FRANCESCO BIANCONI

Curriculum vitae

Università degli Studi di Perugia
Department of Engineering
Via Goffredo Duranti, 93
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PERSONAL DETAILS:
Born: 17 July 1971
Citizenship: Italian

EDUCATION

HIGHER EDUCATION

- PhD in Computer-aided Design, Università degli Studi di Perugia, January 2001;
- Laurea Degree (MEng) in Mechanical Engineering, Università degli Studi di Perugia, April 1997;

OTHER COURSES AND CERTIFICATIONS

- IBM/Coursera Applied Data Science Specialization, June 2020;

LANGUAGES

- English *proficient*
  - Cambridge CB CPE (grade B – 219/230, November 2021);
  - Cambridge CB CAE (grade A – 81/100, April 2013);
  - iBT TOEFL (104/120, December 2011);
- Spanish *advanced*
  - DELE interm. 95/100, May 2006)
- Italian *native*

IT & PROGRAMMING SKILLS

- Programming languages: C, C++, Java and Python;
- Digital typesetting & Office automation: Excel, Word, LaTeX;
- Scientific & data visualisation packages: Matlab, Mathematica and Tableau;
- CAD/CAE: AutoCAD, Inventor, SolidWorks;

EMPLOYMENT

FROM	TO	POSITION	INSTITUTION / COMPANY
1 Jul 2015	present	Professore Associato (eqv.: UK = Senior Lecturer; US = Associate Professor)	Università degli Studi di Perugia (Italy)
1 Nov 2000	30 Jun 2015	Ricercatore (eqv.: UK = Lecturer; US = Assistant Professor)	Università degli Studi di Perugia (Italy)
1 Nov 1997	31 Oct 2000	Salaried PhD candidate	Università degli Studi di Perugia (Italy)
1 Oct 1998	30 Nov 1998	CAD Engineer / Internship	Umbra Cuscinetti SpA, Foligno (Italy)

1 Dec 1997	30 Jun 1998	Secondary school teacher (*Textile Technologies*)	Istituto Professionale Statale per l'Industria e L'Artigianato, Perugia (Italy)
5 Dec 1997	30 Jun 1998	Secondary school teacher (*Civil and Industrial Plants*)	Istituto Tecnico Statale per Geometri, Perugia (Italy)
25 Jun 1997	22 Lug 1998	Secondary school teacher (*Applied Mechanics*)	Istituto Tecnico Industriale Statale, Foligno (Italy)

VISITING POSITIONS

- CITY, UNIVERSITY OF LONDON (UK), School of Mathematics, Computer Science and Engineering
  - Academic visitor from 24-09-2018 to 18-12-2018.
- QUEEN MARY, UNIVERSITY OF LONDON (UK), School Electronic Engineering and Computer Science
  - Academic visitor from 14-09-2015 to 18-12-2015.
- UNIVERSITY OF EAST ANGLIA (UK), School of Computing Sciences
  - Visiting research fellow from 1-10-2010 to 10-12-2010.
- UNIVERSIDADE DE VIGO (Spain), Escuela de Ingeniería Industrial
  - Visiting researcher from 15-6-2009 to 13-7-2009;
  - Visiting researcher from 9-9-2007 to 23-9-2007;
  - Visiting researcher from 10-9-2006 to 27-9-2006;
  - Visiting researcher from 4-9-2005 to 28-9-2005;

TEACHING

UNDERGRADUATE COURSES

- GRAPHICAL COMMUNICATION FOR ENGINEERING DESIGN (5 credits), Università degli Studi di Perugia, Department of Engineering, BSc Engineering Management, 2021–present;
- MACHINE DRAWING (10 credits), Università degli Studi di Perugia, Department of Engineering, BSc Mechanical Engineering, 2021–present;
- TECHNICAL DRAWING (5 credits) + CAD (2 credits), Università degli Studi di Perugia, Department of Engineering, BSc Industrial Engineering, 2010–present;
- COMPUTER SKILLS (2 credits), Università degli Studi di Perugia, Department of Engineering, BSc Mechanical Engineering, 2012–2022;
- TECHNICAL DRAWING (6 credits) + *Computer skills* (2 credits), Università degli Studi di Perugia, Department of Engineering, BSc Management Engineering, 2017–2021;
- MACHINE DRAWING (10 credits) + *Computer skills (2 credits)*, Università degli Studi di Perugia, Department of Engineering, BSc Mechanical Engineering, 2008–2012;
- MACHINE DRAWING (6 credits) Università degli Studi di Perugia, Department of Engineering, BSc Mechanical Engineering, 2000–2007;
- TECHNICAL DRAWING (5 credits) Università degli Studi di Perugia, Department of Engineering, BSc Materials Engineering, 2000–2004;
- TECHNICAL DRAWING (4 credits) + COMPUTER SKILLS (2 credits) Università degli Studi di Perugia, Department of Engineering, BSc Energy Engineering and BSc Management Engineering, 2005–2010;
- CAD LABORATORY (2 credits) Università degli Studi di Perugia, Department of Engineering, BSc Materials Engineering, 2003–2005.

MASTER COURSES

- PRODUCT DESIGN AND DEVELOPMENT (6 credits), Università degli Studi di Perugia, Department of Engineering, MSc Industrial Engineering, 2009–2010.
- DESIGN METHODS OF INDUSTRIAL ENGINEERING (6 credits), Università degli Studi di Perugia, Department of Engineering, MSc Mechanical Engineering, 2008–2009.

POST-MASTER COURSES

- COMPUTER-AIDED DESIGN (2,75 credits), Università degli Studi di Perugia, Graduate Teacher Training Programme, 2005;
- COMPUTER-AIDED DESIGN (4 credits), Università degli Studi di Perugia, Faculty of Engineering post-master course in Materials Engineering, 2004;
- *Technical Drawing I* (1,75 credits), Università degli Studi di Perugia, Graduate Teacher Training Programme, 2002;
- *Technical Drawing II* (2 credits), Università degli Studi di Perugia, Graduate Teacher Training Programme, 2003;

SHORT COURSES

- *Fundamentals of Engineering Drawing: Theory and Applications*, FAIST Componenti S.p.A Montone (Italy), February 2011 (10h)
- *Fundamentals of Pattern Recognition and Image Processing,* Universidad de Vigo (Spain), Doctoral Programme in Environmental Engineering, June 2009 (10h);
- *Introduction to Technical Drawing*, Black & Decker, Perugia (Italy), Dec 2008 / Jan 2009 (15h);
- *Introduction to CAD/CAE*, Master in Virtual Engineering, ITT s.c.a.r.l, Umbertide (Italy), 2005 (10h)
- *Introduction to Object-oriented Programming in C/C++*, Università degli Studi di Perugia (Italy), Doctoral Programme in Industrial Engineering, April/May 2004 (20h);

