Curriculum Vitae

(Last update December 24, 2024)

Dr. Filippo Piccinini, PhD

Born: April 20, 1985, Forlimpopoli (FC), Italy
Resident: Via Pola 6/2, I-48018, Faenza, RA, Italy
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Current position

ASSOCIATE PROFESSOR
University of Bologna, Italy
Department of Medical and Surgical Sciences (DIMEC)

and

RESEARCH FELLOW
IRCCS Istituto Romagnolo per lo Studio dei Tumori "Dino Amadori" - IRST S.r.l., Meldola (FC), Italy
Cancer Research Hospital, Medical Physics Unit

and

EDITOR
Journal: Sensors - MDPI (Q2, JCR-IF2023: 3.4)
Journal: BioMed Research International - Wiley (Q3, JCR-IF2023: 2.6)

National Scientific Qualification (ASN) as Associate Professor: FIS/07 - APPLIED PHYSICS (received the 17th September 2018)
National Scientific Qualification (ASN) as Associate Professor: 09/G2 – BIOENGINEERING (received the 14th May 2019)

Registry of Engineers, Chamber of Forlì: Engineer ID 2786, Section: A/INF (accepted in the Chamber the 30th January 2019)

Elected Board Member, Italian Mesenchymal Stem Cell Group (GISM, www.gismonline.it), since 19/10/2023.

Principal Investigator, MAECI Science and Technology Cooperation Italy–South Korea Grant Years 2023–2025 by the Italian Ministry of Foreign Affairs and International Cooperation, CUP project: J53C23000300003 (~250k euros).

Main current research:

Cancer three-dimensional (3D) multicellular aggregates, typically known as spheroids, are *in vitro* models widely used for testing drugs and radiotherapy treatments. However, experiments using 3D models are jeopardised by the data reproducibility problem. We proved that a spheroid pre-selection, based on the spheroid morphology, is needed to obtain statistically relevant data. Accordingly, we developed open-source software tools capable of performing an automatic image analysis of the spheroids, to guide researchers in performing experiments based on 3D models. In addition, we proceeded in performing high-content screening experiments using 3D cell cultures, meanwhile designing customised software for different analyses.

Education

Dates	**Doctor Europaeus, PhD in Information Technology** University of Bologna, Italy, 1st January 2010 – 31st December 2012. ETH Zurich, Switzerland, 9th May 2011 – 26th August 2011, 7th May 2012 – 8th August 2012. Defence: 19th April 2013. Graduation Ceremony: 21st June 2013.

Scientific field	Informatics and bioengineering
Thesis title	Solutions to common issues in widefield microscopy: vignetting, mosaicing and depth of focus.
Supervisors	Prof. Alessandro Bevilacqua (University of Bologna) Prof. Mauro Ursino (University of Bologna) Prof. Peter Horvath (ETH Zurich)
Financing	3-year-study ministerial grant and ETH Zurich grant.
	Master Degree in Biomedical Engineering, 110 cum LAUDE (average score pre-degree: 29.9/30)
Dates	University of Bologna, Italy, September 2007 – October 2009. Defence: 14th October 2009.
Scientific field	Computer vision
Thesis title	Algorithm for building mosaics of partially overlapping images regarding adherent live stem cells.
Supervisor	Prof. Alessandro Bevilacqua (University of Bologna)
	Bachelor Degree in Biomedical Engineering, 110 cum LAUDE (average score pre-degree: 29.1/30)
Dates	University of Bologna, Italy, September 2004 – July 2007. Defence: 25th July 2007.
Scientific field	Applied physics
Thesis title	Numerical study of dual solutions in mixed convection with viscous dissipation in a vertical conduit.
Supervisor	Prof. Stefano Lazzari (University of Bologna)
	High School Industrial Technical Diploma in Electronics and Telecommunications, 100/100
Dates	Faenza (RA), Italy, September 1999 – July 2004.

Major fields of research

CANCER RESEARCH
MICROSCOPY
IMAGE PROCESSING AND ANALYSIS
BIG DATA ANALYSIS
3D CELL CULTURES
APPLIED PHYSICS
RADIOMICS
MESENCHYMAL STROMAL CELLS
CELL SEGMENTATION, PHENOTYPING AND TRACKING
MACHINE AND DEEP LEARNING
HIGH-CONTENT SCREENING

Main working experiences in Italy and abroad

	Associate Professor (PHYS-06/A), University of Bologna, Italy.
Dates	December 23, 2024 – today.
	Senior Assistant Professor (RTD-B, 02/D1, FIS/07), University of Bologna, Italy.
Dates	December 23, 2021 – December 23, 2024.
	Adjunct Professor, University of Bologna, Italy.
Dates	June 8, 2017 – December 22, 2021.
	Post-doctoral research fellow, IRST- IRCCS Cancer Research Hospital, Italy.

Dates	February 13, 2017 – today.
	Editor, Sensors (JCR-IF2023: 3.4), MDPI.
Data	October 30, 2020 – today.
	Editor, BioMed Research International (JCR-IF2023: 2.4), Wiley.
Data	July 10, 2020 – today.
	Post-doctoral research fellow, ARCES, University of Bologna, Italy.
Dates	April 20, 2013 – February 12 2017.
Supervisor	Prof. Alessandro Bevilacqua
	UICC YY International Cancer Study Grant, Biological Research Center (BRC), Szeged, Hungary.
Dates	May 22, 2020 – August 22, 2020.
Supervisor	Prof. Peter Horvath.
	UICC Technical Fellowship, Biological Research Center (BRC), Szeged, Hungary.
Dates	May 21, 2019 – July 27, 2019.
Supervisor	Prof. Peter Horvath.
	NEUBIAS Short Term Scientific Mission, Biological Research Center (BRC), Szeged, Hungary.
Dates	April 30, 2018 – June 29, 2018.
Supervisor	Prof. Peter Horvath.
	EACR Travel Fellowship, Biological Research Center (BRC), Szeged, Hungary.
Dates	May 1, 2017 – July 31, 2017.
Supervisor	Prof. Peter Horvath.
	FEBS Short-Term Fellowship, Biological Research Center (BRC), Szeged, Hungary.
Dates	April 1, 2016 – July 31, 2016.
Supervisor	Prof. Peter Horvath.
	EMBO Short-Term Fellowship, Biological Research Center (BRC), Szeged, Hungary.
Dates	May 17, 2015 – July 24, 2015.
Supervisor	Prof. Peter Horvath.
	Light Microscopy and Screening Center, ETH Zurich, Switzerland.
Dates	May 9, 2011 – August 26, 2011; May 7, 2012 – August 8, 2012.
Supervisor	Prof. Gábor Csúcs.
	Osteoarticular Regeneration Laboratory, Istituto Ortopedico Rizzoli, Bologna, Italy.
Dates	April 20, 2009 – December 31, 2015.
Supervisor	Dr. Enrico Lucarelli
	Laboratory of Biosciences, IRST- IRCCS, Meldola (FC), Italy.
Dates	July 6, 2010 – December 31, 2015.
Supervisor	Dr. Anna Tesei

Main research projects

Project name	**High Content Screening 3D (HCS3D)** – MAECI Science and Technology Cooperation Italy–South Korea Grant Years 2023–2025 by the Italian Ministry of Foreign Affairs and International Cooperation, CUP project: J53C23000300003 (~250k euros).
Short description	From macro to micro 3D high-content screening platform for anti-cancer drug testing using multicellular spheroids.
Collaborating institutions	- Yonsei University, Seoul, Republic of Korea - IRST IRCCS Cancer Research Hospital, Meldola, Italia
Duration	January 2023 - today.
Role	Principal Investigator.
Project name	**PNRR PE06 - HEAL ITALIA** Health Extended ALliance for Innovative Therapies, Advanced Lab-research, and Integrated Approaches of Precision Medicine - Codice PE00000019 - CUP J33C22002920006 - Spoke 2 - Task 2.2
Short description	Intelligent Health Data Science: Data management and development of advanced methods, algorithms, and machine learning approaches integrating health big data.
Collaborating institutions	- University of Bologna - Other Institutes involved in the PNRR PE06 project
Duration	January 2023 - today.
Role	Task Leader.
Project name	**Microscopy & Artificial intelligence (MiAi)**
Short description	Design and development of computer vision tools and image-based applications.
Collaborating institutions	- Biological Image Analysis a Machine Learning Group, Biological Research Centre, Szeged, Hungary - IRST IRCCS Meldola, Italy
Duration	April 2021 - today.
Role	Funder of the research unit.
Project name	**3D-CELL-ANNOTATOR** – 3D single cell segmentation.
Short description	3D-Cell-Annotator, a free open-source plugin for MITK for segmenting single cells in 3D datasets (e.g. spheroids, organoids, embryos). www.3d-cell-annotator.org
Collaborating institutions	- Biological Image Analysis and Machine Learning Group, Biological Research Centre, Szeged, Hungary - IRST IRCCS Meldola, Italy
Duration	Since May 2018.
Role	Principal Investigator
Project name	**ADVANCED CELL CLASSIFIER** – Cell classification and analysis.
Short description	Advanced Cell Classifier, a free open-source software for classifying and analysing cells imaged in high content screening experiments. www.cellclassifier.org
Collaborating institutions	- Biological Image Analysis and Machine Learning Group, Biological Research Centre, Szeged, Hungary - Computer Vision Group, University of Bologna, Italy
Duration	Since April 2016.
Role	Principal Investigator
Project name	**CELLTRACKER** – *In vitro* live cell tracking.
Short description	CellTracker, a free open-source software for tracking in 2D living cells. http://celltracker.website
Collaborating institutions	- Biological Image Analysis and Machine Learning Group, Biological Research Centre, Szeged, Hungary - Computer Vision Group, University of Bologna, Italy
Duration	Since May 2015.

Role	Principal Investigator
Project name	**DYNAMO** - 3D dynamic tumor models
Short description	Validation of new approaches based on automatic microscopic image analysis for in vitro therapeutic screening and for the characterization of the invasive behaviour of cancer cells.
Collaborating institutions	- Laboratory of Biosciences, IRST- IRCCS, Meldola (FC), Italy - Computer Vision Group, University of Bologna, Italy
Duration	January 2016 - today.
Role	Research member.
Project name	**STAMINAL** - Characterization of stem cells through support for automatic analysis of the microscopic images in pre-clinical therapy.
Short description	Development of software tools for the automatic analysis of stem cells and cancer cells, both in monolayer and multicellular spheroids.
Collaborating institutions	- Laboratory of Biosciences, IRST- IRCCS, Meldola (FC), Italy - Computer Vision Group, University of Bologna, Italy
Duration	January 2011 - December 2015.
Role	Research member.
Project name	**ADVANCE** - Automatic non-invasive system, based on high content analysis to detect and characterize vital mesenchymal stem cells in a spatio-temporal context.
Short description	Development of software tools for the automatic analysis of mesenchymal stem cells used in regenerative medicine for bone tissue applications.
Collaborating institutions	- Osteoarticular Regeneration Laboratory, Istituto Ortopedico Rizzoli (IOR), Bologna, Italy - Computer Vision Group, University of Bologna, Italy
Duration	January 2010 - December 2010.
Role	Research member.

Research groups, scientific associations and institutions

IRCCS Istituto Romagnolo per lo Studio dei Tumori "Dino Amadori" (IRST) S.r.l., www.irst.emr.it
Member since 2017.

BioPhysics – University of Bologna – Prof. Gastone Castellani's Research Group
Member since 2021.

Società Italiana di Fisica (SIF), www.sif.it
Member since 2021.

