Foundation course on
ARTIFICIAL INTELLIGENCE
IN RADIOLOGY
January 30–31, 2020
Rome/Italy
Course information

The AI Foundation Course is aimed at providing the basis of AI and radiomics to the practicing radiologist and to illustrate what will be the professional impact, on ethics, workflow and education. A review of the developing clinical applications will help to understand how the clinical practice of radiologists will change in the near future. Internationally renowned experts will ensure a high quality teaching programme.

Learning objectives

• to learn the basic principles of AI and radiomics
• to review the developing clinical applications of AI and radiomics
• to explore ethical aspects and new applications of AI in the modern radiological department
Programme

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IN RADIOLOGY

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Thursday, January 30, 2020

13:00–13:45 Registration
13:45–14:00 Welcome and introduction
   E. Neri, Pisa/IT; M. Francone, Rome/IT
14:00–15:30 Session 1: Getting started
   Chair: C. Catalano, Rome/IT
14:00–14:20 Entering the era of intelligent machines:
   history and early applications
   A. Mei, Rome/IT
14:20–14:40 Deep learning in medical imaging:
   basic concepts for radiologists
   B. Gallix, Strasbourg/FR
14:40–15:00 From texture to deep radiomic
   L. Fournier, Paris/FR
14:40–15:00 Discussion
15:00–15:30 Discussion
15:30–16:00 Coffee break
16:00–18:00 Session 2: AI training and ethics
   Chair: A. Brady, Cork/IE
16:00–16:20 How to train AI: factors and limitations
   N. Papanikolaou, Lisbon/PT
16:20–16:40 Imaging biobanks for AI training
   L. Marti-Bonmati, Valencia/ES
16:40–17:00 Ethical aspects for the management of sensitive data
   A. Brady, Cork/IE
17:00–17:20 AI in education
   C. Catalano, Rome/IT
17:20–18:00 Discussion

Host Organisers

E. Neri
Pisa/IT

M. Francone
Rome/IT

Venue

NH Collection Roma Vittorio Veneto
Corso d’Italia, 1
00198, Rome
Italy

Registration fees

Early fee EUR 220; Late fee EUR 270
ESR members
Early fee EUR 420; Late fee EUR 470
(Early fee until eight weeks prior to the course)
(Late fee after eight weeks prior to the course)
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09:30–11:00  Session 3: AI integration in a modern radiology department
             Chair: L. Marti-Bonmati, Valencia/ES
09:30–09:50  How to convert digital images into a mineable source of data
             N. Papanikolaou, Lisbon/PT
09:50–10:10  How does AI help in image triage?
             C. Catalano, Rome/IT
10:10–10:30  How does AI help in post-processing and quantitative imaging?
             T. Leiner, Utrecht/NL
10:30–11:00  Discussion
11:00–11:30  Coffee break
11:30–12:30  Session 4: Emerging topics
             Chair: D. Regge, Candiolo/IT
11:30–11:45  AI in blockchain
             E. Neri, Pisa/IT
11:45–12:00  AI assisted image-guided interventions
             B. Gallix, Strasbourg/FR
12:00–12:15  AI for prediction of therapeutic response
             G. Morana, Treviso/IT
12:15–12:30  Discussion
12:30–13:30  Lunch break
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13:30–17:30  
Session 5: AI use cases
Chairs: C. Catalano, Rome/IT; T. Leiner, Utrecht/NL

13:30–13:50  
Cardiovascular
M. Francone, Rome/IT

13:50–14:10  
Lung cancer
M.-P. Revel, Paris/FR

14:10–14:30  
Breast
F. Pediconi, Rome/IT

14:30–15:00  
Coffee break

15:00–15:20  
Prostate
V. Panebianco, Rome/IT

15:20–15:40  
Rectal cancer
D. Caruso, Rome/IT

15:40–16:00  
Whole body
D. Regge, Candia/CT

16:00–16:20  
CNS
A. Radbruch, Essen/DE

16:20–16:40  
Liver
G. Morana, Treviso/IT

16:40–17:00  
Discussion

17:00–17:20  
ESR statement
E. Neri, Pisa/IT

17:20–17:30  
Closing remarks
Please note that programmes are marked with a logo to indicate their classification according to the European Training Curriculum.

- **LEVEL I**: First three years of training
- **LEVEL II**: Fourth and fifth year of training (general radiologist standard)
- **LEVEL III**: Subspecialty training standard