TALKS

- *Behind charts: A quick detour into data visualisation*. In *Topology by the River Ouse: AI, Data Shape and Computation in Buckingham*. The University of Buckingham, Buckingham, United Kingdom, 27 March 2026 (online).
- *Il machine learning e il deep learning spiegati al medico nucleare [Machine learning and deep learning explained to the nuclear medicine specialist].* Corso Big Data, AI & oncologia nucleare: 'Questo matrimonio s'ha da fare'? *[Short course Big Data, AI & nuclear oncology: shall we get them married?]* The Italian Society of Nuclear Medicine, Molecular Imaging and Therapy, Rome (Italy), 5 Februrary 2026.
- *Intelligenza artificiale e radiomica nella diagnostica per immagini: introduzione a strumenti e metodi [Artificial intelligence and radiomics for diagnostic imaging: an introduction to tools and methods].* Corso *Tecniche di intelligenza artificiale nell'imaging: istruzioni per l'uso [Short course Artificial intelligence techniques for diagnostic imaging—how to].* Perugia Hospital, Perugia, Italy, 7 November 2025.
- *IA e radiomica: uno sguardo d'insieme su strumenti e metodi [AI and radiomics: an overview of tools and methods]* Corso *AI e radiomica in medicina nucleare: luci ed ombre [Short AI and radiomics in Nuclear Medicine: Lights and shades]*. The Italian Society of Nuclear Medicine, Molecular Imaging and Therapy, Rome (Italy), 17 December 2024
- *Quale software scegliere? [Which software to choose?]* The 16th National Congress of the Italian Society of Nuclear Medicine and Molecular Imaging, educational session on *Radiomica come e perché [Radiomics how and why]*, Milan (Italy), 23 June 2024
- *Intelligenza artificiale applicata all'imaging medico nucleare: estrazione e analisi di features radiomiche [Artficial Intelligence applied to Nuclear Medicine imaging: extraction and analysis of radiomics features]* (with B. Palumbo), webinar *Evoluzione tecnologica, digital health & Nuclear Medicine [Technical evolution, digital*

health and Nuclear Medicine], Italian Society of Nuclear Medicine and Molecular Imaging (AIMN) the Health Technology Assessment (HTA) study group, 26 January 2024;

- *A quick introduction to Radiomics*, Webinar *Introduction to Radiomics for Nuclear Medicine*, Italian Society of Nuclear Medicine and Molecular Imaging (AIMN), the Radiomics study group, 16 January 2023;
- *Colour and texture descriptors for visual recognition: From the early years to convolutional networks*, keynote lecture (online), 2nd International Conference on Computer Engineering and Science, Islamic Azad University, Najafabad, Iran, 20 December 2022;
- *Intelligenza artificiale e radiomica: applicazioni in Medicina Nucleare [Artificial Intelligence and Radiomics: Applications in Nuclear Medicine]* (with B. Palumbo), Memorial Dr. Fausto Chionne "Dall'Intelligenza Artificiale alla Medicina Predittiva e di precisione: quali sviluppi in sanità" [From Artificial Intelligence to personalised and predictive medicine: Developments for the healthcare system; in memory of Dr. Fausto Chionne], Città della Pieve, Italy, 13 October 2022
- *Artificial intelligence and radiomics: an overview (in Italian)*, invited note at the round-table on Artificial Intelligence and Radiomics, 15th National Congress of the Italian Society of Nuclear Medicine and Molecular Imaging, Rimini (Italy), 14 May 2022
- *Advances in modelling and analysis of the human body by computational imaging* (with G. Pascoletti), keynote lecture, 2nd International Congress on Engineering Sciences and Multidisciplinary Approaches, Istanbul, Turkey, 18 September 2021;
- *Radiomics in medical imaging: an overview,* invited talk*,* IET Webinar Recent advances in Medical Image Analysis, 25 June 2021;
- *Texture and colour descriptors for visual recognition: historical overview and applications to computer vision and robotics*, keynote lecture, The 2020 International Conference on Control, Automation and Diagnosis (ICCAD'20), Paris, France, 7 October 2020;
- *Role of artificial intelligence techniques (automatic classifiers) in molecular imaging modalities in neurodegenerative diseases* (with B. Palumbo). Invited talk, Short course in Big Data, Radiomics & Artificial Intelligence; Italian Association for Medical Physics (AIFM), Reggio Emilia, Italy, 15-16 Dec 2017
- *Towards a procedural model for CAD data exchange*; 5th workshop on Design Tools and Methods in Industrial Engineering, Pisa (Italy), 21-23 Mar 2005
- *Collaborative CAD modeling and construction of augmented CAD models***;** 4th workshop on Design Tools and Methods in Industrial Engineering, Erice (Italy), 29 Sep - 1 Oct 2003
- *Approaches for integration of CAD/CAM/CAE systems***;** 3rd workshop on Design Tools and Methods in Industrial Engineering, Firenze (Italy), 27 - 28 Jun 2002
- *Interface-based methods for data exchange among CAx systems***;** 2nd workshop on Design Tools and Methods in Industrial Engineering, Perugia (Italy), 5 - 6 Jul 2001
- *Collaborative design and data exchange through STL files*; 1st workshop on Design Tools and Methods in Industrial Engineering, Parma (Italy), Sep 2000

SEMINARS

- *Texture and colour descriptors for visual recognition: an overview of methods applications*, Doctoral programme in Industrial and Information Engineering, Università degli Studi di Perugia, Italy, 23 June 2021*;*
- *Hand-designed descriptors vs. pre-trained convolutional networks: a comparison of two strategies for colour texture classification*, City, University of London (UK), 20 Nov 2018;
- *Texture description through histograms of equivalent patterns: A unifying Framework for LBP and related methods* University of East Anglia (UK), School of Computing Sciences, 9 Dec 2015;
- *Texture description through histograms of equivalent patterns: A unifying Framework for LBP and related methods* Queen Mary, University of London (UK), School of Electronic Engineering and Computer Science, 22 Sep 2015;
- *Introduction to computer vision*, Universidade de Vigo (Spain), 21 Jan 2014;
- *Fundamentals of pattern recognition and colour image analysis*, Universidade de Vigo (Spain), 27 Nov 2012;

- *Introduction to pattern recognition and computer vision with applications in industry*, Universidad de Vigo (Spain), 24 Jan 2012;
- *Colour vision and pattern recognition*, Universidad de Vigo (Spain), 11 Jan 2011;
- *Automatic characterization of materials appearance through texture and colour analysis,* University of East Anglia (UK), School of Computing Sciences, 15 Oct 2010;
- *Data exchange among CAD/CAM/CAE systems: problems and perspectives*, Università degli Studi dell'Aquila (Italy), 16 Dec 2004.