Associazione per l'Insegnamento della Fisica (AIF), www.aif.it
Member in 2021.

Italian Mesenchymal Stem Cell Group (GISM), www.gismonline.it
Founder Member since 2014 and **Elected Board Member** since 2023.

Vittorio Tison Association, “Culture & Solidarity” ONLUS. www.associazionevittoriotison.org
Member in 2019.

Advanced Research Center on Electronic Systems “E. De Castro” (ARCES), University of Bologna, Italy. www.arces.unibo.it Member since 2010.

Computer Vision Group (CVG), University of Bologna, Italy. http://cvg.deis.unibo.it Member since 2010.

Register of Engineers, Chamber of Forlì: Engineer ID 2786, Section: A/INF. www.ordineing-fc.it
Member since 2019.

Associazione Volontari Italiani del Sangue (AVIS), Italian society of donors of blood.
www.avisfaenza.it Member since 2009.

Italian Society of Biochemistry and Molecular Biology (SIB), www.biochimica.it Member since 2015.

Italian National Bioengineering Group (GNB), www.bioing.it Member since 2012.

Italian Association Cell Culture (ONLUS-AICC), www.onlus-aicc.org Member in 2013.

European Association for Cancer Research (EACR), www.eacr.org Member since 2015.
Ambassador since 20/04/2018

European Light Microscopy Initiative (ELMI), http://elmi.embl.org/home Member since 2016.

Association of Union for International Cancer Control (UICC) Fellows, https://www.uicc.org Member since 2019

FigShare, store, share, discover research, https://figshare.com/.
Ambassador since 23/07/2019.

Network of European Bioimage Analysts (NEUBIAS), http://eubias.org/NEUBIAS Member since 2016

Honours and awards

Winner as Principal Investigator of the Grant: "MAECI Science and Technology Cooperation Italy–South Korea Grant Years 2023–2025", granted in 2023 by the Italian Ministry of Foreign Affairs and International Cooperation (~250k euros).

Award: "1st position poster presentation competition", PerkinElmer 2022 High Content Screening (HCS) Group Meeting, 17/05/2022, Biological Research Centre (BRC), Szeged, Hungary. Poster presented: "CometAnalyser: a user-friendly, open-source deep-learning microscopy tool for quantitative comet assay analysis. By: A. Baleon, S. Pignatta, C. Arienti, A. Carbonaro, P. Horvath, G. Martinelli, G. Castellani, A. Tesei, F. Piccinini".

Future Science - Future Star Award 2021, **runner-up** among the 4 finalists selected by the scientific committee composed of Editors and researchers of the publisher “Future Science” which publishes prestigious scientific journals including BioTechniques.

Yamagiwa-Yoshida (YY) Memorial International Cancer Study Grant (3 months, 2020) awarded by the Union for International Cancer Control (UICC), Biological Research Centre, Szeged, Hungary, 2020 (US$ 6500).

Technical fellowship (2 months, 2019) awarded by the Union for International Cancer Control (UICC), Biological Research Centre, Szeged, Hungary, 2019 (US$ 2500).

Awarded by the GISM society for the contribution to the Group's activities since its establishment. In particular, for the work carried out to make effective the dissemination of scientific information. Awards ceremony held on the 5th April 2019, Genova, Italy.

Travel fellowship (2 months, 2018) awarded by the Network of European Bioimage Analysts (NEUBIAS), Biological Research Centre, Szeged, Hungary, 2018 (Eur 2000).

Travel fellowship (3 months, 2017) awarded by the European Association for Cancer Research (EACR), Biological Research Centre, Szeged, Hungary, 2017 (Eur 2000).

Awarded by the **Marie Sklodowska-Curie Actions Seal of Excellence**, an award to applicants of proposals submitted to the MSCA Individual Fellowships Call that scored 85% or more (obtained score 91.2%).

Winner of the local selection of FameLab 2017, the Talking Science international competition (Modena, 24th March 2017). The prize was a 3-day course (all expenses paid) with theatre directors, psychologists and famous public speakers to improve my public speaking, and access to the National Finals.

Travel Award from the Italian Embassy in Seoul, South Korea, to visit Universities/Institutes in Seoul to establish new collaborations, August 2016 (Eur 2000).

Travel Award from the Italian Society of Biochemistry and Molecular Biology (SIB), Biological Research Centre, Szeged, Hungary, July 2016 (Eur 1000)

Short-term fellowship (2 months, 2016) awarded by the Federation of European Biochemical Societies (FEBS), Biological Research Centre, Szeged, Hungary, 2016 (Eur 4000).

Candidate for the Award "Sapio Junior for the Italian Research" nominated by the Pro-Rector (teaching area) of the University of Bologna, Prof. Enrico Sangiorgi. Final ceremony: Palazzo Montecitorio, Roma, 16th March 2016.

Short-term fellowship (3 months, 2015) awarded by the European Molecular Biology Organization (EMBO), Biological Research Centre, Szeged, Hungary, 2015 (Eur 5000).

Best Oral Communication Award, awarded by the Italian Association of Cell Culture (ONLUS-AICC) 2014. Award ceremony held on 14th November 2014, Verona, Italy (Eur 500)

Selected as the representative PhD student (scientific area) to give the speech during the PhD Graduation Ceremony (21st June 2013, Santa Lucia Church, Bologna). 1200 people, including 380 PhD students, were present.

Free conference registration grant, 1st International Conference Materials in Medicine (MiMe). 8th October 8-11, 2013. Faenza (RA), Italy.

Free conference registration grant, 8th World Conference on The Future of Science. September 16-18, 2012. Venezia, Italy.

Travel Award "Marco Polo 2011" from the University of Bologna, Light Microscopy and Screening Center, ETH Zurich, Switzerland. 2011 (3500 Euros)

Best Master Thesis Award "Mario Pasquini 2010", awarded by the Marine & Freshwater Science Group Association. Awards ceremony held on the 22nd June 2010, Savoia Hotel Regency of Bologna, Italy (2500 Euros)

Scholarship "F.I.D.A.", for university merits for the academic years 2004/2005 and from 2006/2007 to 2008/2009, granted by Fondo Integrativo Di Assistenza of Ravenna, Italy (2000 Euros).

Scholarship "Homo Sapiens Sapiens", for university merits for the academic year 2004/2005, granted by I.N.P.D.A.P. Rome, Italy, on the 7th November 2007 (1000 Euros).

Scholarship "F.I.D.A.", for school merits for the school years from 1999/2000 to 2002/2003, granted by Fondo Integrativo Di Assistenza of Ravenna, Italy (800 Euros).

Publication statistics

ORCID:	**0000-0002-0371-7782**
SCOPUS AUTHOR ID:	**36806469000**
WEB OF SCIENCE ResearcherID:	**ABC-7747-2020**
SciProfiles:	**559079**
Peer reviewed scientific articles:	**78**
- Journal publications (with IF in JCR):	**56**
- Journal publications (without IF in JCR):	**6**
- Conference proceedings:	**16**
Books/Book-chapters:	**3**
First author publications (in journals with IF in JCR):	**21**
Last author publications (in journals with IF in JCR):	**5**
Corresponding author publications (in journal with IF JCR):	**9**
Total impact:	**383.5400 IF**
Average impact:	**6.8489 IF**
Total number of citations (SCOPUS):	**2385**
H-index (SCOPUS):	**23**
Best publication:	**Nature Reviews Drug Discovery - 57.618 IF**

Publications

International Journals (with official IF in JCR)

56 J.S. Sung, Y. Han, T.G. Yun, J. Jung, T.-H. Kim, F. Piccinini, M.-J. Kang, J. Jose,, M. Lee, J.-C. Pyun, *Monocarboxylate transporter-1 (MCT-1) inhibitors screened from autodisplayed FV-antibody library*. **International Journal of Biological Macromolecules**, 265(1):130854, April 2024. DOI: 10.1016/j.ijbiomac.2024.130854. IF(2023): 8.2/Q1.

55 J. Lee, Y. Kim, J. Lim, H.-I. Jung, G. Castellani, F. Piccinini, B. Kwak, *Optimization of Tumor Spheroid Preparation and Morphological Analysis for Drug Evaluation*. **BioChip Journal**, 1-10, February 2024. DOI: 10.1007/s13206-024-00143-5. IF(2023): 5.5/Q1.

54 I. Ferrero, F. Piccinini, P. Marrazzo, M. Monti, C. Pipino, A.S.G. Banche Niclot, C.F. Proto, E. Ragni, R. Hass, G.M. Stella, P. Berni, A. Ivanovska, K. Mareschi, *State of the Art and New Trends from the Second International StemNet Meeting*. **International Journal of Molecular Sciences**, 25(4):2221, February 2024. DOI: 10.3390/ijms25042221. IF(2023): 4.9/Q1.

53 F. Piccinini, L. Drudi, J.-C. Pyun, M. Lee, B. Kwak, B. Ku, A. Carbonaro, G. Martinelli, G. Castellani, *Two-dimensional segmentation fusion tool: an extensible, free-to-use, user-friendly tool for combining different bidimensional segmentations*. **Frontiers in Bioengineering and Biotechnology**, 12:1339723, January 2024. DOI: 10.3389/fbioe.2024.1339723. IF(2023): 4.3/Q1.

52 F. Piccinini, M. Tazzari, M.M. Tumedei, M. Stellato, D. Remondini, E. Giampieri, G. Martinelli, G. Castellani, A. Carbonaro, *Data Science for Health Image Alignment: A User-Friendly Open-Source ImageJ/Fiji Plugin for Aligning Multimodality/Immunohistochemistry/Immunofluorescence 2D Microscopy Images*. **Sensors**, 24:451, January 2024. DOI: 10.3390/s24020451. IF(2023): 3.4/Q2.

51 A. Mishra, R. Kai, S. Atkuru, Y. Dai, F. Piccinini, P.M. Preshaw, G. Sriram, *Fluid flow-induced modulation of viability and osteodifferentiation of periodontal ligament stem cell spheroids-on-chip*. **Biomaterials Science**, 11(22):7432-7444, October 2023. DOI: 10.1039/d3bm01011b. IF(2023): 5.8/Q1.

50 F. Piccinini, A. Peirsman, M. Stellato, J.C. Pyun, M.M. Tumedei, M. Tazzari, O. De Wever, A. Tesei, G. Martinelli, G. Castellani, *Deep Learning-Based Tool for Morphotypic Analysis of 3D Multicellular Spheroids*. **Journal of Mechanics in Medicine and Biology**, 23(6):2340034, August 2023. DOI: 10.1142/S0219519423400341. IF(2023): 0.8/Q4.

49 M.M. Tumedei, F. Piccinini, I. Azzali, F. Pirini, S. Bravaccini, S. De Matteis, C. Agostinelli, G. Castellani, M. Zanoni, M.Cortesi, B. Vergani, B.E. Leone, S. Righi, A. Gazzola, B. Casadei, D. Gentilini, L. Calzari, F. Limarzi, E. Sabattini, A. Pession, M. Tazzari, C. Bertuzzi, *Follicular Lymphoma Microenvironment Traits Associated with Event-Free Survival.* **International Journal of Molecular Sciences,** 24(12):9909, June 2023. DOI: 10.3390/ijms24129909. IF(2023): 4.9/Q1.

48 M. Bocchini, M. Tazzari, S. Ravaioli, F. Piccinini, F. Foca, M. Tebaldi, F. Nicolini, I. Grassi, S. Severi, R.A. Calogero, M. Arigoni, J. Schrader, M. Mazza, G. Paganelli, *Circulating hsa-miR-5096 predicts 18F-FDG PET/CT positivity and modulates somatostatin receptor 2 expression: a novel miR-based assay for pancreatic neuroendocrine tumors*. **Frontiers in Oncology**, 13:1969, May 2023. DOI: 10.3389/fonc.2023.1136331. IF(2023): 3.5/Q2.

