



UNIVERSITÀ
DI PAVIA

RADIOMICS TOOLBOX: WORKFLOW & QUALITY MANAGEMENT

Pavia, 8-9-10 September 2021



Fondazione IRCCS
Policlinico San Matteo

Sistema Socio Sanitario



Regione
Lombardia

DAY 1: 8 September 2021

MORNING SESSION

08:30 Participants' registration

09:00 Welcome & Introduction

Anna PICHIECCHIO ~ Lorenzo PREDA ~ Andrea FILIPPI

MODERATORS ~ G. MAGENES, F. CALLIADA

09:30–10:00 Fundamentals of Radiomics in Medical Images (A. LASCIALFARI)

10:00–10:30 How radiomics could change our approach to medical imaging (R. ORECCHIA)

Methods

10:30–11:00 Evaluating machine learning models (R. BELLAZZI)

11:00–11:15 Coffee break

MODERATORS ~ L. PAVARINO, E. D'ANGELO

11:15–11:45 Machine learning methods in Radiomics: supervised and unsupervised approaches (F. MAMBRETTI)

11:45–12:30 Deep learning for Biomedical Images (S. GUALANDI)

12:30–13:30 **Sponsored lecture 1** AlforCOVID: predicting the clinical outcomes in patients with COVID-19 applying AI to chest-X-rays. An Italian multicenter study (N. C. D'AMICO)

13:30–14:30 Lunch

AFTERNOON WORKSHOP

14.30–17.30 **ARTIFICIAL INTELLIGENCE APPROACH FOR MEDICAL USE** (M. GROSSI/D. M. REBUZZI)

17:30 Visit at the Golgi Museum

19:00 Happy hour - "Get together"

DAY 2: 9 September 2021

MORNING SESSION

MODERATORS ~ G. RIZZO, S. FIGINI

08:30–09:00 Feature extraction: hand-crafted/engineered versus deep learning (E. SCALCO)

09:00–09:30 Analysis of small dataset in radiomics and machine learning (A. RETICO)

09:30–10:00 Biophysics inspired neural network (G. CASTELLANI)

10:00–10:30 Coffee break

MODERATORS ~ G. TOSCANI, R. BELLAZZI, A. LASCIALFARI

10:30–11:00 Principles of image based Brain Modeling (E. D'ANGELO)

11:00–11:30 Features for modeling brain pathologies (N. OXTOBY)

11:30–12:00 Quantification of Nuclear Imaging in Neurology (A. CHINCARINI)

12:00–13:00 **Sponsored lecture 2** Easing the workflow of radiomics analysis through QUIBIM Precision Platform (A. JIMENEZ)

13:00–14:00 Lunch

AFTERNOON WORKSHOP

14.00–17.00 **BODY STRUCTURE SEGMENTATION & BRAIN DYNAMICS SIMULATION**

Segmentation

C. BORTOLOTTI/A. LANCIA/L. BIANCHINI

Brain dynamics simulation using

The Virtual Brain

F. PALESI/R.M. LORENZI/A. MONTEVERDI

20:00 Social dinner

Artificial Intelligence for healthcare (B. TAMERSOY)

DAY 3: 10 September 2021

MORNING SESSION

MODERATORS ~ A. FILIPPI, V. VALENTINI

08:00–09:00 Radiomic and radiogenomic features in Oncology

Guest of Honor (P. LAMBIN)

09:00–09:30 Radiomics: the in-vivo non-invasive biopsies for personalized medicine (I. CASTIGLIONI)

09:30–10:00 Integrating radiomics in clinical trials in oncology (L. BOLDRINI)

10:00–10:30 Coffee Break

MODERATORS ~ S. BASTIANELLO, S. PAPA

10:30–11:00 Applications in Neurology of quantitative Magnetic Resonance Imaging (C. GANDINI)

11:00–11:30 Translational research in neurodegenerative diseases: ready for "prime time"? (S. CAPPA)

11:30–12:30 **Sponsored lecture 3** Sonography & Artificial Intelligence: Design and Opportunities of Decision Support Systems in gynecology (R. BELLACOSA MAROTTI)

12:30–14:00 Lunch

AFTERNOON WORKSHOP

14.00–17.00 **MACHINE LEARNING APPLICATIONS FOR QUANTITATIVE MRI**
Neural networks for automatic segmentation
A. AGOSTI/M. PAOLETTI

Radiomics features extraction and machine learning methods
P. FELISAZ/G. COLELLI

CONFERENCE VENUE (MORNING SESSIONS)
FONDAZIONE ISTITUTO NEUROLOGICO CASIMIRO MONDINO
Aula Berlucchi & Aula Mondino - Pavia - PV

CONFERENCE VENUE (AFTERNOON WORKSHOPS)
FACOLTA' DI INGEGNERIA
Aula B1 & Aula B2 - Via Adolfo Ferrata, 5 - Pavia - PV

General Information

STUDIO CONGRESSI srl
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CME PROVIDER (ID Ref.: 752)

REGISTRATION

- ACCESS THE PLATFORM <https://sc.qlearning.it>
- CLICK ON "REGISTER"
- FILL IN THE REQUESTED DATA AND CREATE YOUR ACCOUNT

An e-mail confirming your registration will be sent within 24 hours.
Your registration to the course is valid only after paying the admission fee.

Please visit also:
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CME CREDITS

- **CME REF. NUMBER:** 752 - 315010
- **CME CREDITS:** 17
- **ATTENDEES:** Medical Doctors, Physicists, Engineers, Mathematicians, Statisticians, Computer Scientists.
- **FIELDS OF INTEREST:** Radiology, Radiotherapy, Nuclear Medicine, Surgery, Oncology, Neuro-radiology, Physics, Engineering, Math.

IMPORTANT

In order to participate in this course, we would like to remind you to pay the **admission fee** and fill in the billing information. An e-mail confirming your registration will be sent within 24 hours. After receiving the confirmation email, please refer to the following steps:

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REGISTRATION DEADLINE:
30 JULY 2021

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V.Le della Libertà, 17 - Pavia
www.studio-congressi.com
info@studio-congressi.com

T. 0382 21424 - Fax 0382 303082

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Università degli Studi di Pavia ~ IRCCS Fondazione Mondino Pavia
Lorenzo PREDA
Università degli Studi di Pavia ~ IRCCS Policlinico San Matteo Pavia
Andrea FILIPPI
Università degli Studi di Pavia ~ IRCCS Policlinico San Matteo Pavia

SCIENTIFIC COMMITTEE

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Università degli Studi di Pavia
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