TUTORIALS

- *Colour texture analysis and classification* (with C. Cusano and P. Napoletano), 6th Computational Colour Imaging Workshop (CCIW'17), Milan, Italy, 29 Mar 2017.

SUPERVISION OF PHD DISSERTATIONS

- M.U. Khan "*Radiomics as a tool to differentiate benign vs. malignant lesions in different imaging modalities*". Università degli Studi di Perugia (Italy), Doctoral Programme in Industrial and Information Engineering, 38th cycle, Apr. 2026. Supervisor: F. Bianconi.
- R. Bello-Cerezo; "*Colour texture classification at the end of the 'early' years: hand-designed descriptors or pre-trained convolutional neural networks*". Università degli Studi di Perugia (Italy), Doctoral Programme in Industrial and Information Engineering, 31st cycle, Apr. 2019. Supervisors: F. Bianconi and F Di Maria.

SUPERVISION OF BACHELOR AND MASTER THESES

- Twenty-three master and bachelor theses within the Faculty of Engineering, Università degli Studi di Perugia, Italy;
- Eight master theses within the School of Industrial Engineering, Universidad de Vigo.

TEACHING ACTIVITY IN THE FRAMEWORK OF THE ERASMUS PROGRAMME

- December 2013: six hours within the module of "Expresión Gráfica" (Technical Drawing), BSc Energy Engineering and Mining, and Energy Resources and Engineering, Universidade de Vigo (Spain), School of Mining Engineering.
- January 2012: six hours within the module of "Expresión Gráfica" (Technical Drawing), BSc in Engineering of Industrial Technologies, Management Engineering, Electrical Engineering, Mechanical Engineering, Industrial Automation and Electronic Engineering, and Industrial Chemical Engineering, Universidade de Vigo (Spain), School of Industrial Engineering.
- April 2009: eight hours within the module of "Expresión Gráfica" (Technical Drawing), BSc in Industrial Engineering, Universidade de Vigo (Spain), School of Industrial Engineering.

ADMINISTRATIVE WORK

- Member of the Research Committee, Department of Engineering, Università degli Studi di Perugia, Nov. 2014 – Nov. 2025
- Member of the Internship Committee, BSc and MSc in Mechanical Engineering, Università degli Studi di Perugia, Nov. 2022--present
- Member of the Quality Assurance Group, BSc and MSc in Mechanical Engineering, Università degli Studi di Perugia, Jan. 2024--present
- Member of the Steering Committee of the Doctoral Programme in Industrial Engineering, Università degli Studi di Perugia, 2003—2012
- Member of the Steering Committee of the Doctoral Programme in Industrial and Information Engineering, Università degli Studi di Perugia, 2013--present

COORDINATION AND PARTICIPATION IN SCIENTIFIC PROJECTS

TITLE	*MODUS-PRO MODellazione aUtomatica perSonalizzata di PRotesi e Ortesi [Automated personalised modeling of protheses and ortheses]*
FUNDING INSTITUTIONS	Fondazione Perugia (Perugia, Italy)
TYPE	Research call 2025 – innovative research projects
ROLE	Investigator
YEARS	2026-2028
OVERALL BUDGET	€ 50.000,00

TITLE	*Innovation, digitalisation and sustainability for the diffused economy in Central Italy – VITALITY*. Spoke 9: POLO NANOMAT, Nanostructured materials and devices
FUNDING INSTITUTIONS	Ministero dell'Università e della Ricerca, Commissione Europea
TYPE	NextGenerationEU
ROLE	Investigator
YEARS	2024-2025
OVERALL BUDGET	€ 18.482.071,99

TITLE	*3D printing and digital twinning ceramic restorations for dentistry (3DCer4Dent)*
FUNDING INSTITUTIONS	Italian Ministry for University and Research (MUR)
TYPE	National research call PRIN 2022
ROLE	Investigator
YEARS	2023-2025
AMOUNT GRANTED	€ 306.790,00 (totale), € 86.589,00 (Università degli Studi di Perugia)

TITLE	*Analisi della geometria e della tessitura di modelli piani e volumetrici: metodi ed applicazioni [STARTLE – Shape and Texture Analysis of planaR and volumeTric models: mEthods and applications]*
FUNDING INSTITUTIONS	Department of Engineering, Università degli Studi di Perugia, Italy
TYPE	Fundamental research grants 2022
ROLE	Principal Investigator
YEARS	2022-2024
AMOUNT GRANTED	€ 4.000,00

TITLE	*Artificial intelligence for earth observation*
FUNDING INSTITUTIONS	Department of Engineering, Università degli Studi di Perugia, Italy
TYPE	Fundamental research grants 2020
ROLE	Investigator
YEARS	2021-2022
AMOUNT GRANTED	€ 3.000,00

TITLE	*Shape, colour and texture features for the analysis of two- and three-dimensional images: methods and applications*
FUNDING INSTITUTIONS	Department of Engineering, Università degli Studi di Perugia, Italy
TYPE	Fundamental research grants 2019
ROLE	Principal Investigator

YEARS	2020-2021
AMOUNT GRANTED	€ 2.751,32
TITLE	*Traditional and Machine Learning algorithms for developing data-driven robotics applications and for automatic classification of industrial products*
FUNDING INSTITUTIONS	Department of Engineering, Università degli Studi di Perugia, Italy
TYPE	Fundamental research grants 2018
ROLE	Investigator
YEARS	2019-2020
AMOUNT GRANTED	€ 5.600,00
TITLE	*BioMeTron: A new multi-disciplinary, integrated approach for studying, designing and managing biological plants for energy and the environment*
FUNDING INSTITUTIONS	Department of Engineering, Università degli Studi di Perugia, Italy
TYPE	Fundamental research grant
ROLE	Investigator
YEARS	2015-2017
AMOUNT GRANTED	€ 14.000,00
TITLE	*Object-based identification of greenhouse horticultural crops through satellite stereo imagery from WorldView-3 and time series from Landsat-8* (Identificación basada en objetos de cultivos hortícolas bajo invernadero a partir de stereo imágenes del satélite WorldView-3 y series temporales de Landsat-8). Ref. AGL2014-56017-R
FUNDING INSTITUTIONS	Ministerio de Economía y Competitividad (Spain)
COORDINATING INST.	Universidad de Almería (Spain)
PARTNERS	Universidad de Vigo (Spain), Università degli Studi di Perugia (Italy)
ROLE	Investigator
YEARS	2015-2018
AMOUNT GRANTED	€ 85.000,00
TITLE	*Image processing methods and applications to the industry and other sectors*
FUNDING INSTITUTIONS	Dipartimento Ingegneria Industriale, Università degli Studi di Perugia (Italy)
ROLE	Principal investigator
YEARS	2013-present
AMOUNT GRANTED	€ 7000,00
TITLE	*LIFE12 ENV/IT/000411 Enhanced material recovery and environmental sustainability for small scale waste management systems*
FUNDING INSTITUTIONS	European Commission
ROLE	Investigator
YEARS	2013-present
TITLE	*GEOEYE1-WV2: generation of high resolution geo-referenced data from GeoEye-1 and WorldView-2 satellite images* (ref. CTM2010-16573)
FUNDING INSTITUTIONS	Ministerio de Educación y Ciencia (Spain)
COORDINATING INST.	Universidad de Almería (Spain)
PARTNERS	Universidad de Vigo (Spain), Università degli Studi di Perugia (Italy)
ROLE	Investigator