47 I. Ferrero, C.F. Proto, A.G. Santa Banche Niclot, E. Marini, L. Pascucci, F. Piccinini, K. Mareschi, *State of the Art and New Trends from the 2022 Gism Annual Meeting*. **International Journal of Molecular Sciences**, 24(10):8902, May 2023. DOI: 10.3390/ijms24108902. IF(2023): 4.9/Q1.

46 M. Bedeschi, N. Marino, E. Cavassi, F. Piccinini, A. Tesei, *Cancer-Associated Fibroblast: Role in Prostate Cancer Progression to Metastatic Disease and Therapeutic Resistance*. **Cells**, 12(5):802, March 2023. DOI: 10.3390/cells12050802. IF(2023): 5.1/Q2.

45 C. Voros, D. Bauer, E. Migh, I. Grexa, A.G. Vegh, B. Szalontai, G. Castellani, T. Danka, S. Dzeroski, K. Koos, F. Piccinini, P. Horvath, *Correlative Fluorescence and Raman Microscopy to Define Mitotic Stages at the Single-Cell Level: Opportunities and Limitations in the AI Era*. **Biosensors**, 13(2):187, January 2023. DOI: 10.3390/bios13020187. IF(2023): 4.9/Q1

44 A. Beleon, S. Pignatta, C. Arienti, A. Carbonaro, P. Horvath, G. Martinelli, G. Castellani, A. Tesei*, F. Piccinini*, *CometAnalyser: A user-friendly, open-source deep-learning microscopy tool for quantitative comet assay analysis*. **Computational and Structural Biotechnology Journal**, 20:4122-4130, August 2022. DOI: 10.1016/j.csbj.2022.07.053. IF(2022): 6.0/Q1

43 E. Mezzenga, F. Piccinini, E. Loi, M.L. Belli, A. Sarnelli, *Reconstructed SPECT images of 177Lu homogeneous cylindrical phantom used for calibration and texture analysis*. **Scientific Data**, 9:412, July 2022. DOI: 10.1038/s41597-022-01535-8. IF(2022): 9.8/Q1.

42 R. Hollandi, N. Moshkov, L. Paavolainen, E. Tasnadi, F. Piccinini, P. Horvath, *Nucleus segmentation: towards automated solutions*. **Trends in Cell Biology**, 32(4):295-310, April 2022. DOI: 10.1016/j.tcb.2021.12.004. IF(2022): 19.0/Q1.

41 A. Peirsman, E. Blondeel, T. Ahmed, J. Anckaert, D. Audenaert, T. Boterberg, K. Buzas, N. Carragher, G. Castellani, F. Castro, V. Dangles-Marie, J. Dawson, P. De Tullio, E. De Vlieghere, S. Dedeyne, H. Depypere, A. Diosdi, R.I. Dmitriev, H. Dolznig, S. Fischer, C. Gespach, V. Goossens, J.Heino, A. Hendrix, P. Horvath, L. A. Kunz-Schughart, S. Maes, C. Mangodt, P. Mestdagh, S. Michlíková, M.J. Oliveira, F. Pampaloni, F. Piccinini, C. Pinheiro, J. Rahn, S.M. Robbins, E. Siljamäki, P. Steigemann, G. Sys, S. Takayama, A. Tesei, J. Tulkens, M. Van Waeyenberge, J. Vandesompele, G. Wagemans, C. Weindorfer, N. Yigit, N. Zablowsky, M. Zanoni, P. Blondeel, O. De Wever, *MISpheroID: a knowledgebase and transparency tool for minimum information in spheroid identity*. **Nature Methods**, 18:1294–1303, November 2021. DOI: 10.1038/s41592-021-01291-4. IF(2021): 47.990/Q1.

40 R. Reda*, F. Piccinini*, G. Martinelli, A. Carbonaro, *Heterogeneous self-tracked health and fitness data integration and sharing according to a linked open data approach*. **Computing**, 104(4):835-857, August 2021. DOI: 10.1007/s00607-021-00988-w. IF(2021): 2.420/Q2.

39 G. Feliciani, L. Mellini, E. Loi, F. Piccinini, R. Galeotti, A. Sarnelli, G.C. Parenti, *An annotated T2-weighted magnetic resonance image collection of testicular germ and non-germ cell tumors*. **Scientific Data**, 8:209, August 2021. DOI: 10.1038/s41597-021-00990-z. IF(2021): 8.501/Q1.

38 F. Piccinini, G. Martinelli, A. Carbonaro, *Reliability of body temperature measurements obtained with contactless infrared point thermometers commonly used during the COVID-19 pandemic*. **Sensors**, 21:3794, May 2021. DOI: 10.3390/s21113794. IF(2021): 3.847/Q2.

37 A. Szkalisity, F. Piccinini, A. Beleon, T. Balassa, I.G. Varga, E. Migh, C. Molnar, L. Paavolainen, S. Timonen, I. Banerjee, E. Ikonen, Y. Yamauchi, I. Ando, J. Peltonen, V. Pietiäinen, V. Honti, P. Horvath, *Regression plane concept for analysing continuous cellular processes with machine learning*. **Nature Communications**, 12:2532, May 2021. DOI: 10.1038/s41467-021-22866-x. IF(2020): 17.694/Q1.

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6 S. Pignatta, L. Zamai, C. Arienti, C. Cocchi, M. Zanoni, M. Cortesi, A. Sarnelli, D. Arpa, F. Piccinini, A. Tesei, *Starvation-induced metabolic changing: a boost for radiotherapy treatment in cancer?* European Association Cancer Research (EACR): Mechanisms to Therapies: Innovations in Cancer Metabolism, Bilbao, Spain, October 9-11, 2018

5 G. Gallerani, A. Delmonte, C. Cocchi, M. Bocchini, F. Piccinini, M. Burgio, C. Casadei, A. Rocca, F. Fabbri, *Feasibility investigation of EML4-ALK rearrangements in mNSCLC CTCs using a new in vivo procedure*. American Association for Cancer Research (AACR) Annual Meeting, Chicago, America, April 14-18, 2018

4 M. Zanoni, F. Piccinini, C. Arienti, A. Zamagni, S. Santi, A. Bevilacqua, A. Tesei, *Simple strategies to increase the biological significance of a cytotoxic test based on 3D cell cultures*. 2nd European Association for Cancer Research (EACR) conference Goodbye Flat Biology, Berlin, Germany, October 2-5, 2016

3 F. Piccinini, A. Tesei, C. Arienti, S. Duchi, A. Bevilacqua, *Cell proliferation in 3D cancer spheroids: Volume assessment and 3D reconstruction from a single 2D projection*. 5th International Satellite Symposium Italian Mesenchymal Stem Cell Group (GISM), Verona, Italy, November 12-14, 2014

2 F. Piccinini, M. Pierini, E. Lucarelli, A. Bevilacqua, *Extending the field of view microscope's camera using a video of images.* Materials in Medicine International Conference (MiMe), Faenza (RA), Italy, October 8-11, 2013

1 A. Bevilacqua, W. Zoli, F. Piccinini, A. Tesei, *Extension of the Microscope's Depth of Focus.* 2nd International Conference Translational Research in Oncology: a New Approach to Personalized Medicine, Forlì, Italy, May 8-11, 2012

Abstracts and Posters at National Conferences

24 F. Piccinini, F. Pilutti, L. Rigoni, M. Stellato, M. Tazzari, E. Giampieri, D. Remondini, G. Castellani, A. Carbonaro. *Comparative analysis of commercial, freely-available, and open-source software for single-cell analysis within a histological image ROI*. Annual Meeting Alliance Against Cancer (ACC2024), Reggio-Emilia, Italy, November 28-30, 2024.

23 M. Stellato, M.M. Rydzyk, M. Pannella, F. Rossi, C. Cappadone, D. Remondini, J.-C. Pyun, G. Castellani, E. Malucelli, S. Iotti, E. Lucarelli, F. Piccinini. *From 2D brightfield images to quantitative radiomics features: A non-destructive analysis of 3D spheroids*. 110° Italian Congress Italian Physical Society (SIF), Bologna, Italy, September 9-13, 2024.

22 F. Piccinini, M. Tazzari, M.M. Tumedei, M. Stellato, D. Remondini, E. Giampieri, G. Martinelli, G. Castellani, A. Carbonaro. *Data Science for Health Image Alignment: A User-Friendly Open-Source ImageJ/Fiji Plugin for Aligning Multimodality/Immunohistochemistry/Immunofluorescence 2D Microscopy Images*. National Forum of the Precision Medicine, Palermo, Italia, June 13-15, 2024.

21 M.M. Tumedei, M. Tazzari, F. Piccinini, I. Azzali, S. Bravaccini, F. Pirini, G. Musuraca, G. Martinelli, A. Pession, C. Bertuzzi. *Follicular lymphoma microenvironment traits associated with Disease Recurrence.* 7h meeting annuale dell'Alleanza (ACC), online, Italia, September 21-23, 2022

20 M. Stellato, F. Piccinini, J-C Pyun, M. Lee, B. Kwak, D. Remondini, G. Martinelli, G. Castellani, *Morphological and intensity-based features for radiomics analysis of 3D multicellular spheroids used in high-content screening experiments.* StemNet 2023, Brescia, Italy, October 18-20, 2023 (pag. 179)

19 M.M. Tumedei, M. Tazzari, F. Piccinini, I. Azzali, S. Bravaccini, F. Pirini, G. Musuraca, G. Martinelli, A. Pession, C. Bertuzzi. *Follicular lymphoma microenvironment traits associated with Disease Recurrence.* 7h Annual Meeting of the Alliance Against Cancer (ACC), online, Italy, September 21-23, 2022

18 F. Piccinini, M.E. Duma, M. Belletti, M.M. Tumedei, M. Tazzari, G. Martinelli, G. Castellani, A. Carbonaro. *DS4H Image Alignment: a user-friendly ImageJ/Fiji plugin for analysing multimodality/IHC/IF 2D microscopy images.* 7h Annual Meeting of the Alliance Against Cancer (ACC), online, Italy, September 21-23, 2022

17 A. Baleon, A. Carbonaro, S. Pignatta, C. Arienti, P. Horvath, G. Castellani, G. Martinelli, A. Tesei, F. Piccinini. *CometAnalyser: a user-friendly open-source deep learning microscopy Tool for quantitative comet assay analysis.* 6h Annual Meeting of the Alliance Against Cancer (ACC), online, Italy, September 23-25, 2021

16 M. Bocchini, M. Tazzari, S. Ravaioli, S. Bravaccini, F. Piccinini, F. Foca, M. Tebaldi, F. Nicolini, I. Grassi, S. Severi, T. Ibrahim, A. Bongiovanni, C. Liverani, R.A. Calogero, M. Arrigoni, J. Schrader, M. Mazza, G. Paganelli. *Exosome delivered miRNAs modulate tumor heterogeneity and PRRT efficacy in pancreatic neuroendocrine neoplasia (PanNEN).* 5th Annual Meeting of the Alliance Against Cancer (ACC), online, Italy, October 28-30, 2020

15 M.M. Tumedei, F. Piccinini, J. Bulgarelli, M. Guidoboni, F. Limarzi, B. Vergani, M. Puccetti, S. Bravaccini, G. Martinelli, T. Ibrahim, M. Tazzari, *Sequential immunohistochemistry and computational image analysis for the assessment of tumor-infiltrating myeloid cells.* 5th Annual Meeting of the Alliance Against Cancer (ACC), online, Italy, October 28-30, 2020

