

ESMPE European School for Medical Physics Experts Artificial Intelligence

16th June 2021, Torino, Italy (virtual)

This one day satellite meeting will be held in conjunction with the 3rd European Congress of Medical Physics and teaching sessions covering the main topics of Artificial Intelligence (AI) and focusing mainly on Machine Learning (ML) and Deep Learning (DL). These methods are becoming increasingly essential in the field of medical physics and healthcare in general. The methods are also developing fast and there is a clear need to provide training of the fundamentals and recent findings concerning AI/ML/DL techniques to medical physicists in Europe. This is the motivation to create this ESMPE module.

The event will be accredited by EBAMP (European Board for Accreditation in Medical Physics) and is intended for practising clinical Medical Physicists who are involved in any of our sub-fields. The main lecture topics are related to radiology and radiation therapy applications.

Mika Kortensniemi, Annalisa Trianni (Scientific Chairs)

Alberto Torresin (Chair of the School)

Faculty	
Angel Alberich Bayarri	Valencia, Spain
Wouter Crijs	Leuven, Belgium
Mika Kortensniemi	Helsinki, Finland
Teemu Mäkelä	Helsinki, Finland
Peter van Ooijen	Groningen, The Netherlands
Annalisa Trianni	Udine, Italy
Jonas Teuwen	Nijmegen, The Netherlands
Alberto Torresin	Milano, Italy
Federica Zanca	Leuven, Belgium

Time-table

	Session	Title	Description	Lecturer
8:00-9:00	Registration			
Morning session Chairs: Annalisa Trianni/IT, Mika Kortesiemi/FI				
9:00-9:15	Introduction	Opening of the AI satellite event	Why are we here?	Mika Kortesiemi/FI , Annalisa Trianni/IT
9:15-10:15		Artificial Intelligence	Artificial Intelligence explained from the basics	Jonas Teuwen/NL
10:15-10:30	Coffee break			
10:30-11:15		Main applications of AI	Main applications of AI in radiation therapy	Wouter Crijns/BE
11:15-12:00			Main applications of AI in diagnostic imaging	Angel Alberich Bayarri/ES
12:00-13:00	Lunch break			
Afternoon session Chairs: Alberto Torresin/IT, Annalisa Trianni/IT				
13:00-14:00		Roadmap to future clinical applications	Solving the challenges in data access, curation, ethical and legal issues	Peter van Ooijen/NL
14:00-14:15	Coffee break			
14:15-15:00		Practical demonstration	Practical demonstration of Deep Learning in image segmentation	Teemu Mäkelä/FI
15:00-15:45		Education of medical physicist	The future role, competence and education of medical physicist in the era of AI	Federica Zanca/BE
15:45-16:00		Discussion	Panel discussion and closing remarks	

Further Information

Course language	English
Level	MPE
Registration fee* (meal & coffee breaks)	50 € + VAT
Duration	16 th June 2021
Study load	6 hours of lectures and discussions
Venue	Virtual with live lectures
Information, programme at:	www.efomp.org
Registration	Electronic registration via www.ecmp2020.org

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