YEARS	2011-2013
TITLE	*EFESO (Environmental Friendly Energy from Solid Oxide Fuel Cells)*
FUNDING INSTITUTIONS	Ministero dello Sviluppo Economico (Italy), Merloni Termosanitari S.p.A. (Italy), Università degli Studi di Perugia (Italy), Università Politecnica delle Marche (Italy), Politecnico di Torino (Italy), ENEA (Italy) and other nine partners
ROLE	Investigator
YEARS	2009-2011
AMOUNT GRANTED	€ 10.922.360,00 (total); € 528.376,00 (Università degli Studi di Perugia)
TITLE	*Models for performance evaluation of the supply chain*
FUNDING INSTITUTION	Consorzio per lo sviluppo del polo universitario della provincia di Terni (Italy)
ROLE	Investigator
YEARS	2007
AMOUNT GRANTED	€ 45.000,00
TITLE	*Modeling, simulation and experimental evaluation of materials for Industrial and Civil Engineering*
FUNDING INSTITUTION	Consorzio per lo sviluppo del polo universitario della provincia di Terni (Italy)
ROLE	Investigator
YEARS	2007-2008
AMOUNT GRANTED	€ 73.000,00
TITLE	*Innovative systems for the interoperability and data exchange among CAD/CAM/CAE systems*
FUNDING INSTITUTION	Ministero dell'Istruzione, dell'Università e della Ricerca (Italy)
ROLE	Investigator
YEARS	2006-2007
AMOUNT GRANTED	€ 70.500,00
TITLE	*Flexible production systems and product diversification in natural stone industry*
FUNDING INSTITUTION	Mondial Marmi SpA (Italy)
ROLE	Investigator
YEARS	2003
AMOUNT GRANTED	€ 417.000,00

OTHER GRANTS AND FELLOWSHIPS

FUNDING INSTITUTION	Ministry of Education, Research and University (MIUR, Italy)
TYPE	Grant for fundamental research
TITLE	*Funding for Basic Activities Related to Research*
YEAR	2017
AMOUNT GRANTED	€ 3000,00
FUNDING INSTITUTION	FAIST Componenti S.p.A (Montone, Italy)
TYPE	Grant for teaching activity
TITLE	*Training – Engineering Drawing*
YEAR	2018
AMOUNT GRANTED	€ 3000,00

FUNDING INSTITUTION	FAIST Componenti S.p.A (Montone, Italy)
TYPE	Grant for teaching activity
TITLE	*Training – Engineering Drawing*
YEAR	2017
AMOUNT GRANTED	€ 1500,00

FUNDING INSTITUTION	FAIST Componenti S.p.A (Montone, Italy)
TYPE	Grant for teaching activity
TITLE	*Introduction to Engineering Drawing: theory and applications*
YEAR	2016
AMOUNT GRANTED	€ 1000,00

FUNDING INSTITUTION	Universidad de Vigo (Spain)
TYPE	Grant for teaching activity
TITLE	*Introduction to computer vision*
YEAR	2014
AMOUNT GRANTED	€ 500,00

FUNDING INSTITUTION	Universidad de Vigo (Spain)
TYPE	Grant for teaching activity
TITLE	*Fundamentals of pattern recognition and colour image analysis*
YEAR	2013
AMOUNT GRANTED	€ 500,00

FUNDING INSTITUTION	Universidad de Vigo (Spain)
TYPE	Grant for teaching activity
TITLE	*Fundamentals of pattern recognition and colour image analysis*
YEAR	2012
AMOUNT GRANTED	€ 1200,00

FUNDING INSTITUTION	Universidad de Vigo (Spain)
TYPE	Grant for teaching activity
TITLE	*Colour vision and pattern recognition*
YEAR	2011
AMOUNT GRANTED	€ 500,00

FUNDING INSTITUTION	FAIST Componenti S.p.A (Italy)
TYPE	Grant for teaching activity
TITLE	*Introduction to engineering drawing*
YEAR	2011
AMOUNT GRANTED	€ 780,00

FUNDING INSTITUTION	Universidad de Vigo (Spain)
TYPE	Grant for teaching activity
TITLE	*Digital image processing and pattern recognition*
YEAR	2009
AMOUNT GRANTED	€ 1.800,00

FUNDING INSTITUTION	Black & Decker Italia S.p.A. (Italy)

TYPE	Grant for teaching activity
TITLE	*Introduction to Engineering drawing, materials and manufacturing processes*
YEARS	2008-2009
AMOUNT GRANTED	€ 6000,00
FUNDING INSTITUTION	Universidad de Vigo (Spain)
TYPE	Visiting fellowship for research activity
TITLE	*Characterization of the visual appearance of ornamental stone through combination of classifiers*
YEAR	2006
AMOUNT GRANTED	€ 1.200,00
FUNDING INSTITUTION	Consiglio Nazionale delle Ricerche (Italy)
TYPE	Short-term mobility fellowship for research activity
TITLE	*Characterization of the visual appearance of natural stones (marble and granite) through image processing and artificial intelligence*.
YEAR	2005
AMOUNT GRANTED	€ 1.787,87
FUNDING INSTITUTION	O.M.C. Srl (Italy)
TITLE	*Design and optimisation of shelters*
TYPE	Grant for research activity
YEAR	2005
AMOUNT GRANTED	€ 5.760,00

ADVISORY

EDITORSHIPS

- Guest Editor of the Special Issue *Radiomics in cancer Imaging: Theory and Applications in Solid Tumours*, Cancers (e-ISSN: 2072-6694) Oct. 2024—Oct.2025;
- Academic Editor for *PLOS ONE* (e-ISSN: 1932-6203) Jun. 2020—Mar. 2024;
- Member of the Section Board *Computing and Artificial Intelligence*, Applied Sciences (e-ISSN: 2076-3417), Nov. 2019—Feb. 2022;
- Guest Editor of the Special Issue *Artificial intelligence in Image-Based Diagnostics of Oncological and Neurological Disorders 2.0*, Diagnostics (e-ISSN 2075-4418), 2022—2023;
- Managing Guest Editor of the Virtual Special Issue *Visual dEscriptors for TexturE Recognition: from Gabor to deep leArNing (VETERAN)*, Pattern Recognition Letters (ISSN: 0167-8655), 2022;
- Guest Editor of the Special Issue *Automated Product Inspection for Smart Manufacturing*, Applied Sciences, MDPI (e-ISSN: 2076-3417), 2022;
- Guest Editor of the Special Issue *Artificial intelligence in Image-Based Diagnostics of Oncological and Neurological Disorders*, Diagnostics (e-ISSN 2075-4418), 2020—2021;
- Guest Editor of the Special Issue *Texture and Colour in Image Analysis*, Applied Sciences (e-ISSN: 2076-3417), 2019—2020.