14 F. Piccinini, R. Vespignani, G. Martinelli, A. Carbonaro, *Accuracy of mobile applications versus wearable devices in long-term step measurements.* 5th Annual Meeting of the Alliance Against Cancer (ACC), online, Italy, October 28-30, 2020

13 F. Piccinini, T. Balassa, A. Szkalisity, E. Tasnadi, T. Toth, C. Molnar, L. Paavolainen, M. Kovacs, M. Harmati, K. Buzas, P. Horvath, *Advanced Cell Classifier: an open-source machine-learning tool useful for mesenchymal stem cell classification.* 4th Annual Meeting of the Italian Mesenchymal Stem Cell Group (GISM), Genova, Italy, April 04-05, 2019 (pag. 22)

12 F. Piccinini, S. Santi, S. Duchi, I. De Santis, A. Bevilacqua, *F-Tracker3D: tracking fluorescent cells in three dimensions.* 3rd Annual Meeting of the Italian Mesenchymal Stem Cell Group (GISM), Assisi, Italy, April 12-13, 2018 (pag. 72)

11 I. De Santis, M. Zanoni, C. Bellotti, E. Lucarelli, F. Piccinini*, A. Tesei*, A. Bevilacqua*, *3D multicellular spheroids: regularization time for obtaining a homogeneous model.* 3rd Annual Meeting of the Italian Mesenchymal Stem Cell Group (GISM), Assisi, Italy, April 12-13, 2018 (pag. 53)

10 F. Piccinini, E. Lucarelli, A. Bevilacqua, *MicroMos: an open source software tool to obtain high-resolution panoramic images of 2D cell cultures.* 2nd Annual Meeting of the Italian Mesenchymal Stem Cell Group (GISM), Brescia, Italy, October 20-21, 2016 (pag. 42)

9 A. Bevilacqua, F. Piccinini, M. Zanoni, A. Tesei, *Comparison of methods to generate multicellular spheroids with characteristics compliant with 3D high-content screening experiments.* 2nd Annual Meeting of the Italian Mesenchymal Stem Cell Group (GISM), Brescia, Italy, October 20-21, 2016 (pag. 66)

8 F. Piccinini, C. Bellotti, S. Duchi, E. Lucarelli, A. Bevilacqua, *Over time homogeneity and stability of mesenchymal stromal cells 3D spheroids built using base-level laboratory equipment*. 1st Annual Meeting of the Italian Mesenchymal Stem Cell Group (GISM), Brescia, Italy, October 8-9, 2015

7 F. Piccinini, S. Duchi, E. Martella, G. Alessandri, E. Lucarelli, A. Bevilacqua, *In vitro quantitative analysis of mesenchymal stromal cells migration towards tumours*. 1st Annual Meeting of the Italian Mesenchymal Stem Cell Group (GISM), Brescia, Italy, October 8-9, 2015

6 F. Piccinini, M. Zanoni, A. Bevilacqua, A. Tesei, *Shape-based viability of 3D multicellular spheroids*. 1st Annual Meeting of the Italian Mesenchymal Stem Cell Group (GISM), Brescia, Italy, October 8-9, 2015

5 F. Piccinini, I. De Santis, D. Angeli, A. Bevilacqua, *AnaSP: a software suite to automatically analyse spheroid used in high throughput experiments*. 27th annual conference Italian Association Cell Culture (ONLUS-AICC), Verona, Italy, November 12-14, 2014

4 F. Piccinini, D. Angeli, I. De Santis, A. Tesei, C. Arienti, A. Bevilacqua, *Cell viability and culture population: Statistical analysis of precision of Trypan Blue assay*. 27th annual conference Italian Association Cell Culture (ONLUS-AICC), Verona, Italy, November 12-14, 2014

3 F. Piccinini, A. Tesei, W. Zoli, A. Bevilacqua, *Cancer multicellular aggregates: volume reconstruction from a single 2D projection*. 4th Congress Italian National Bioengineering Group (GNB 2014), Pavia, Italy, June 25-27, 2014

2 F. Piccinini, A. Tesei, G. Paganelli, W. Zoli, A. Bevilacqua, *GridMos: a fully-automatic mosaicing method for improving precision and repeatability of manual cell counting*. 26th annual conference Italian Association Cell Culture (ONLUS-AICC), Brescia, Italy, November 20-22, 2013

1 F. Piccinini, M. Pierini, E. Lucarelli, A. Bevilacqua, *Semi-quantitative monitoring of adhesion of mesenchymal stromal cells on calcium-phosphate granules through a computer vision system*. 26th annual congress Italian Association Cell Culture (ONLUS-AICC), Brescia, Italy, November 20-22, 2013

Invited presentations

29 Title: "Artificial Intelligence Tools For 2D And 3D Microscopy". Date: 11/10/2024. Event: “16 International Symposium On Natural Sciences”, Location: Online and Incheon National University, South Korea. Main Organizer: Prof. Misu Lee. Time: 2 h.

28 Title: "Scientific Writing: How to Boost Scientific Publications by Exploiting AI Opportunities". Date: 24/09/2024. Event: “IRCCS IRST Seminars”, Location: IRCCS IRST Meldola. Main Organizer: Dr. Nicola Normanno. Time: 2 h.

27 Title: "Applications to support writing and bibliographic research". Date: 10/04/2024. Event: “Italian Association of Medical Oncology (AIOM) - Oncology Wednesdays - Medical writing, pharmacovigilance, and clinical research in the era of Artificial Intelligence.”, Location: Online Event. Main Organizers: Dr. Francesca Fabbri, Dr. Anna Delia. Time: 20 min.

26 Title: "Spheroid-based 3D High-content Screening Imaging Platform". Date: 14/06/2023. Event: “International MAECI Workshop 2023”, Location: Yonsei University, Seoul, South Korea. Main Organizers: Prof. Jae-Chul Pyun. Time: 15 min.

25 Title: "Opportunities In 2023 For Short-Term Fellowships In Europe". Date: 07/06/2023. Event: “Cells and Extracellular Templates, 07-09/06/2023 (CET 2023)”, Location: Cusano University, Rome, Italy. Main Organizer: Prof. Ilaria Cacciotti, Dr. Antonio Ravaglioli. Time: 15 min.

24 Title: "Spheroid-based 3D High-content Screening Imaging Platform". Date: 22/05/2023. Event: “Image based 2D and 3D phenotypic drug discovery workshop”, Location: Biological Research Centre (BRC), Szeged, Hungary. Main Organizer: Prof. Peter Horvath. Time: 45 min.

23 Title: "Scientific Writing: How To Choose The Right Journal Taking Advantage Of Some Opportunities". Date: 17/04/2023. Event: “IRCCS IRST Seminars”, Location: IRCCS IRST Meldola. Main Organizer: Prof. Giovanni Martinelli, Dr. Valentina Bugani. Time: 2 h.

22 Title: "Scientific Articles: How To Choose The Right Journal Taking Advantage Of Some Opportunities". Date: 20/10/2022. Event: “Annual Meeting of the Italian Mesenchymal Stem Cell Group (GISM)”, Location: Turin. Main Organizer: Prof. Augusto Pessina, IRCCS BESTA Milan. Time: 15 min.

21 Title: "Humanistic knowledge and scientific knowledge dialogue at school". Date: 07/04/2022. Event: “Meetings 2022 - ScuolaParlante”, Location: Auditorium Liceo Classico Torricelli, Faenza (RA), Italy. Main Organizer: Gruppo interdisciplinare ScuolaParlante. Time: 1 h.

20 Title: "Opportunities for Short-Term Fellowships in Europe". Date: 24/09/2021. Event: “Conference STEMNET2021”, Location: Padova. Main Organizer: Prof. Augusto Pessina, IRCCS BESTA Milan. Time: 15 min.

19 Title: "New frontiers for testing drugs: computer sciences and cell cultures in 3D". Date: 03/02/2021. Event: “A sight at the future (of information technology)”, Location: digital even – University of Bologna. Main Organizer: Prof. Annalisa Franco e Catia Prandi, University of Bologna. Time: 1 h.

18 Title: "New frontiers for testing drugs: computer sciences and cell cultures in 3D". Date: 10/06/2020. Event: “Summer Camp 2020 - Digital Girls”, Location: digital even - University of Bologna. Main Organizer: Prof. Antonella Carbonaro, University of Bologna. Time: 2 h.

17 Title: "Advanced Cell Classifier: an open-source machine-learning tool useful for mesenchymal stem cell classification". Date: 04/04/2019. Location: 4th Annual Meeting of the Italian Mesenchymal Stem Cell Group (GISM), Genova, Italy. Time: 10 min.

16 Title: "Semantic modelling of smart healthcare data". Data: 07/09/2018. Location: Intelligent Systems Conference 2018 (IntelliSys2018), London, UK. Time: 15 min.

15 Title: "Towards consistent data representation in the IoT healthcare landscape". Data: 24/04/2018. Location: 8th International Digital Health Conference (DH'18), Lyon, France. Time: 15 min.

14 Title: "3D cell cultures, from generation to analysis, today and tomorrow". Mini-symposium series: "3D cell cultures: present and future". Date: 02/08/2018. Location: Biological Research Centre, Hungarian Academy of Sciences, Szeged, Hungary. Time: 30 min. Invitation from: Prof. Peter Horvath.

13 Title: "Image processing tools and software applications to improve the research output in Biology and Microscopy". Date: 21/02/2017. Location: Istituto Scientifico Romagnolo per lo Studio e la Cura dei Tumori (IRST) IRCCS, Meldola (FC), Italy. Time: 30 min. Invitation from: Prof. Dino Amadori.

12 Title: "Quantitative microscopy using 3D multicellular spheroids: generation, imaging, and analysis". Location: Presentations sponsored by the Italian Embassy in Seoul, South Korea. 30th August 2016 to Samsung Medical Center, 31st August 2016 to Yonsei University, 02nd September 2016 to Medicinal Bioconvergence Research Center, Seoul, South Korea. Time: 1 h.

11 Title: “How to write a scientific article”. Date: 11/05/2016. Location: Biological Research Centre, Hungarian Academy of Sciences, Szeged, Hungary. Time: 60 min. Invitation from: Prof. Peter Horvath.

10 Title: “The right microscope for the right sample”. Date: 01/12/2015. Audience: Master students of the course BioChemistry, Biomedical Engineering. Location: School of Engineering, Cesena, University of Bologna. Time: 3 h. Invitation from: Prof. Emanuele Giordano.

9 Title: "Over time homogeneity and stability of mesenchymal stromal cells 3D spheroids built using base-level laboratory equipment". Date: 08/10/2015. Location: 1st Annual Meeting of the Italian Mesenchymal Stem Cell Group (GISM), Brescia, Italy.

8 Title: “Microscope limits and 3D cell cultures”. Date: 21/05/2015. Location: Biological Research Centre, Hungarian Academy of Sciences. Location: Szeged, Hungary. Time: 30 min. Invitation from: Prof. Peter Horvath.

7 Title: “The right microscope for the right sample”. Date: 27/11/2014. Audience: Master students of the course BioChemistry, Biomedical Engineering. Location: School of Engineering, Cesena, University of Bologna. Time: 2 h. Invitation from: Prof. Emanuele Giordano.

6 Title: "Cell proliferation in 3D cancer spheroids: volume assessment and 3D reconstruction from a single 2D projection". Date: 14/11/2014. Location: 27th annual congress Italian Association Cell Culture (ONLUS-AICC), Verona, Italy.

