

GENERAL INFORMATION

ORGANIZING SECRETARIAT

STUDIO CONGRESSI SRL

V.LE DELLA LIBERTA', 17 - 27100 PAVIA

TEL. +39 0382 21424

info@studio-congressi.com - www.studio-congressi.com

CME PROVIDER (ID Ref.: 752)

MED TECH SCIENCE SRL

V.LE DELLA LIBERTA', 17 - 27100 PAVIA

info@studio-congressi.com

If you wish to participate in the conference, please 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: http://www.studio-congressi.com/calendario_eventi.php

MAX. NUMBER OF PARTICIPANTS: 40

CME CREDITS

CME REF. NUMBER - 752 - 347626

CME CREDITS - 11,9

ATTENDEES

Medical Doctors, Physicists

FIELDS OF INTEREST

Radiology, Radiotherapy, Nuclear Medicine, Surgery, Oncology, Neuro-radiology

Endorsed by:



Associazione Italiana
Radioterapia e Oncologia clinica

ESTRO



Istituto Nazionale di Fisica Nucleare
Laboratori Nazionali di Frascati



EUROPEAN SOCIETY OF NEURORADIOLOGY
DIAGNOSTIC AND INTERVENTIONAL



UNIVERSITÀ
DI PAVIA



FONDAZIONE
MONDINO
Istituto Neurologico Nazionale
a Carattere Scientifico | IRCCS