OCCASIONAL REVIEWER FOR:

- *Applications in Engineering Science* (3 manuscripts revised)
- *Applied Mathematics and Computation* (2)
- *Algorithms* (4)
- *Applied Sciences* (13)

- *Archaeometry* (1)
- *Automation in Construction* (3)
- *Autosoft Journal* (2)
- *Bioengineering* (2)
- *Biomecules & Biomedicine* (1)
- *Biomedicines* (1)
- *Biosystems Engineering* (1)
- *BMC Cancer* (1)
- *BMC Medical Imaging* (7)
- *Cancer Imaging* (3)
- *Cancer Investigation* (1)
- *Cancer Medicine* (2)
- *Cancer Management and Research* (1)
- *Cancers* (5)
- *Clinical and Translational Imaging* (3)
- *Clinical Lung Cancer* (1)
- *Computers and Electronics in Agriculture* (1)
- *Computers in Industry* (2)
- *Computer Methods and Programs in Biomedicine* (3)
- *Concurrency and Computation: Practice and Experience* (1)
- *Data in Brief* (1)
- *Diagnostics* (4)
- *Digital Signal Processing* (4)
- *Dyna-Colombia* (1)
- *Ecological Informatics* (1)
- *Electronics* (3)
- *Energy and Buildings* (1)
- *Entropy* (2)
- *Engineering Computations* (1)
- *Expert Review of Medical Devices* (2)
- *Expert Systems With Applications* (11)
- *EURASIP Journal on Image and Video Processing* (1)
- *European Journal of Nuclear Medicine and Molecular Imaging* (1)
- *European Radiology* (2)
- *Fibers and Polymers* (1)
- *Food Science and Applied Biotechnology* (1)
- *Frontiers in Medicine* (1)
- *Frontiers in Oncology* (2)
- *Future Generation Computer Systems* (1)
- *EURASIP Journal on Image and Video Processing* (1)
- *IEEE Access* (1)
- *IEEE Journal of Biomedical and Health Informatics* (1)
- *IEEE Signal Processing Letters* (2)
- *IEEE Transactions on Circuits and Systems for Video Technology* (1)
- *IEEE Transactions on Emerging Topics in Computational Intelligence* (1)
- *IEEE Transactions on Image Processing* (19)
- *IEEE Transactions on Medical Imaging* (1)
- *IEEE Transactions on Multimedia* (2)
- *IEEE Transactions on Signal Processing* (1)

- *IET Image Processing* (2)
- *IET Signal Processing* (2)
- *IET Computer Vision* (2)
- *Information* (1)
- *Información Tecnológica* (1)
- *Integrated Computer-aided Engineering* (1)
- *Intelligent Automation and Soft Computing* (1)
- *International Journal of Computer Applications in Technology* (1)
- *International Journal of Computer Vision* (1)
- *International Journal of Continuing Engineering Education and Life-Long Learning* (1)
- *International Journal of Cosmetic Science* (1)
- *International Journal on Interactive Design and Manufacturing* (4)
- *International Journal of Multimedia Information Retrieval* (1)
- *International Journal of Neural Systems* (2)
- *Journal of Applied Remote Sensing* (1)
- *Journal of Cancer Research and Clinical Oncology* (1)
- *Journal of Computational Methods in Sciences and Engineering* (1)
- *Journal of Computer Assisted Radiology and Surgery* (1)
- *Journal of Digital Imaging* (1)
- *Journal of Electronic Imaging* (9)
- *Journal of King Saud University* (1)
- *Journal of Imaging* (8)
- *Journal of Imaging Science and Technology* (1)
- *Journal of Medical Imaging* (1)
- *Journal of Medical Imaging and Health Informatics* (9)
- *Journal of the Optical Society of America – A* (1)
- *Journal of Visualization* (3)
- *Journal on Computing and Cultural Heritage* (1)
- *Knowledge-Based Systems* (3)
- *Life* (1)
- *Machine Vision and Applications* (1)
- *Measurement* (2)
- *Medical Image Analysis* (2)
- *Microscopy Research & Technique* (1)
- *Modelling and Simulation in Engineering* (2)
- *Molecular Imaging and Biology* (2)
- *Multidimensional Systems and Signal Processing* (7)
- *Nanomaterials* (1)
- *Neurocomputing* (1)
- *Optical Engineering* (4)
- *Optics and Lasers in Engineering* (7)
- *Optik - International Journal for Light and Electron Optics* (1)
- *Opto-Electronics Review* (1)
- *Pattern Analysis and Applications* (1)
- *Pattern Recognition* (11)
- *Pattern Recognition Letters* (9)
- *PeerJ Computer Science* (4)
- *Photogrammetric Engineering and Remote Sensing* (2)
- *PlosONE* (6)
- *Quantitative Imaging in Medicine and Surgery* (5)

- *Radiation Oncology* (1)
- *Remote Sensing* (3)
- *Respiratory Research* (1)
- *Scientific Reports* (4)
- *Signal Processing* (1)
- *SN Applied Sciences* (2)
- *Surfaces & Coatings Technology* (1)
- *Sensors* (9)
- *Solar Energy Materials & Solar Cells* (1)
- *Superficies y Vacío* (1)
- *Symmetry* (4)
- *Technologies* (2)
- *Textile Research Journal* (1)
- *Theranostics* (1)
- *Translational lung cancer research* (3)
- *Turkish Journal of Agriculture and Forestry* (1)

SCIENTIFIC AND PROGRAMME COMMITTEES:

- *Webinar on AI-radiomica su PET dinamica: verso una medicina di precisione nella distinzione infiammazione-neoplasia [AI-radiomics on dynamic PET: towards precision medicine for differentiating inflammation vs. malignancy]*, the Italian Society of Nuclear Medicine and Molecular Imaging, 25 Feb. 2026 (moderator)
- *Heritechne Conference 2026*
- *Webinar on Intelligenza artificiale e PET nella diagnosi e gestione clinica delle vasculiti: nuove frontiere per la medicina [Artificial Intelligence and PET for the diagnosis and clinical management of vasculitis: new frontiers for medicine]*, the Italian Society of Nuclear Medicine and Molecular Imaging, 12 Nov. 2025 (moderator)
- *ADM 2025 International Conference* (reviewer)
- *EG-ICE International Workshop on Intelligent Computing in Engineering 2025*
- *ADM 2023* and *2024 International Conference* (reviewer and session chair)
- *27th International Conference on Pattern Recognition* (*ICPR 2024*, reviewer)
- *International Conference on Image Processing and Vision Engineering* (*IMPROVE 2024*, *IMPROVE 2025*)
- *International Conference on Frontiers of Digital Signal Processing* (*CFDSP 2023*)
- *International Joint Conference on Mechanics, Design Engineering and Advanced Manufacturing – JCM 2022* (reviewer and session chair)
- *International Symposium on Mathematical and Computational Oncology, Virtual (ISMCO'21)*
- *The International Conference on Control, Automation and Diagnosis* (*ICCAD'20*, *ICCAD'21* – co-publication chair, *ICCAD'23*, *ICCAD'24* and *ICCAD'25 – co-special session chair*)
- *International Conference on Computer Graphics and Digital Image Processing* (*CGDIP 2020*, *CGDIP 2021*)
- *International Conference on Frontiers of Digital Signal Processing (CFDSP 2021*)
- *The 4th International Conference on Control, Automation and Diagnosis* (*ICCAD'20*)
- *First International Symposium on Information and Future Technologies* (*ISIFut 2020*)
- *15th European Congress on Digital Pathology (ECDP 2019)*
- *4th International Workshop on Interactive and Spatial Computing (IWISC 2019)*
- *KES International Conference on Intelligent Decision Technologies* (*IDT 2019*)
- *International Conference on Advances in Signal Processing and Artificial Intelligence* (*ASPAI 2019*)
- *International Conference on Big Data and Machine Learning* (*BDML 2018*)
- *International Conference Florence Heri-Tech* (*The future of Heritage Science and technologies, 2018*, *2020* and *2022*)
- *International Conference on Advances in Image Processing (ICAIP 2018*, *ICAIP 2019)*

- *Processing visual data in intelligent systems: methods and applications* (session organizer and chair – *10th KES International Conference on Intelligent Interactive Multimedia: Systems and Services 2017*)
- *CCIW'17 – Computational Color Imaging Workshop*
- *KES International Conference on Intelligent Interactive Multimedia: Systems and Services* (*IIMSS-17*, *IIMSS-18*)
- *International Conference on Communication and Information Processing (ICCIP 2016*, *ICCIP 2017*, *ICCIP 2019* and *ICCIP 2020)*
- *1st IEEE Italy Section Summer School – Advanced course for graduated students and industrial research* (*IEEESS 2015*)
- *Knowledge-Based and Intelligent Information & Engineering Systems* (*KES-2015*, *KES-2016*, *KES-2017*)
- *Workshop Colour in Texture and Material Recognition* (in conjunction with the *18th Int. Conf. on Image Analysis and Processing – ICIAP 2015*)
- *Portuguese Conference on Artificial Intelligence* (*EPIA 2015*)
- *International Conference on Systems* (*ICONS 2015*, *ICONS 2016*, *ICONS 2017*, *ICONS 2018*, *ICONS 2019*, *ICONS 2020*, *ICONS 2021*, *ICONS 2022*, *ICONS 2023* and *ICONS 2024*)
- *International Conference on Modelling, Simulation, and Identification* (*MSI 2014*, *MSI 2016*)
- *World Conference on Information Systems and Technologies* (*WorldCIST'13*, *WorldCIST'14*, *WorldCIST'15*, *WorldCIST'16*, *WorldCIST'17*, *WorldCIST'18*, *WorldCIST'19*, *WorldCIST'20* and *WorldCIST'21*)
- *International Conference on Computer Graphics and Imaging* (*CGIM 2013*)
- *Irish Machine Vision and Image Processing Conference* (*IMVIP 2011*, *IMVIP 2014*, *IMVIP 2015*, *IMVIP 2016, IMVIP 2017*, *IMVIP 2018*, *IMVIP 2019, IMVIP 2020*, *IMVIP 2021, IMVIP 2022* and *IMVIP 2023*)
- *Imaging and Signal Processing in Healthcare and Technology* (*ISPHT 2011*)
- *Computational Photography* (*CPhoto 2011*)
- *Visualization Imaging and Image Processing* (*VIIP 2007*, *VIIP 2008*, *VIIP 2009* and *VIIP 2012*)
- *International Conference on Information Visualization* (*IV07*, *IV08*, *IV09*, *IV10*, *IV2011*, *IV2012*, IV2013, *IV2015* and *IV2016*)
- *Applied Simulation and Modelling* (*ASM 2008*, *ASM 2009* and *ASM 2012*)
- *International Joint Congress XVI ADM – XIX INGEGRAF (2007)*.

REFEREEING AND EVALUATION

- Member of the final evaluation committee for the degree of Doctor of Philosophy, inter-university Doctoral Programme in Bioengineering and Surgical-Medical Sciences, Politecnico di Torino, Italy, May 2026
- Member of the final evaluation committee for the degree of Doctor of Philosophy, Doctoral Programme in Industrial and Information Engineering, Università degli Studi di Perugia, Italy, Apr. 2026
- External reviewer for PhD Thesis, Inter-university doctoral programme in Bioengineering and Medical-Surgical Sciences, Politecnico di Torino, Università di Torino, Italy, Jan. 2026
- Member of the final evaluation committee for the degree of Doctor of Philosophy, Doctoral Programme in Artificial Intelligence, Politecnico di Torino, Italy, Jun. 2025
- Reviewer for Proyectos Sinérgicos I+D 2024 (Comunidad de Madrid, Spain), May 2025
- External reviewer for PhD Thesis, Doctoral programme in Aerospace Science and Technology, Università degli Studi di Bologna, Italy, Jan. 2025
- External reviewer for PhD Thesis, Doctoral programme in Industrial Engineering, Università degli Studi di Firenze, Florence, Italy, Dec. 2024
- External reviewer for PhD Thesis, Doctoral programme in Environment Design Innovation, University of Campania 'Luigi Vanvitelli', Italy, Sep. 2024
- External reviewer for PhD Thesis, EIDO International Doctoral School, Universidade de Vigo, Spain, May 2024
- Member of the final evaluation committee for the degree of Doctor of Philosophy, Department of Industrial Engineering, Università degli Studi di Firenze, Italy, Apr. 2024