5 Title: "Image processing method for 3D volume rendering from one 2D projection: application to cancer spheroids". Date: 15/10/2014. Location: 4th IEEE International Conference on Image Processing Theory, Tools and Applications (IPTA), Paris, France.

4 Title: "Extending the field of view microscope’s camera using a video of images". Date: 08/10/2013. Location: 1st International Conference Materials in Medicine (MiMe), Faenza (RA), Italy.

3 Title: “Solutions to common issues in widefield microscopy: vignetting, mosaicing and depth of focus”. Date: 14/05/2013. Audience: PhD Students in BioEngineering. Location: School of Engineering, Cesena, University of Bologna. Time: 1 h. Invitation from: Prof. Stefano Severi.

2 Title: “Some selected research activities”. Date: 10/05/2011. Audience: Researchers of Light Microscopy and Screening Center, ETH Zurich, Switzerland. Location: ETH Zurich. Time: 1 h. Invitation from: Prof. Peter Horvath.

1 Title: “PET and SPECT”. Date: 01/04/2011. Audience: Master students of the course BioImages, Biomedical Engineering. Location: School of Engineering, Cesena, University of Bologna. Time: 1 h. Invitation from: Prof. Alessandro Bevilacqua.

Commissions of trust

Editorial Board member

Pathology and Oncology Research (JCR-IF2023: 2.3), Frontiers, Issue Editor
Special Issue: “Biology and Clinical Potential of Cellular Communications and Behaviors in Tumor Diseases”
https://www.por-journal.com/research-topics/24/biology-and-clinical-potential-of-cellular-communications-and-behaviors-in-tumor-diseases

BioMed Research International (JCR-IF2023: 2.6), Section: Computational Biology. Wiley
Academic Editor since 10/07/2020
https://www.hindawi.com/journals/bmri/

Sensors (JCR-IF2023: 3.4), MDPI
Topic Editor since 30/10/2020
https://www.mdpi.com/journal/sensors

Sensors (JCR-IF2023: 3.4), MDPI, Guest Editor
Special Issue: “Computer Vision and Sensors Innovations for Microscopy Imaging Applications”
www.mdpi.com/journal/sensors/special_issues/Microscopy_Imaging

Pharmaceutical Sciences and Biomedical Analysis Journal, Scientific Literature,
Editor since 01/09/2017
http://scientificliterature.org/pharmaceutical-sciences-editorial-board.html

Current Updates in Stem Cell Research and Therapy, OPR Science,
Editor, 01/02/2017 – 31/12/2019
http://oprscience.com/department/current-updates-in-stem-cell-research-and-therapy/

Biomedical Statistics and Informatics, Science Publishing Group,
Editor, 28/11/2016 – 31/12/2019
http://www.sciencepublishinggroup.com/j/bsi

SL Clinical And Medical Oncology, Scientific Literature,
Editor since 01/11/2016
http://www.scientificliterature.org/oncology-editorial-board.html#

Reviewer for
(some selected)

Analytical Biochemistry: Methods in the Biological Sciences, Elsevier, ISSN: 0003-2697

Artificial Intelligence in Medicine, Elsevier, ISSN:0933-3657

ASSAY and Drug Development Technologies, Mary Ann Liebert, Inc., ISSN:1540-658X

BioInformatics, Oxford University Press, ISSN: 1367-4803

BioMed Research International, Wiley, ISSN: 2314-6133

Biomedica Signal Processing and Control (BSPC), Elsevier. ISSN:1746-8094

Computers In Biology And Medicine, Science Direct. ISSN: 0010-4825

Computer Methods and Programs in Biomedicine (CMPB), Elsevier, ISSN:0169-2607

Frontiers in Immunology, Frontiers. ISNN: 1664-3224

J. of Biomaterials a Tissue Ingegneering (JBT), American Scientific Publishers, ISSN:2157-9083

J. of Mechanics in Medicine and Biology (JMMB), World Scientific, ISSN: 1793-6810

Biological Procedures Online, BioMed Central, ISSN: 1480-9222

Micron, Elsevier. ISSN:0968-4328

Microscopy Research a Technique (MRT), John Wiley & Sons, Inc. ISSN:1097-0029

Scientific Reports, Nature. ISSN: 2045-2322

Signal, Image and Video Processing (SIVP), Springer. ISSN:1863-1711

Organisation of conferences/congresses/meetings/special-issues/society-activities

Special Issue: "Biology and Clinical Potential of Cellular Communications and Behaviors in Tumor Diseases", 22/08/2024-30/04/2025, Pathology and Oncology Research (JCR-IF2023: 2.3/Q2), Frontiers, website: *https://www.por-journal.com/research-topics/24/biology-and-clinical-potential-of-cellular-communications-and-behaviors-in-tumor-diseases*

International MAECI Workshop, July 10, 2024, Bologna, Italy. 19 invited speakers, 70 attendees, many more online, 2 caterings. Main Organiser.

STEMNET2023 Conference, October 18-20, 2023, Brescia, Italy (*https://stemnet.webnode.it/stemnet-meeting/*). Chairman of the Section "Next Generation", Wednesday 18/10/2023.

5th Italian Mesenchymal Stem Cell Group (GISM) annual meeting, October 20-21, 2022, Turin, Italy (*http://www.gismonline.it/*)

"XXII International Conference on Mechanics in Medicine and Biology (ICMMB)", Bologna, Italy, September 19–21, 2022. Chairman of the Section "Machine Learning and AI", Tuesday 20/09/2022. *https://eventi.unibo.it/icmmb2022*

"GISM NEXT GENERATION", GISM section (Italian Mesenchymal Stem Cell Group). Founder and Organizing Committee Member, 01/01/2020-today: *https://urly.it/3fa38*

STEMNET2021 Conference, September 22-24, 2021, Padova, Italy (*https://stemnet.webnode.it/stemnet-meeting/*)

Special Issue: "Computer Vision and Sensors Innovations for Microscopy Imaging Applications", 03/11/2020-31/08/2021, Sensors (JCR-IF2019: 3.275/Q1), MDPI, website: *www.mdpi.com/journal/sensors/special_issues/Microscopy_Imaging*

1st Italian Mesenchymal Stem Cell Group (GISM) "Next Generation" webinar, October 22, 2020, format: live webinar (*www.gismonline.it*)

4th National School of Microscopy, April 14-17, 2019, IRST IRCCS, Meldola (FC), Italy (*www.scuoladimicroscopia.it*)

4th Italian Mesenchymal Stem Cell Group (GISM) annual meeting, April 4-5, 2019, Centro Congressi IST Nord - Ospedale Policlinico San Martino, Genova, Italy (*www.gismonline.it*)

3rd Italian Mesenchymal Stem Cell Group (GISM) annual meeting, April 12-13, 2018, Palazzo del Monte Frumentario, Assisi, Italy (*www.gismonline.it*)

3rd National School of Microscopy, October 12-14, 2016, Orthopaedic Rizzoli Institute, Bologna, Italy (*www.scuoladimicroscopia.it*)

2nd Italian Mesenchymal Stem Cell Group (GISM) annual meeting, October 20-21, 2016, Centre Pastorale Paolo VI, Brescia, Italy (*www.gismonline.it*)

1st Italian Mesenchymal Stem Cell Group (GISM) annual meeting, October 8-9, 2015, Centre Pastorale Paolo VI, Brescia, Italy (www.gismonline.it)

Teaching activities (as Professor)

Course	Associate Professor, 09127 – Radioprotection (teaching language: Italian), Faculty of Medicine - Ravenna, University of Bologna,
CFU	1
Date	2024/2025, second cycle, fifth year.
Notes	Lessons hold at the "Santa Maria Delle Croci" Hospital, Ravenna.
Course	Associate Professor, B6249 – Scientific Information (teaching language: Italian), Faculty of Medicine - Ravenna, University of Bologna,
CFU	3
Date	2024/2025, second cycle, first year.
Notes	Lessons hold at the "Santa Maria Delle Croci" Hospital, Ravenna.
Course	Associate Professor, 93064-Statistics (Module 2) CLEF (**teaching language: English**), Faculty of Economics, Management and Statistics - Bologna, University of Bologna,
CFU	Integrated course of 11 credits in total (15-hour module)
Date	2024/2025, second cycle, second year, bachelor degree.
Notes	Programming language used: R.
Course	Assistant Professor (i.e. RTD-B), 87928 - TRANSVERSAL SKILLS FOR PHYSICS-RELATED PROFESSIONS (**teaching language: English**), Faculty of Physics - Bologna, University of Bologna,
CFU	6
Date	2024/2025, first cycle, second year master.
Notes	Lessons for learning scientific writing.
Course	Assistant Professor (i.e. RTD-B), 00405 – PHYSICS (teaching language: Italian), Faculty of Medicine - Ravenna, University of Bologna,
CFU	6
Date	2024/2025, first cycle, first year.
Notes	Lessons hold at the "Santa Maria Delle Croci" Hospital, Ravenna.

Course	Substitute professor for maternity leave, 00405 – PHYSICS (teaching language: Italian), Faculty of Medicine - Forlì, University of Bologna,
CFU	6
Date	2023/2024, first cycle, first year.
Notes	Lessons hold at the “Teaching Hub” Forlì.
Course	Assistant Professor (i.e. RTD-B), 00405 – PHYSICS (teaching language: Italian), Faculty of Medicine - Ravenna, University of Bologna,
CFU	6
Date	2023/2024, first cycle, first year.
Notes	Lessons hold at the “Santa Maria Delle Croci” Hospital, Ravenna.
Course	Assistant Professor (i.e. RTD-B), 93064-Statistics (Module 2) CLEF (**teaching language: English**), Faculty of Economics, Management and Statistics - Bologna, University of Bologna,
CFU	Integrated course of 11 credits in total (15-hour module)
Date	2023/2024, second cycle, second year, bachelor degree.
Notes	Programming language used: R.
Course	Assistant Professor (i.e. RTD-B), 00405 - PHYSICS (teaching language: Italian), Faculty of Medicine - Ravenna, University of Bologna,
CFU	6
Date	2022/2023, first cycle, first year.
Notes	Lessons hold at the “Santa Maria Delle Croci” Hospital, Ravenna.
Course	Assistant Professor (i.e. RTD-B), 93064-Statistics (Module 2) CLEF (**teaching language: English**), Faculty of Economics, Management and Statistics - Bologna, University of Bologna,
CFU	Integrated course of 11 credits in total (15-hour module)
Date	2022/2023, second cycle, second year, bachelor degree.
Notes	Programming language used: R.
Course	Adjunct Professor, 93064-Statistics (Module 2) CLEF (**teaching language: English**), Faculty of Economics, Management and Statistics - Bologna, University of Bologna,
CFU	Integrated course of 11 credits in total (15-hour module)
Date	2021/2022, second cycle, second year, bachelor degree.
Notes	Programming language used: R.
Course	Adjunct Professor, 93064-Statistics (Module 2) CLEF (**teaching language: English**), Faculty of Economics, Management and Statistics - Bologna, University of Bologna,
CFU	Integrated course of 11 credits in total (15-hour module)
Date	2020/2021, second cycle, second year, bachelor degree.
Notes	Programming language used: R.
Course	Adjunct Professor, 00819-Programming (Module 2) (teaching language: Italian), Faculty of Computer Science - Cesena, University of Bologna,
CFU	Integrated course of 12 credits in total (46-hour module)
Date	2020/2021, first cycle, first year, bachelor degree.
Notes	Programming language used: C.