Fondazione IRCCS
Policlinico San Matteo

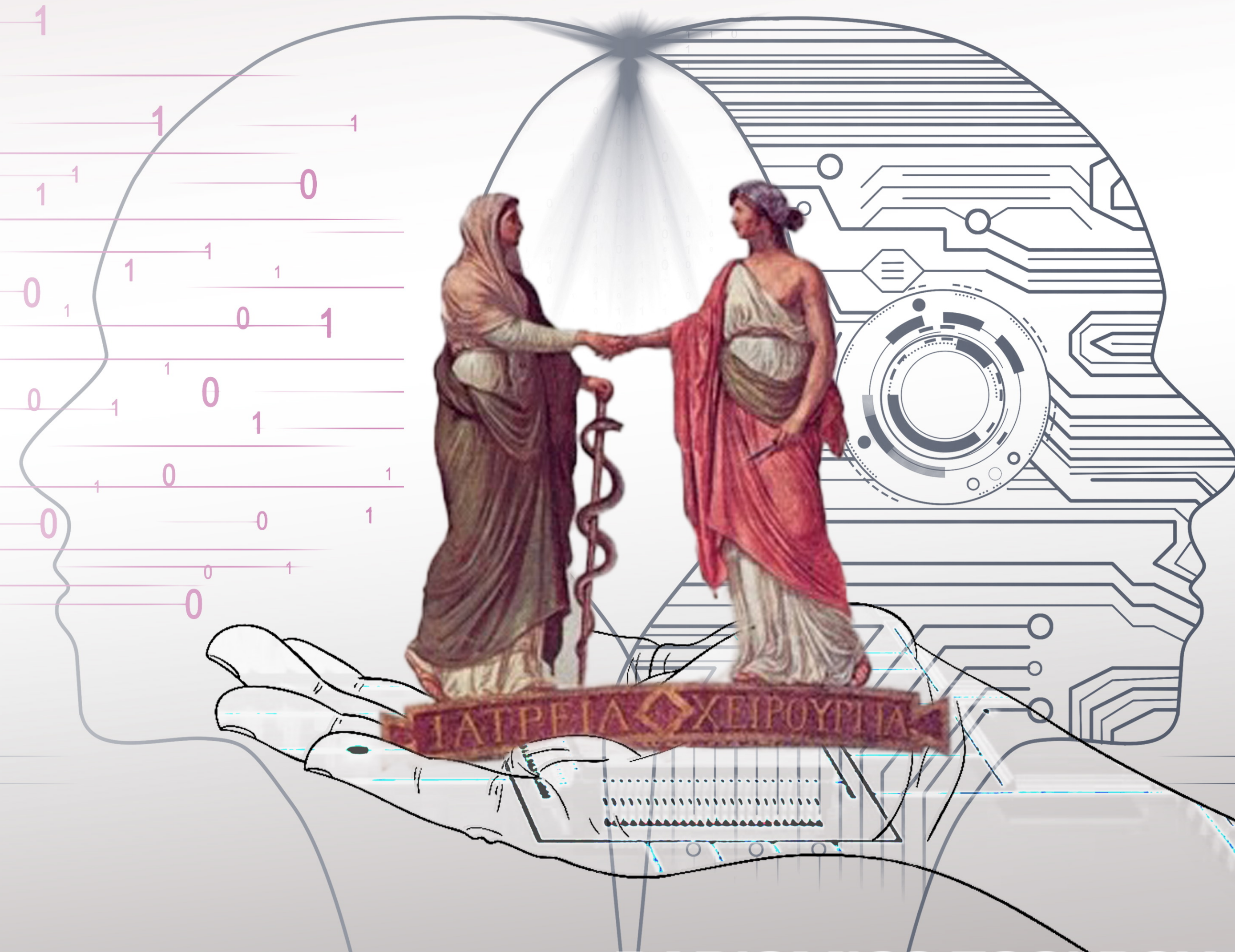


Sistema Socio Sanitario

Regione
Lombardia

Convegno ECM Residenziale

7 - 8 - 9 September 2022



**RADIOMICS TOOLBOX
WORKFLOW AND QUALITY MANAGEMENT**

Mondino Foundation - PAVIA

7 September 2022

MORNING SESSION

8:30 Participant registration

9:00 Welcome & Introduction

Introduction - **A. PICHIECCHIO - A. FILIPPI - L. PREDA**

Fundamentals

Moderators: **G. MAGENES - R. ORECCHIA - G. TOSCANI**

9:30 - 10:30

Fundamentals of Radiomics in medical images - **A. LASCIALFARI**

10:30 - 11:30

Evaluating machine learning models - **R. BELLAZZI**

11:30 - 11:45 *Coffee break*

Methods

Moderators: **L. PAVARINO - S. BASTIANELLO**

11:45 - 12:15

Machine learning methods in Radiomics: supervised and unsupervised approaches - **S. CARRAZZA**

12:15 - 12:45

Deep learning for Biomedical Images - **S. GUALANDI**

12:45 - 13:30

Sponsored lecture 1

From research to AI-based medical devices to improve screening and diagnosis of breast cancer - **F. SARDANELLI - DEEPTRACE TECHNOLOGIES S.R.L.**

13:30 - 14.30 *Lunch*

14:30 - 17:00 *AFTERNOON WORKSHOP*

19:00 *Aperitif "Get together"*

8 September 2022

MORNING SESSION

Features and models

Moderators: **S. FIGINI - A. LASCIALFARI**

8:30 - 09:00

Feature extraction:

hand-crafted - engineered versus deep learning - **E. SCALCO**

9:00 - 09.30

Analysis of small dataset in radiomics and machine learning - **A. RETICO**

9:30 - 10:00

Biophysics inspired neural network - **N. CURTI**

Coffee break 10:00 - 10:30

Moderators: **R. BELLAZZI - S. CAPPÀ - G. CARRAFIELLO**

10:30 - 11:00

Principles of image-based Brain Modeling - **E. D'ANGELO**

11:00 - 11:30

Applications in Neurology of quantitative Magnetic Resonance Imaging
C. GANDINI WHEELER-KINGSHOTT

11:30-12:00

Quantification of Nuclear Imaging in Neurology - **A. CHINGARINI**

12:00-13:00

Sponsored lecture 2

HealthMyne - From Clinical to Research Opportunities - **M. COSTA**
TECNOLOGIE AVANZATE

13:00 - 13.30

Sponsored lecture 3

AI and Deep Learning to automatically extract quantitative information from medical images - **M. SANTORO**
CAMELOT BIOMEDICAL SYSTEMS S.R.L.