- Member of the final evaluation committee for the degree of Doctor of Philosophy, Department of Industrial and Information Engineering, Università di Pavia, Italy, Mar. 2024
- External reviewer for PhD Thesis, EIDO International Doctoral School, Universidade de Vigo, Spain, Mar. 2024
- External reviewer for PhD Thesis, Doctoral programme in Industrial Engineering, Università degli Studi di Firenze, Florence, Italy, Dec. 2023
- External reviewer for PhD Thesis, International Doctoral School, Universidade de Vigo, Spain, Nov. 2023
- External reviewer for PhD Thesis, Department of Informatics, Systems and Communications, Università degli Studi di Milano-Bicocca, Milan, Italy, Nov. 2023
- Member of the final evaluation committee for the degree of Doctor of Philosophy, International Doctoral Programme, University of Vigo, Spain, Feb. 2023
- External reviewer for PhD Thesis, International Doctoral School, Universidade de Vigo, Spain, Apr. 2022
- Member of the final evaluation committee for the degree of Philosophiae Doctor, Faculty of Information Technology and Electrical Engineering, Norges Teknisk-Naturvitenskapelige Universitet (NTNU), Gjøvik, Norway, Jan. 2022
- External reviewer for PhD Thesis, Department of Informatics, Systems and Communications, Università degli Studi di Milano-Bicocca, Milan, Italy, Nov. 2021
- Reviewer for the Italian Ministry for University and Research, National Research Projects (PRIN) call 2020
- External reviewer for PhD Thesis, School of Electronic Engineering and Computer Science, Queen Mary University of London, United Kingdom, May 2020
- External reviewer for PhD Thesis, Anna University, Chennai, India, Feb. 2020
- External referee for academic promotions at London South Bank University, United Kingdom, Feb. 2020
- External reviewer for PhD Thesis, University of Florence, Italy, Dec. 2019
- Head of the evaluation panel for Fondimpresa Lifelong Learning projects ('*Technology and/or digital innovation*') call 4/2018, Rome, Italy, Mar. – Sep. 2019
- Referee for the *Young Reseachers Programme 'Rita Levi Montalcini'* 2016, Italian Ministry of Education
- Member of the final evaluation committee for the degree of Doctor of Philosophy, International Doctoral Programme, University of Vigo, Spain, Jul. 2019
- Member of the final evaluation committee for the degree of Doctor of Philosophy, Department of Engineering, University of Almería, Spain, Jul. 2013
- Member of the final evaluation committee for the degree of Doctor of Philosophy, Department of Mining and Environmental Engineering, University of Vigo, Spain, Jul. 2011
- Member of the final evaluation committee for the degree of Doctor of Philosophy, Faculty of Sciences, University of Vigo, Spain, Mar. 2010.

OTHER ACTIVITIES AND AWARDS

- Member of *Elsevier Researcher Panel*.
- MDPI Cancers – Exceptional Reviewer (2024 Q4)

PRIZES AND AWARDS

- BEST PAPER AWARD (category: 3D technologies for engineering): G. Pascoletti, C. Di Natali, M. Sposito, G. Franceschini, F. Bianconi and E.M. Zanetti *A multibody model of the exoskeleton-human body system for ergonomic design*, ADM2024 International Conference, Palermo (Italy), September 11-13, 2024
- FIRST PRIZE: S. Cascianelli, C. Tranfaglia, M.L. Fravolini, **F. Bianconi**, M. Minestrini, S. Nuvoli, N. Tambasco, M.E. Dottorini and B. Palumbo *Right putamen and age are the most discriminant features to diagnose*

Parkinson's disease by using ^{123}I-FP-CIT brain SPECT data by using an artificial neural network classifier, a classification tree (CIT), 4th International Medical Olympiad, Thessaloniki (Greece), November 3-5, 2017

- BEST PAPER AWARD*:* R. Bello-Cerezo, **F. Bianconi**, S. Cascianelli, F. Di Maria, M. Fravolini and F. Smeraldi *Hand-designed local image descriptors vs. off -the-shelf CNN-based features for texture classification: an experimental comparison*, 9th International Conference on Intelligent Interactive Multimedia: Systems and Services, Vilamoura (Portugal), June 21-23, 2017
- BEST PAPER AWARD*:* M.J. Álvarez, A. Fernández, E. González, **F. Bianconi**, F.J. Aguilar, J. Armesto Image segmentation using multilayer Coordinated Cluster Representation, *International Joint Congress XXI INGEGRAF - XVII ADM*, Lugo (Spain), June 10-12, 2009

PATENTS AND INVENTIONS

- IT PATENT no. 1413266: *Apparatus to acquire a plurality of superficial images of at least one body and related method*, assignee: Mondial Marmi S.r.l. inventors: F. Bianconi, S.A. Saetta, A. Fernández and E. González. Filed on July 25, 2012 granted on January 16, 2015.

PUBLICATIONS

BOOKS

[1] **F. Bianconi** Data and process visualisation for graphic communication: A hands-on approach with Python, Cham: Springer Nature 2024, XIX, 242 p., 14 b/w illustrations, 84 illustrations in colour. eBook ISBN: 978-3-031-57051-3, Softcover ISBN: 978-3-031-57050-6.

BOOK CHAPTERS

[1] J. N. Kather, R. Bello-Cerezo, F. Di Maria, G.W. van Pelt, W.E. Mesker, N. Halama and **F. Bianconi** Classification of Tissue Regions in Histopathological Images: Comparison Between Pre-trained Convolutional Neural Networks and Local Binary Patterns Variants in *Deep Learners and Deep Learner Descriptors for Medical Applications* L. Nanni, S. Brahnam, R. Brattin, S. Ghidoni and C.J. Lakhmi *eds*., Springer, Intelligent Systems Reference Library vol. 186 pp. 96-111, 2020

[2] **F. Bianconi** and A. Fernández A unifying framework for LBP and related methods in *Local Binary Patterns: new variants and new applications*, S. Brahnam, L.C. Jain, L. Nanni and A. Lumini eds. Vol. 506 of Studies in Computational Intelligence Springer pp. 17-46, 2013.

EDITED BOOKS

[1] **F. Bianconi**, A. Fernández and Raúl E. Sánchez-Yáñez (Eds.), Texture and Colour in Image Analysis (printed edition of the Special Issue Texture and Colour in Image Analysis, published in Applied Sciences), MDPI, Basel (Switzerland), 2021.