Course	Adjunct Professor, 76528-Laboratory of Computer Programming CLEF (**teaching language: English**), Faculty of Economics, Management and Statistics - Bologna, University of Bologna,
CFU	Integrated course of 11 credits in total (15-hour module)
Date	2019/2020, first cycle, second year, bachelor degree.
Notes	Programming language used: R.
Course	Adjunct Professor, 00819-Programming (Module 2) (teaching language: Italian), Faculty of Computer Science - Cesena, University of Bologna,
CFU	Integrated course of 12 credits in total (46-hour module)
Date	2019/2020, first cycle, first year, bachelor degree.
Notes	Programming language used: C.
Course	Adjunct Professor, 76528-Laboratory of Computer Programming CLEF (**teaching language: English**), Faculty of Economics, Management and Statistics - Bologna, University of Bologna,
CFU	2
Date	2018/2019, first cycle, second year, bachelor degree.
Notes	Programming language used: R.
Course	Adjunct Professor, 76528-Laboratory of Computer Programming QF (**teaching language: English**), Faculty of Economics, Management and Statistics - Bologna, University of Bologna,
CFU	2
Date	2018/2019, third cycle, first year, master degree.
Notes	Programming language used: Python.
Course	Adjunct Professor, 00819-Programming (A-L) (Module 2) (teaching language: Italian), Faculty of Computer Science - Cesena, University of Bologna,
CFU	Integrated course of 12 credits in total (46-hour module)
Date	2018/2019, first cycle, first year, bachelor degree.
Notes	Programming language used: C.
Course	Adjunct Professor, 76528-Laboratory of Computer Programming QF (**teaching language: English**), Faculty of Economics, Management and Statistics - Bologna, University of Bologna,
CFU	2
Date	2017/2018, third cycle, first year, master degree.
Notes	Programming language used: Python.
Course	Adjunct Professor, 00819-Programming (A-L) (Module 2) (teaching language: Italian), Faculty of Computer Science - Cesena, University of Bologna,
CFU	Integrated course of 12 credits in total (46-hour module)
Date	2017/2018, first cycle, first year, bachelor degree.
Notes	Programming language used: C.

Teaching activities (as Tutor)

Course	Tutor, 18067-Computer Science (teaching language: Italian), Faculty of Economics, Management and Statistics - Forlì, University of Bologna, Prof. Mauro Gaspari.
Date	2021/2022, first cycle, first year, bachelor degree.

Course	Tutor, 18067-Computer Science (teaching language: Italian), Faculty of Economics, Management and Statistics - Forlì, University of Bologna, Prof. Mauro Gaspari.
Date	2020/2021, first cycle, first year, bachelor degree.
Course	Tutor, 18067-Computer Science (teaching language: Italian), Faculty of Economics, Management and Statistics - Forlì, University of Bologna, Prof. Mauro Gaspari.
Date	2019/2020, first cycle, first year, bachelor degree.
Course	Tutor, 18067-Computer Science (teaching language: Italian), Faculty of Economics, Management and Statistics - Forlì, University of Bologna, Prof. Mauro Gaspari.
Date	2018/2019, first cycle, first year, bachelor degree.
Course	Tutor, 18067-Computer Science (teaching language: Italian), Faculty of Economics, Management and Statistics - Forlì, University of Bologna, Prof. Mauro Gaspari.
Date	2017/2018, first cycle, first year, bachelor degree.
Course	Tutor, 18067-Computer Science (teaching language: Italian), Faculty of Economics, Management and Statistics - Forlì, University of Bologna, Prof. Mauro Gaspari.
Date	2016/2017, first cycle, first year, bachelor degree.
Course	Tutor, 29227-Foundations of Informatics (teaching language: Italian), Mechanical Engineering - Bologna, University of Bologna, Prof. Ruben Scardovelli.
Date	2016/2017, first cycle, second year, bachelor degree.
Notes	Programming language used: C.
Course	Tutor, 29227-Foundations of Informatics (teaching language: Italian), Mechanical Engineering - Bologna, University of Bologna, Prof. Ruben Scardovelli.
Date	2015/2016, first cycle, second year, bachelor degree.
Notes	Programming language used: C.
Course	Tutor, 29227-Foundations of Informatics (teaching language: Italian), Mechanical Engineering - Bologna, University of Bologna, Prof. Jorge Eduardo Fernandez.
Date	2015/2016, first cycle, second year, bachelor degree.
Notes	Programming language used: FORTRAN.

Integrative and support teaching activities (other)

Supervisor of PhDs	
2023 – today	University of Bologna, Physics, Mariachiara Stellato. Role: main supervisor.
Supervisor of Visiting PhDs	
3	Ervin Tasnadi, PhD Student in Computer Vision, Biological Research Centre (BRC), Hungarian Academy of Sciences, Szeged, Hungary; Topic: development of an application to segment and annotate single cells in 3D multicellular aggregates; Home-supervisor: Prof. Peter Horvath. Location: IRST IRCCS, Meldola (FC), Italy; Date of the stay: 27/08/2018-07/09/2018
2	Maria Harmati, PhD Student in Biology, Biological Research Centre (BRC), Hungarian Academy of Sciences, Szeged, Hungary; Topic: testing of several systems for the generation of cancer multicellular spheroids; Home-supervisor: Prof. Krisztina Buzas. Location: IRST IRCCS, Meldola (FC), Italy; Date of the stay: 05/11/2017-29/11/2017

1	Timea Toth, PhD Student in Bio-Engineering, Biological Research Centre (BRC), Hungarian Academy of Sciences, Szeged, Hungary; Topic: analysis of tools for extracting data from cancer multicellular spheroids; Home-supervisor: Prof. Peter Horvath. Location: IRST IRCCS, Meldola (FC), Italy; Date of the stay: 05/11/2017-29/11/2017
Co-supervisor of thesis works	
21	Filippo Pilutti, University of Bologna, School of Computer Sciences, BS thesis, title: Segmentazione di singole cellule all'interno di ROI in immagini di provini istologici attraverso l'utilizzo del software open-source QuPath. Supervisor: Antonella Carbonaro. Co-Supervisors: Filippo Piccinini, Marcella Tazzari, Gastone Castellani. Thesis defence: 18th July 2024
20	Michele Tritto, University of Bologna, School of Physics, MS thesis, title: Colori-DT: a tool for Color Image Difference Measurement. Supervisor: Gastone Castellani. Co-Supervisors: Filippo Piccinini, Giovanni Martinelli. Thesis defence: 27 th March 2024.
19	Fabio Vincenzi, University of Bologna, School of Computer Sciences, BS thesis, title: DS4H Image Alignment tool: code restructuring seguendo modello MVC con ottimizzazione allineamento semiautomatico attraverso modulo gestione smart corners e rendering immagini per analisi di big-data. Supervisor: Antonella Carbonaro. Co-supervisors: Filippo Piccinini, Giovanni Martinelli, Gastone Castellani. Thesis defence: 20th July 2023
18	Matteo Iorio, University of Bologna, School of Computer Sciences, BS thesis, title: DS4H Image Alignment tool: algoritmi per allineamento automatico con estensione dei tool competitor e possibilità di correzioni elastiche includendo gestione ottimizzata di immagini multicanale. Supervisor: Antonella Carbonaro. Co-supervisors: Filippo Piccinini, Giovanni Martinelli, Gastone Castellani. Thesis defence: 20th July 2023
17	Lorenzo Drudi, University of Bologna, School of Computer Sciences, BS thesis, title: TDSFT (Two-Dimensional Segmentation Fusion Tool): tool open-source per la fusione di segmentazioni bidimensionali create da differenti anatomopatologi. Supervisor: Antonella Carbonaro. Co-supervisors: Filippo Piccinini, Gastone Castellani, Giovanni Martinelli. Final score: 110 cum Laude. Thesis defence: 20th July 2023
16	Mariachiara Stellato, University of Bologna, School of Physics, MS thesis, title: Deep learning-based tool for radiomics analysis of cancer 3D multicellular spheroids. Supervisor: Gastone Castellani. Co-supervisors: Filippo Piccinini, Giovanni Martinelli. Final score: 110 cum Laude. Thesis defence: 14th July 2023
15	Matteo Belletti, University of Bologna, School of Computer Sciences, BS thesis, title: DS4H Image Alignment tool, allineamento multimodale automatico: sviluppo di modulo per ottimizzazione dei dati acquisiti ed estensione ad immagini a colori. Supervisor: Antonella Carbonaro. Co-supervisors: Filippo Piccinini, Giovanni Martinelli, Gastone Castellani. Thesis defence: 1st December 2022
14	Marco Edoardo Duma, University of Bologna, School of Computer Sciences, BS thesis, title: DS4H Image Alignment: Modulo per allineamento multimodale automatico considerando deformazioni solide. Supervisor: Antonella Carbonaro. Co-supervisors: Filippo Piccinini, Giovanni Martinelli, Gastone Castellani. Thesis defence: 27th May 2022
13	Sofia Belloni, University of Bologna, School of Computer Sciences, BS thesis, title: Implementazione in Linguaggio C++ in Versione Ottimizzata del tool Reconstruction and Visualization from a Single Projection (ReViSP). Supervisor: Antonella Carbonaro. Co-supervisors: Filippo Piccinini, Giovanni Martinelli. Thesis defence: 7th October 2021
12	Miguel Sotomayor Gonzalez, University of Bologna, School of Computer Sciences, BS thesis, title: Analisi e sviluppo di una procedura di post-processing per immagini acquisite da telecamere in toni di grigio. Supervisor: Antonella Carbonaro. Co-supervisors: Filippo Piccinini. Thesis defence: 18th March 2020
11	Stefano Belli, University of Bologna, School of Computer Sciences, MS thesis, title: Studio e realizzazione di un plugin per l'allineamento di immagini microscopiche. Supervisor: Antonella Carbonaro. Co-supervisors: Filippo Piccinini. Thesis defence: 10th October 2019
10	Roberto Reda, University of Bologna, School of Computer Sciences, MS thesis, title: A semantic web approach to ontology-based system: integrating, sharing and analysing IOT health and fitness data. Supervisor: Antonella Carbonaro. Co-supervisors: Filippo Piccinini. Final score: 110 cum Laude. Thesis defence: 15th December 2017

