



Gustave Roussy Integrated Cancer Research
presents
Master-class

Artificial Intelligence

Medical Physics & Radiation Oncology

École des Sciences
et du Cancer
Paris - France

Registration at
www.siricsocrate.com

November
8-9-10th
2021

Due to recent increase in SARS-CoV-2 infections all over Europe, the master-class has been postponed.



CentraleSupélec



FINAL PROGRAM

Artificial Intelligence Medical Physics & Radiation Oncology

Gustave Roussy, 114 rue Edouard Vaillant, 94800 Villejuif - France

November 8, 2021

MORNING

08:30	Welcome coffee	
09:00 10:00	Introduction to Artificial Intelligence (vocabulary, methodology)	Nikos Paragios Thérapanacéa Centrale Supélec, Paris
10:00 10:30	Applications to radiotherapy and medical imaging : the radiation oncologist's point of view	Vincent Grégoire CLCC Léon Bérard, Lyon
10:30 11:00	Applications to radiotherapy and medical imaging : the medical physicist's point of view	Charlotte Robert Gustave Roussy, Villejuif Université Paris Sud, Saclay
11:00 11:15	Break	
11:15 12:30	Python refresher course	David Sarrut CREATIS, Lyon
<h4>AFTERNOON</h4>		
12:30 02:00	Lunch	
02:00 05:00	Practicle session 1 - Python	David Sarrut CREATIS, Lyon

November 9, 2021

MORNING

08:30	Welcome coffee	
09:00 10:30	Optimization and main machine learning algorithms (SVM, Random Forest, ...)	Chloé-Agathe Azencott Mines ParisTech, Paris

November 9, 2021

10:30 10:45	Break	
10:45 12:00	Optimization and main machine learning algorithms (SVM, Random Forest, ...)	Chloé-Agathe Azencott Mines ParisTech, Paris
AFTERNOON		
12:00 01:30	Lunch	
01:30 03:00	Practical session 2 - Machine learning: radiomics for brain tumor classification - part 1	To be determined
03:00 03:15	Break	
03:15 05:00	Practical session 3 - Machine learning: radiomics for brain tumor classification - part 2	To be determined

November 10, 2021

MORNING		
08:30	Welcome coffee	
09:00 10:30	Deep learning and neural networks - part 1	Vincent Lepetit École nationale des Ponts ParisTech, Marne la Vallée
10:30 11:45	Break	
10:45 12:00	Deep learning and neural networks - part 2	Vincent Lepetit École nationale des Ponts ParisTech, Marne la Vallée
AFTERNOON		
12:00 01:30	Lunch	
01:30 03:00	Practical session 4 - Deep learning : segmentation of brain magnetic resonance images - part 1	To be determined
03:15 05:00	Practical session 5 - Deep learning : segmentation of brain magnetic resonance images - part 2	To be determined

NB: During the 3 days, participants must be in possession of a personal laptop. Instructions will be given prior to the training for the installation of a Python environment.