13:30 - 14.30 *Lunch*

AFTERNOON WORKSHOP 14:30-17:00

Social dinner 20:00

Sponsored Lecture - **ÉRIC LLUCH ALVAREZ - SIEMENS HEALTHCARE**



MORNING SESSION

Clinical Correlates for RadiomicsModerators: **V. VALENTINI - S. PAPA**

8:30 - 9:00

Radiomics: the in-vivo non invasive biopsies for personalized medicine

I. CASTIGLIONI

9:00 - 9:30

Integrating radiomics in clinical trials in oncology - **L. BOLDRINI**

09:30 - 10:30

Radiomic and radiogenomic features in Oncology

Guest of Honor: **P. LAMBIN**10:30 - 11:00 *Coffee break***WORKSHOP**

11:00 - 13:00

Radiomics - Lambin group

13:00 - 14:00 *Lunch*

14:00 - 15:00

Sponsored lecture 4Data collection, quality controls
and pre-processing of medical images**A. FRINGUELLO MINGO - BRACCO IMAGING S.p.A**

15:00 - 16:00

Sponsored lecture 5AI-OMICS: AI and Genomics - **S. IENGO - REPLY S.p.A.**

Radiomics and artificial intelligence (AI) are currently revolutionizing the way we look at big data and our approach in the understanding of diseases, connecting imaging metrics, biological biomarkers, genetics and clinical scores.

Radiomics emerged as a translational field of research with the aim of extracting mineable data from clinical images, with initial specific attention to oncologic imaging, but soon expanded its application to all spheres of imaging. Beyond the initial focus on conventional imaging sequences, the technological advances are such that this field needs to further expand itself to embrace all kinds of quantitative imaging mapping solutions.

The application of AI is further sustaining the evolution of radiomics and promises to boost its applications, progressively proving itself to be crucial in the interplay between radiology and other medical and scientific disciplines in supporting the understanding of pathological mechanisms of diseases as well as potentially predicting clinical outcomes.

The availability of such a large amount of data poses several issues and highlights the need to improve our abilities in building and organizing adequate datasets, extracting features and signatures as well as optimizing their analysis and interpretation by correctly setting up a robust "pipeline". Another critical issue in modern radiomics/AI based medical research is paving the way to translating these results into clinical practice.

The aim of this three-day School, coordinated by the University of Pavia, is to respond to these needs of a robust pipeline with quality control in order to translate research evidence into clinical practice. In this arduous attempt, the school will provide the attendants a complete "toolbox" to operate in this field. The technical steps will be explored in detail, ranging from data collection, data organization, analysis, feature extraction and data presentation, both from a technical/operational perspective as well as from a medical/interpretative one. Special attention will be paid not only to the pipeline but also to quality assurance in order to ease an adequate translation of evidence into clinical practice.

With the contribution of:



ORGANIZERS

Anna PICHIECCHIO

Università degli Studi di Pavia - IRCCS Fondazione Mondino Pavia

Andrea FILIPPI

Università degli Studi di Pavia - IRCCS Policlinico San Matteo Pavia

Lorenzo PREDA

Università degli Studi di Pavia - IRCCS Policlinico San Matteo Pavia

SCIENTIFIC COMMITTEE

Stefano BASTIANELLO

Università degli Studi di Pavia - IRCCS Fondazione Mondino Pavia

Riccardo BELLAZZI

Università degli Studi di Pavia - Fondazione S. Maugeri Pavia

Fabrizio CALLIADA

Università degli Studi di Pavia - IRCCS Fondazione Mondino Pavia

Egidio D'ANGELO

Università degli Studi di Pavia - IRCCS Fondazione Mondino Pavia

Silvia FIGINI

Università degli Studi di Pavia

Claudia GANDINI WHEELER KINGSHOTT

Università degli Studi di Pavia - UCL London

Alessandro LASCIALFARI

Università degli Studi di Pavia & INFN - Sezione di Pavia

Giovanni MAGENES

Università degli Studi di Pavia

Luca PAVARINO

Università degli Studi di Pavia

Giuseppe TOSCANI

Università degli Studi di Pavia

FACULTY

Stefano BASTIANELLO Università degli Studi & Fondazione Mondino Pavia

Riccardo BELLAZZI Università degli Studi & Fondazione Maugeri, Pavia

Luca BOLDRINI Fondazione Policlinico A. Gemelli IRCCS, Roma

Stefano CAPPÀ Università degli Studi di Pavia

GIANPAOLO CARRAFIELLO Università degli Studi Milano

STEFANO CARRAZZA Università degli Studi Milano

Isabella CASTIGLIONI Università degli Studi Milano Bicocca

Andrea CHINCARINI INFN-Genova

Giulia COLELLI Università degli Studi di Pavia, INFN-Pavia

Nico CURTI Università degli Studi di Bologna

Egidio D'ANGELO Università degli Studi & Fondazione Mondino Pavia

Paolo FELISAZ Ospedale Fatebenefratelli e Oftalmico, Milano

Silvia FIGINI Università degli Studi di Pavia, INFN-Pavia

Andrea FILIPPI IRCCS Policlinico San Matteo Pavia

Claudia GANDINI WHEELER KINGSHOTT Università degli Studi di Pavia, UCL Londra

Stefano GUALANDI Università degli Studi di Pavia

Philippe LAMBIN Maastricht University

Alessandro LASCIALFARI Università degli Studi di Pavia, INFN-Pavia

Giovanni MAGENES Università degli Studi di Pavia

Roberto ORECCHIA IRCCS Istituto Europeo di Oncologia Milano

Matteo PAOLETTI Fondazione Mondino Pavia

Sergio PAPA Centro Diagnostico Italiano, Milano

Luca PAVARINO Università degli Studi di Pavia

Anna PICHIECCHIO Fondazione Mondino & Università degli Studi di Pavia

Lorenzo PREDA Università degli Studi &
IRCCS Policlinico San Matteo Pavia

Alessandra RETICO INFN-Pisa

Elisa SCALCO Istituto di Tecnologie Biomediche CNR, Milano

Giuseppe TOSCANI Università degli Studi di Pavia

Vincenzo VALENTINI Fondazione Policlinico Universitario A. Gemelli IRCCS
Università Cattolica S. Cuore, Roma



GENERAL INFORMATION

CONFERENCE VENUE - MORNING SESSIONS

Fondazione Istituto Neurologico Casimiro Mondino

Aula Berlucci e Aula Mondino
Via Mondino, 2 - 27100 Pavia - PV

CONFERENCE VENUE - AFTERNOON WORKSHOPS

Università degli Studi di Pavia

Facoltà di Ingegneria - Aula B
Via Adolfo Ferrata, 5

HOW TO GET TO PAVIA

AIRPLANE

The town of Pavia does not have its own airport. You need to reach one of the following airports: **Milan Linate**, **Milan Malpensa** or **Milan Bergamo**.

The **Linate shuttle** bus service connects **Linate airport** to **Milan Central Station** (Milano Stazione Centrale). The **Malpensa Shuttle** bus service connects **Malpensa Terminal 1 and Terminal 2** to **Milan Central Station**.

The **Malpensa Express** train service takes you directly to **Milan Central Station**. From **Milan Bergamo** airport there is also a bus service to **Milan Central Station**.

CAR

Pavia is on the **A7 highway**, 30 kilometers south from **Milan Ring Road** (Tangenziale). The exit to Pavia is **Beregardo/Pavia Nord**.

TRAIN

Pavia is on the **Milano-Genova railway line**; a daily train service is available from **Milano Central Station** to **Pavia**. The trip by train takes about 30 minutes.

For the timetables, please click here www.trenitalia.com

BUS

The town of Pavia has an efficient bus service. For more info, please refer to the following website: <http://pavia.autoguidovie.it/>

TAXI

Radio Taxi Pavia

Ph. +39 0382 576.576 - +39 0382 577799

HOTEL INFORMATION

With regard to the hotel reservation, please note that Studio Congressi has provisionally booked a limited number of rooms for our guests.