9	Ilaria De Santis, University of Bologna, School of Biological Sciences, BS thesis, title: Confronto di sistemi per creazione *in vitro* di aggregati multicellulari tumorali: analisi bio-statistica. Supervisor: Fulvia Farabegoli. Co-supervisors: Alessandro Bevilacqua, Anna Tesei, Filippo Piccinini. Final score: 110 cum Laude. Thesis defence: 16th July 2014
8	Angeli Davide, University of Bologna, School of Biological Sciences, BS thesis, title: Sferoidi multicellulari creati *in vitro* via bioreattore: studio a breve e medio termine della omogeneità. Supervisor: Fulvia Farabegoli. Co-supervisors: Alessandro Bevilacqua, Wainer Zoli, Filippo Piccinini. Final score: 110 cum Laude. Thesis defence: 16th July 2014
7	Luigi Caiffa, University of Bologna, Faculty of Biomedical Engineering, MS thesis, title: Studio di classi di sferoidi multicellulari di carcinoma polmonare epidermoidale in radiobiologia. Supervisor: Alessandro Bevilacqua. Co-supervisors: Filippo Piccinini, Anna Tesei, Rolando Polico. Thesis defence: 21st March 2013
6	Ilaria Fantigrossi, University of Bologna, Faculty of Biomedical Engineering, BS thesis, title: Analisi temporale di caratteristiche morfometriche estratte da immagini di broncosfere sottoposte a differenti trattamenti rediobiologici. Supervisor: Alessandro Bevilacqua. Co-supervisors: Filippo Piccinini, Anna Tesei, Rolando Polico. Thesis defence: 11th October 2012
5	Andrea Giorni, University of Bologna, Faculty of Biomedical Engineering, MS thesis, title: Misure di segnali fluorescenti per l'analisi in microscopia dell'espressione genica in biologia sintetica. Supervisor: Emanuele Domenico Giordano. Co-supervisors: Alessandro Bevilacqua, Alessandro Gherardi, Filippo Piccinini, Francesca Ceroni. Thesis defence: 28th March 2012
4	Marco Marchetti, University of Bologna, Faculty of Biomedical Engineering, MS thesis, title: Segmentazione automatica di regioni in immagini istologiche. Supervisor: Alessandro Bevilacqua. Co-supervisors: Alessandro Gherardi, Filippo Piccinini, Wainer Zoli. Thesis defence: 28th March 2012
3	Davide Pollini, University of Bologna, Faculty of Biomedical Engineering, MS thesis, title: Ricostruzione di immagini di broncosfere in microscopia ottica con tecniche di estensione della profondità di fuoco. Supervisor: Alessandro Bevilacqua. Co-supervisors: Filippo Piccinini, Anna Tesei. Final score: 110 cum Laude. Thesis defence: 28th March 2012
2	Alessandro Cedioli, University of Bologna, Faculty of Biomedical Engineering, BS thesis, title: Acquisizione di immagini di broncosfere in radiobiologia. Supervisor: Alessandro Bevilacqua. Co-supervisors: Filippo Piccinini, Anna Tesei. Thesis defence: 28th March 2012
1	Carlo Busa, University of Bologna, Faculty of Informatics Engineering, MS thesis, title: Automatic detection of cancerous regions in histopathological images. Supervisor: Riccardo Rovatti. Co-supervisors: Alessandro Bevilacqua, Sara Bravaccini, Filippo Piccinini. Final score: 110 cum Laude. Thesis defence: 19th December 2011
Teaching Assistant	Tutor DM198/2003, Biomedical Engineering - Cesena, University of Bologna.
Date	2008/2009.
Notes	200 hours of assistance in teaching activities for courses without dedicated tutors.
University examiner	Examiner for the admission tests for the School of Medicine, University of Bologna
Dates	Years 2022, 2023, 2024.
Notes	Examiner in the admission tests for applicant students.
PhD examiner	Examiner for PhD Course in Physics.
Date	21/03/2024.
Notes	Examiner in the official commission of the PhD Thesis of Giacomo Feliciani and Enrico Menghi.
Role	Member of various degree commissions
Date	Years 2022, 2023, 2024.
Notes	Member of various Bachelor's and Master's degree commissions of various Schools of the University of Bologna.
Role	Responsible for the Physics/Mathematics part, Interdepartmental Group OFA, University of Bologna

Date	From 24/06/2024.
Notes	Additional Educational Obligations (OFA) are educational obligations which, according to Art. 6 of the Ministerial Decree 270/2004, are awarded to the student who does not appear to have adequate preparation based on the initial evaluation test.
Role	Member AlmaQ Center for Quantum Sciences and Technologies
Date	05/07/2024.
Notes	AlmaQ aims to systematize the complementary skills present in the various departments of the University of Bologna in the field of Quantum Sciences and Technologies.

Software tools developed and freely available

For programming I typically use one of the following languages: MATLAB, C/C++, JAVA.

Advanced Cell Classifier, for classifying cells in high-content screening images
http://www.cellclassifier.org

AnaSP, software suite to segment brightfield images of multicellular spheroids
http://sourceforge.net/projects/anasp

AND-Tool, Matlab tool for segmenting nuclei in 2D widefield images stained with DAB
http://sourceforge.net/projects/andtool/

CellTracker, for tracking in 2D cells cultured in vitro
http://celltracker.website

CIDRE, for correcting the illumination field of microscopy images
http://www.nature.com/nmeth/journal/v12/n5/full/nmeth.3323.html

Colori-DT, for quantitatively compare colour images
https://sourceforge.net/p/colori-dt/

Colour Deconvolution 2, ImageJ/Fiji plugin for stain unmixing in RGB histological images.
https://blog.bham.ac.uk/intellimic/g-landinisoftware/colour-deconvolution-2/

CometAnalyser, for quantitative comet assay analysis of silver stained and fluorescence images.
https://sourceforge.net/p/cometanalyser

DS4H Image Alignment, ImageJ/Fiji plugin for aligning images based on markers manually defined.
www.filippopiccinini.it/DS4H-IA.html

F-Tracker3D, for tracking in 3D fluorescent particles imaged with a confocal/light-sheet microscope
http://sourceforge.net/p/f-tracker3d

MicroMos, for building a panorama, starting from a set of overlapping images
http://www.filippopiccinini.it/Mosaicing/index.html

ReViMS, for cancer spheroids Reconstruction and Visualization using Multiple Sections
http://sourceforge.net/projects/revims

ReViSP, for cancer spheroids Reconstruction and Visualization using a Single Projection
http://sourceforge.net/projects/revisp

TDSFT, for “mediating” (i.e., process and fuse) multiple 2D black&white segmentations
https://sourceforge.net/p/tdsft

3D-Cell-Annotator, MITK plugin for segmenting single cells in 3D datasets.
www.3d-cell-annotator.org

English courses attended

	Intensive personalized one-to-one English course in England.
Dates	June 9-15, 2013 (5 hours of lesson one-to-one a day per 5 days).
Organisation	English School: “Best In Bath”. Accredited by the British Council. Bath, England.
	English Course in Switzerland, Level C1 – Advanced User.
Dates	May 23, 2011 - July 11, 2011 (14 lessons of 2 hours each).
Organisation	Klubschule Migros, Private Language Centre, Zurich, Switzerland.
	English Course in Italy, B2 – Independent User.
Dates	September 27, 2010 - December 6, 2010.
Organisation	CLIRO, University Language Centre, Cesena (FC), Italy.
	University exam, B2 – Independent User.
Date	March 20, 2007.
Organisation	Biomedical Engineering, University of Bologna, Cesena (FC), Italy.
	English Course in England, B2 – Independent User.
Dates	June 30, 2002 - July 13, 2002.
Organisation	EF Language Travel, London, England.
	English Course in England, A1 – Basic User.
Dates	July 26, 1999 - August 9, 1999.
Organisation	The British Council, London, England.

Conferences and courses

	Annual Meeting Alliance Against Cancer (ACC)
Dates	November 28–30, 2024.
Location	Reggio-Emilia, Italy.
Notes	1 work in the form of a poster.
	XXIII International Conference on Mechanics in Medicine and Biology (ICMMB)
Dates	September 11–13, 2024.
Location	Bruxelles, Belgium.
Notes	**2 Oral Communications** and 1 work in the form of a poster.
	International MAECI Workshop 2024.
Dates	July 10, 2024.

Location	Sant'Orsola Hospital, Bologna, Italy.
Note	**Main Organiser** and 1 **Oral Communication**.
	National Forum of the Precision Medicine
Dates	June 13-15, 2024.
Location	Palermo, Italia.
Note	1 work in the form of a poster.
	International Summer School: Mathematics and Machine Learning for Image Analysis.
Dates	June 4-12, 2024.
Location	University of Bologna, Italy.
Notes	2 works in the form of a poster.
	Straub Conference 2024.
Dates	May 30-31, 2024.
Location	Biological Research Centre (BRC), Szeged, Hungary.
Notes	2 works in the form of posters.
	STEMNET Conference 2023.
Dates	October 18-20, 2023.
Location	Brescia, Italia.
Notes	1 work in the form of a poster.
	International MAECI Workshop 2023.
Dates	June 14, 2023.
Location	Yonsei University, Seoul, South Korea.
Notes	1 **Oral Communication**.
	Cells & Extracellular Templates (CET) 2023.
Dates	June 07-09, 2023.
Location	University Niccolò Cusano-Roma, Rome, Italy.
Notes	2 **Oral Communication**s.
	Straub Conference 2023.
Dates	May 25-26, 2023.
Location	Biological Research Centre (BRC), Szeged, Hungary.
Notes	1 work in the form of a poster.
	5th Annual Meeting of the Italian Mesenchymal Stem Cell Group (GISM).
Dates	October 20-21, 2022.
Location	Turin, Italia.
Notes	**Oral Communication**.
	Comprehensive Cancer Care and Research Network (CCCRN)
Dates	September 20-22, 2022.

Location	Musei San Domenico, Forlì (FC), Italy.
	XXII International Conference on Mechanics in Medicine and Biology (ICMMB)
Dates	September 19–21, 2022.
Location	IRCCS Sant'Orsola Hospital, Bologna.
Notes	**2 Oral Communications** and **CHAIRMAN Session "*Machine Learning and AI*"**
	Straub Conference 2022.
Dates	May 25-27, 2022.
Location	Biological Research Centre (BRC), Szeged, Hungary.
Notes	1 work in the form of a poster.
	STEMNET Conference.
Dates	September 22-24, 2021.
Location	Padova, Italia.
Notes	**Oral Communication**.
	4th EACR Conference Goodbye Flat Biology.
Dates	November 10-13, 2019.
Location	Berlin, Germany.
Notes	Two works in the form of a poster.
	4th Annual Meeting of the Italian Mesenchymal Stem Cell Group (GISM).
Dates	April 04-05, 2019.
Location	Genova, Italy.
Notes	**Oral Communication**, and one work in the form of a poster.
	Confocal Microscopy Course
Dates	January 2019 (one-week course after the acquisition of the microscope from IRST)
Location	Istituto Scientifico Romagnolo per lo Studio e la Cura dei Tumori (IRST) IRCCS, Meldola (FC), Italy
Note	Organized by **Nikon**. Main teacher: Dr. Giacomo Cozzi.
	Intelligent Systems Conference 2018 (IntelliSys2018).
Dates	September 06-07, 2018.
Location	London, UK.
Note	**Oral presentation.**
	8th International Digital Health Conference (DH'18).
Dates	April 23-26, 2018.
Location	Lyon, France.
Note	**Oral presentation.**
	3rd Annual Meeting of the Italian Mesenchymal Stem Cell Group (GISM).
Dates	April 12-13, 2018.
Location	Assisi, Italy.

Notes	Two works in the form of a poster.
	FameLab 2017 intensive course for improving the public speaking of the 20 Italian finalists
Dates	April 7–9, 2017.
Location	POST (Perugia Workshop of Science and Technology), Perugia, Italy.
	4th International Conference Translational Research in Oncology and **1st Multidisciplinary Osteoncology School**
Dates	November 11–12, 2016.
Location	IRST- IRCCS, Meldola, Italy.
	2nd Annual meeting of the Italian Mesenchymal Stem Cell Group (GISM).
Dates	October 20-21, 2016.
Location	Brescia, Italy.
Notes	Two works in the form of a poster.
	3rd Italian School of Microscopy.
Dates	October 12-14, 2016.
Location	Orthopaedic Rizzoli Institute, Bologna, Italy
Notes	Sponsored by **Nikon**. Main topic: super resolution. I was in the **organization committee**.
	Guest researcher to the Leica Microscopy Center
Dates	September 18-19, 2016.
Location	Mannheim, Baden-Württemberg, Germany.
Notes	Invited to test the **Leica** Light Sheet Microscope with our 3D cancer spheroids.
	Guest researcher to the Carl ZEISS MICROSCOPY GmbH
Dates	March 3-4, 2016.
Location	Munich, Bavaria, Germany.
Notes	Invited to test the **Zeiss** Light Sheet Microscope with our 3D cancer spheroids.
	1st Annual Meeting of the Italian Mesenchymal Stem Cell Group (GISM).
Dates	October 8-9, 2015.
Location	Brescia, Italy.
Notes	**Oral Communication**, and three works in the form of posters.
	XXXIV annual School of Bio-engineering.
Dates	September 21-24, 2015.
Location	Bressanone (BZ), Italy.
	27th annual Congress Italian Association Cell Culture (ONLUS-AICC) & 5th International Satellite Italian Mesenchymal Stem Cell Group (GISM).
Dates	November 12-14, 2014.
Location	Verona, Italy.
Notes	**Oral Communication**, and three works in the form of poster.
	4th IEEE International Conference on Image Processing Theory, Tools and Applications (IPTA 2014).

