanasiou

Senior Engineer, Unit of Medical Technology, and Intelligent Information Systems

11:00-11:30 am

Coffee Break

11:30-1:30 pm



Dealing with open issues and unmet needs in healthcare through the sharing, harmonization, and federated analysis of medical data

V. Pezoulas

Senior Researcher, Unit of Medical Technology, and Intelligent Information Systems

1:30-2:30 pm

Lunch

2:30-4:00 pm



Large Scale Simulation, Data Converters and Integration

N. Filipovic

Rector of University of Kragujevac

Professor at Faculty of Engineering and Head of Center for Bioengineering at University of Kragujevac, Serbia

4:00-4:30 pm

Coffee Break

4:30-5:30 pm



Large Scale Simulation, Data Converters and Integration

N. Filipovic

Rector of University of Kragujevac

Professor at Faculty of Engineering and Head of Center for Bioengineering at University of Kragujevac, Serbia

5:30-6:00 pm

Interaction

WORKSHOP PROGRAMME

SUNDAY, 9th JULY 2023

Start Time

9:00-10:00 am



Model data converters and integration

B. Milicevic

Researcher at Faculty of Engineering and Center for Bioengineering, University of Kragujevac

10:00-11:00 am



Model data converters and integration

B. Milicevic

Researcher at Faculty of Engineering and Center for Bioengineering, University of Kragujevac

11:00-11:30 am

Coffee Break

11:30-1:30 pm

Neural Form Models for Differential Equations



I. Lagaris

Emeritus Professor, Dept. of Computer Science & Engineering, University of Ioannina

1:30-2:30 pm

Lunch

2:30-4:00 pm

Can holography and immersive techniques revolutionize modern surgical medicine? – Mixed Reality Live Demo



M. Stanuch

CarnaLife Holo Manager at MedApp

PhD student, AGH University of Krakow, Poland,

A. Skalski

Associate Professor, AGH University of Krakow, Poland, CTO at MedApp

4:00-4:30 pm

Coffee Break

4:30-6:00 pm

Interaction



Closing of the workshop

D.I. Fotiadis FIEEE, FEAMBES, FIAMBE, FAAIA

Prof. of Biomedical Engineering, University of Ioannina / BRI-FORTH

Head of the Unit of Medical Technology and Intelligent Information Systems

Editor in Chief IEEE Journal of Biomedical and Health Informatics