All payments for bookings will be carried out by the guests directly at the hotel. As part of your booking, you may be required to provide details of a credit or debit card.

The rooms have been booked until August 31, 2022.

SUGGESTED HOTELS & UNIVERSITY COLLEGES

For more info, please contact the Organizing Secretariat Studio Congressi s.r.l.
Ph. +39 0382 21424 - info@studio-congressi.com - Mob. +39 351 8055151

COLLEGIO UNIVERSITARIO SANTA CATERINA DA SIENA

RESIDENZA UNIVERSITARIA BIOMEDICA

Via Giuseppe Maria Giulietti, 412

27100 Pavia

Tel. +39 0382 516762

<http://www.collegiosantacaterina.it/residenza-universitaria-post-laurea/>

COLLEGIO NUOVO

Via Giuseppe Maria Giulietti, 412

27100 Pavia

Tel. +39 0382 516762

<http://www.collegiosantacaterina.it/residenza-universitaria-post-laurea/>

COLLEGIO ALESSANDRO VOLTA

Via Adolfo Ferrata, 17

27100 Pavia

Tel. +39 0382 548511

<http://www.edisu.pv.it/index.php?page=collegio-volta>

HOTEL MODERNO

Viale Vittorio Emanuele II, 41 - di fronte alla Stazione Ferroviaria

27100 Pavia

Tel. +39 0382 303401 - info@hotelmoderno.it

HOTEL AURORA

Viale Vittorio Emanuele II, 25 - di fronte alla Stazione Ferroviaria

27100 Pavia

Tel. +39 0382 23664



APPLICATION FORM PART 1

REGISTRATION

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

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 registration email, please refer to the following steps:

- ACCESS THE PLATFORM WITH THE USER ID AND PASSWORD CHOSEN DURING REGISTRATION
- CLICK ON THE "**ON-SITE EVENTS**" ICON AT THE BOTTOM OF THE PAGE
- **CLICK ON THE "COURSE BROCHURE" ICON AND TYPE THE FOLLOWING ACCESS CODE IRCCSP22**

REGISTRATION DEADLINE - 31 August, 2022

REGISTRATION FEES (22% VAT included)

Please tick the appropriate box

- 400 Euro
- 200 Euro (only for junior doctors and graduate students)

The registration fee includes:

Participation in the conference - from Sept. 7 throughout Sept. 9, 2022
Coffee Break, Lunch, Welcome cocktail and visit at the Golgi Museum - 1st DAY
Coffee Break, Lunch and Dinner - 2nd DAY
Coffee Break and Lunch - 3rd DAY
Certificate of Attendance

APPLICATION FORM PART 2

PAYMENT

BANK NAME - Intesa San Paolo, Viale C. Battisti, 18 - Pavia (IT)

IBAN - IT86X0306911310000099728448

Purpose of the Payment - "RADIOMICS TOOLBOX" 7-8-9 SEPT. 2022, PAVIA (IT)

PayPal payment also available

IMPORTANT

Please remember to specify your role (Jr. doctor or graduate student - other) by ticking the appropriate box.

A copy of the **bank transfer** must be sent to:

Organizing Secretariat STUDIO CONGRESSI s.r.l.

Via fax +39 (0)382 303082

Via e-mail info@studio-congressi.com

BILLING INFORMATION

A payment receipt will be sent to you upon receipt of the registration fee

Participant's name & surname: _____

Name of the Company (in case the registration fee is sponsored by a Pharmaceutical Company, public authority or private company):

Billing Address:

Town _____ Zip code _____ State _____

Phone _____

E-mail _____

Fiscal Code _____ VAT number _____

Single Code for the Electronic Invoicing _____

The undersigned agrees to allow Studio Congressi s.r.l. to use the information provided above in accordance with Italian law nr. 679/2016 and successive modifications and amendments.

Date _____ Signature _____