Dates	October 14-17, 2014.
Location	Paris, France.
Notes	**Oral Communication**.
	4th Congress Gruppo Nazionale Bioingegneria (GNB 2014).
Dates	June 25-27, 2014.
Location	Pavia, Italy.
Notes	I presented one work in the form of a poster.
	1st Italian School of Microscopy.
Dates	March 5-7, 2014.
Location	Orthopaedic Rizzoli Institute, Bologna, Italy
Notes	Sponsored by Nikon. Main topic: live imaging.
	26th annual congress Italian Association Cell Culture (ONLUS-AICC) & 4th International Satellite Italian Mesenchymal Stem Cell Group (GISM).
Dates	November 20-22, 2013.
Location	Brescia, Italy.
Notes	I presented two works in the form of a poster.
	1st International Conference MiMe-Materials in Medicine.
Dates	October 8-11, 2013.
Location	Faenza, Ravenna, Italy.
Financing	Grant financed by CNR and ISTEC-Faenza, Italy.
Notes	**Oral Communication**
	8th World Conference on The Future of Science. Nanoscience Society, Fondazione Umberto Veronesi.
Dates	September 16-18, 2012.
Location	Venezia, Italy.
Financing	Granted by the University of Bologna, Italy.
	33rd annual IEEE international conference Engineering in Medicine and Biology Society (EMBS 2011).
Dates	August 30, 2011 - September 3, 2011.
Location	Boston, Massachusetts, USA.
Notes	I presented two works in the form of a poster.
	IEEE SSCI Conference, Symposium on Computational Intelligence in Bioinformatics and Computational Biology (CIBCB 2011).
Dates	April 11-15, 2011.
Location	Paris, France.
Notes	I presented two works in the form of a poster.
	CIMST 2010 Interdisciplinary Summer School on Bio-medical Imaging.
Dates	September 6-17, 2010.
Location	Swiss Federal Institute of Technology Zurich (ETH), Zurich Center for Imaging Science and Technology (CIMST), Zurich, Switzerland.

Notes	Only 50 selected participants were admitted to attend the summer school. I presented one work in the form of a poster.
	ICVSS 2010 International Computer Vision Summer School.
Dates	July 12-17, 2010.
Location	University of Catania, Scicli (Ragusa), Italy.
Notes	I presented one work in the form of a poster.

Other experiences

	Exam for entrance to the Italian Register of Engineers
Dates	January 07, 2019 (date of the fourth and last test of the second call for 2018)
Organization	University of Bologna
Note	1st test score: 40/60, 2nd test score: 57/60, 3rd test score: 57/60, 4th test score: 39/60. Accepted.
	European Night of Researchers 2018.
Dates	28th September 2018, Forli
Main activity	I organized a public show for children and adults about “microscopes and applications”
Organization	http://nottedeiricercatori-society.eu/edizione2018/aspettando-la-notte-2018/
	International FameLab talking science competition 2017.
Date	24th March 2017
Score	Winner of the local selection (10 candidates)!
Main activity	International competition with seminars with theatre directors, psychologists and famous public speakers to learn how to speak in front of a public.
Organization	FameLab Italy (http://www.famelab-italy.it)
	European Night of Researchers 2015.
Dates	25th September 2015, Bologna
Main activity	I organized a public show for children and adults about “microscopes and applications”
Organization	https://eventi.unibo.it/notte-ricercatori-2015
	International FameLab talking science competition 2015.
Dates	4th March 2015 seminars and 11th March 2015 pre-selection and local final.
Score	Selected as one of the 10 local finalists (36 candidates).
Main activity	International competition with seminars with theatre directors, psychologists and famous public speakers to learn how to speak in front of a public.
Organization	FameLab Italy (website: http://famelabbo.bo.imm.cnr.it)
	Biomedical Engineer Trainee.
Dates	April 20, 2009 - May 22, 2009.
Main activity	Development of techniques for image acquisition and processing; assessment of the quality of several cell counters.
Organization	Bone Regeneration Laboratory, Istituto Ortopedico Rizzoli, Bologna, Italy.
Supervisors	Prof. Alessandro Bevilacqua and Dr. Enrico Lucarelli.
	Public secondary school teacher.
Dates	Several substitutions in the period 2005 – 2013.

Main activity	Teacher in several high school institutes for laboratories of the following courses: Physics, Chemistry, Mathematics, Informatics, Electronics, Electrotechnics.
Notes	Third level ranking teacher. Called to various high schools in the province of Ravenna.

Electrician Trainee.

Dates	July 5, 2003 - July 19, 2003.
Main activity	Maintenance of electrical panels.
Organization	Alfing Kessler Sondermaschinen, Aalen, Germany.

Local show presenter and public event planner

Wedding planner	Planning and entertainment of weddings, since 2019
Presenter	Show “Faenza Rock Festival 2008”, Faenza (RA), Italy
Presenter	Show “Pisciniadi 2009: funny water games competition”, Tontola (FC), Italy
Presenter	Show “Pisciniadi 2008: funny water games competition”, Tontola (FC), Italy
Presenter	Show “Pisciniadi 2007: funny water games competition”, Faenza (RA), Italy
Presenter	Show “Pisciniadi 2006: funny water games competition”, Faenza (RA), Italy
Event planner	Summer season 2009, Disco-club Indie, Cervia (RA), Italy
Event planner	Summer season 2008, Disco-club Panighina, Cesena, Italy
Event planner	Winter season 2008, Disco-club Click-Rock, Forlì, Italy
Event planner	Winter season 2007, Disco-club Click-Rock, Forlì, Italy
Event planner	Winter season 2006, Disco-club Click-Rock, Forlì, Italy

Recommendations

- Prof. Gastone Castellani. Professor of Physics. Leader of the research group “BioPhysics Group”, Università di Bologna. Supervisor of my RTD-B time. Email: gastone.castellani@unibo.it. Telefono: +390512143578

- Prof. Alessandro Bevilacqua. Professor of Informatics, Bio-image processing, Image processing. Leader of the research group “Computer Vision Group (CVG)”, University of Bologna. Supervisor of my PhD and my master thesis. Email: alessandro.bevilacqua@unibo.it. Phone: +390512095409

- Prof. Peter Horvath. Professor of Image processing. Leader of the research group “Biological Image Analysis and Machine Learning Group (BIOMAG)”, Biological Research Centre (BRC), Hungarian Academy of Sciences, Szeged, Hungary. Supervisor of my research activities during my stays in ETH Zurich and BRC Szeged. Email: horvath.peter@brc.mta.hu. Phone: +3662599654

- Prof. Antonella Carbonaro. Professor of Informatics. Leader of the research group “Data Science For Health (DS4H)”, University of Bologna. My supervisor for the Teaching Activities at the University of Bologna. Email: antonella.carbonaro@unibo.it. Phone: +390547338830

- Prof. Mauro Ursino. Programme Director of the First Degree and the Master Degree in Biomedical Engineering, University of Bologna. Professor of Neural Networks, University of Bologna. Co-Supervisor of my PhD and my master thesis. Email: mauro.ursino@unibo.it. Phone: +390512093073

- Prof. Kevin Smith. Professor of Image processing. KTH Royal Institute of Technology, School of Computer Science and Communication, Stockholm, Sweden. Co-supervisor of my research activities during my stays in ETH Zurich. Email: ksmith@kth.se. Phone: +46852481246

- Dr. Gábor Csúcs. Director of the Light Microscopy and Screening Center, ETH, Zurich, Switzerland. He provided me with a 7-month grant for the period spent in his Center, happily ended in a shared publication in Nature Methods. Email: csucs@lmc.biol.ethz.ch. Phone: +41446336221

- Dr. Enrico Lucarelli. Director of the Bone Regeneration Laboratory, Istituto Ortopedico Rizzoli, Bologna, Italy. Coordinator and Secretary of the Gruppo Italiano Staminali Mesenchimali (GISM). Referee of my trainee during the master thesis and co-supervisor of my master thesis. Email: enrico.lucarelli@ior.it. Phone: +390516366595

- Dr. Anna Tesei. Head of the Drug Discovery and Radiobiology Unit, Istituto Scientifico Romagnolo per lo Studio e la Cura dei Tumori (IRST), IRCCS, Meldola (FC), Italy. Collaborator for many shared projects. Email: anna.tesei@irst.emr.it. Phone: +390543739227.

- Dr. Anna Sarnelli. Director of the Medical Physics Unit, Istituto Scientifico Romagnolo per lo Studio e la Cura dei Tumori (IRST), IRCCS, Meldola (FC), Italy. I worked in her Unit for 2 years. Now we are collaborators for projects on Radiomics in SPECT, PET, MR, and CT images. Email: anna.sarnelli@irst.emr.it. Phone: +390543739921.

- Prof. Stefano Lazzari. Professor of Fluid Dynamics, Technical Physics, Computational Term Fluid Dynamics, University of Bologna. Supervisor of my bachelor thesis. Email: stefano.lazzari@unibo.it. Phone: +390512093383.

Personal skills and competences

Competences in Biology	Wide experience in planning and managing biological experiments on monolayer and three-dimensional cell cultures. Practical abilities to conduct wetlab routine operations. I typically plan and lead personally the biological experiments of my research, assuming the responsibility of the outcome.
Computer skills and competences	I'm an expert user of MATLAB and HTML. Regular user of FORTRAN, C/C++, JAVA, Python, R. Basis of PLC. I commonly use different CAD, simulation programs, advanced software and word processors: GIMP, SketchUp, Adobe Illustrator. I am an expert user of many microscope programs and imaging processing tools: AxioVision (Zeiss), NIS-Elements (Nikon), MetaMorph (Molecular Devices), ImageXpress (Molecular Devices), CellProfiler, ImageJ.
Internet skills and competences	I'm a good web designer. I have built 4 websites for: - Mesenchymal Stem cells Italian Group (www.gismonline.it) - CellTracker official webpage (www.celltracker.website) - Advanced Cell Classifier official webpage (www.cellclassifier.org) - myself (www.filippopiccinini.it) To design websites I strongly suggest Joomla!
Other skills and competences	Patent BLSD (Basic Life Support Defibrillation), obtained the 10/29/2018 after a two-day course and an exam organized by the Italian Red Cross association. I completed the Latin Dancing Teacher diploma in 2022. I completed the Wedding Planner diploma in 2023. I completed the Personal Trainer diploma in 2023. I completed the Allenatore Portieri Dil. Settore Giovanile FIGC diploma in 2024. I was a football goalkeeper reaching the FIGC D series. In my spare time I work as presenter of shows and local events. I love public speaking!
Driving licences	B and A1 (experiences of left- and right-driving).

Additional information

	www.filippopiccinini.it

I authorize the use and collection of my personal data according to the Art.13 of the Italian Legislative Decree n. 196/2003.

Bologna, 23-Dec-24

Filippo Piccinini