JOURNAL PAPERS (ISI-REFERRED JOURNALS)

[1] M.Scialpi, G.N. Antogiovanni, **F. Bianconi**, B. Palumbo, G. Bellezza, M. Mandarano, S. Ammar, G.B. Scalera and R. Nicola. Quantitative assessment of prostate cancer using an individualized apparent diffusion coefficient intensity scale: a proposal. *Quantitative imaging in medicine and surgery* 16(8):664, 2026.

[2] L. Filippi, **F. Bianconi**, A. Marongiu, M.L. Fravolini, M. Minestrini, S. Nuvoli, A. Spanu, O. Schillaci and B. Palumbo. From quantification to classification: comparative analysis of two software applications for machine learning–based prediction of early Parkinson's disease using ^{123}I-Ioflupane metrics. *Clinical and Translational Imaging*, published: 06 May 2026

[3] L. Filippi, **F. Bianconi**, A. Marongiu, A. Spanu and B. Palumbo. SPECT-based radiomics in oncology: current evidence, technical challenges, and future directions. *Clinical and Translational Imaging*, 14:93-101, 2026

[4] L. Filippi, **F. Bianconi**, V. Frantellizzi, C. Ferrari, A. Marongiu, M.S. De Feo, C. Battisti, G. Aghakhanyan, M. Gazzilli, N. Urbano, S. Nuvoli, D. Volterrani, M.L. Fravolini, G. Rubini, G. De Vincentis, A. Spanu and B.

Palumbo. Machine learning for automated differentiation of parkinson's disease and its mimics using ^{123}I-mIBG scintigraphy: insights from a multicentre real-world cohort (ITA-mIBG study). *European Journal of Nuclear Medicine and Molecular Imaging*, 53:3469-3480, 2026.

[5] B. Palumbo, L. Filippi, A. Marongiu, **F. Bianconi**, M.L. Fravolini, R. Danieli, V. Frantellizzi, G. De Vincentis, A. Spanu and S. Nuvoli. Diagnostic accuracy of DaTQUANT® versus BasGanV2™ for ^{123}I-Ioflupane brain SPECT: A machine learning-based differentiation of Parkinson's disease and essential tremor. *Biomedicines* 13(10):2367, 2025

[6] A. Marongiu, A.Spanu, B. Palumbo, **F. Bianconi**, L. Filippi, G. Madeddu and S. Nuvoli. Artificial intelligence in PET imaging for Alzheimer's disease: A narrative review. *Brain Sciences* 15(10), art. no. 1038, 2025

[7] **F. Bianconi**, M.U. Khan, H. Du and S. Jassim. Experimental assessment of conventional features, CNN-Based features and ensemble schemes for discriminating benign versus malignant lesions on breast ultrasound images. *Ultrasonic Imaging*, 47(6):256-269, 2025.

[8] L. Filippi, **F. Bianconi**, C. Ferrari, F. Linguanti, C. Battisti, N. Urbano, M. Minestrini, S. G. Messina, L. Buci, A. Baldoncini, G. Rubini, O. Schillaci and B. Palumbo. Digital versus analogue PET in parathyroid imaging: comparison of PET metrics and machine learning-based characterisation of hyperfunctioning lesions (the DIGI-PET study). *European Journal of Nuclear Medicine and Molecular Imaging*, 53:2122-2130, 2025.

[9] G. Pascoletti, C. Di Natali, D. G. Caldwell, M. Sposito, **F. Bianconi** and Elisabetta M. Zanetti. The exoskeleton-human body system: a multibody model for fitting design analyses. *International Journal on Interactive Design and Manufacturing (IJIDeM)*, published: 14 Aug. 2025.

[10] O. Bagni, R. Danieli, **F. Bianconi**, B. Palumbo and L. Filippi. Clinical performance of analog and digital 18F-FDG PET/CT in pediatric epileptogenic zone localization: Preliminary results. *Biomedicines* 13(8), art. no. 1887, 2025.

[11] L. Filippi, **F. Bianconi**, M. Minestrini, G. De Vincentis, V. Frantellizzi, A. Marongiu, C. Ferrari, A. Giordano, D. D'Ambrosio, M. Gazzilli, F. Bertagna, O. Bagni, S. Panareo, P. Guglielmo, A. Lazzarato, M. Casali, G. Aghakhanyan, A. Spanu, L. Evangelista, O. Schillaci and B. Palumbo. Multi-centre data harmonisation applied to heart-to-mediastinum quantification in parkinsonism (ITA-MIBG): a cross-calibration phantom study with tube and bottle. *Clinical and Translational Imaging*, 13:185-186, 2025

[12] L. Filippi, **F. Bianconi**, O. Schillaci, B. Palumbo. This union must happen: Radiomics and LAFOV PET/CT as the power couple of nuclear medicine. *European Journal of Nuclear Medicine and Molecular Imaging*, Dec. 2024.

[1] **F. Bianconi**, R. Salis, M.L. Fravolini, M.U. Khan, L. Filippi, A. Marongiu, S. Nuvoli, A. Spanu and B. Palumbo. Radiomics features from Positron Emission Tomography with [18F] Fluorodeoxyglucose can help predict cervical nodal status in patients with head and neck cancer. *Cancers* 16(22), art. no. 3759, 2024.

[2] T.B. Irhsad, G. Pascoletti, **F. Bianconi** and E.M. Zanetti. Mandibular bone segmentation from CT scans: Quantitative and qualitative comparison among software. *Dental Materials* 40(8):e11-e22, 2024.

[3] **F. Bianconi**, R. Salis, M.L. Fravolini, M.U. Khan, M. Minestrini, L. Filippi, A. Marongiu, S. Nuvoli, A. Spanu and B. Palumbo. Performance analysis of six semi-automated tumour delineation methods on [^{18}F] fluorodeoxyglucose Positron Emission Tomography/Computed Tomography (FDG PET/CT) in patients with head and neck cancer. *Sensors* 23(18), art. no. 7952, 2023.

[4] E. Buchicchio, A. De Angelis, F. Santoni, P. Carbone, **F. Bianconi** and F. Smeraldi. Battery SOC estimation from EIS data based on machine learning and equivalent circuit model. *Energy* 283, 2023, art. no. 128461.

[5] L. Evangelista, F. Fiz, R. Laudicella, **F. Bianconi**, A. Castello, P. Guglielmo, V. Liberini, L. Manco, V. Frantellizzi, A. Giordano, L. Urso, S. Panareo, B. Palumbo and L. Filippi. PET radiomics and response to immunotherapy in lung cancer: A systematic review of the literature. *Cancers* 15(12), art no. 3258, 2023.

[6] **F. Bianconi**, M.L. Fravolini and A. Palumbo. Size measurement of lung nodules on CT: which diameter is most stable to inter-observer variability? *Clinical Imaging* 99:38-40, 2023.

[7] L. Filippi, L. Urso, **F. Bianconi**, B. Palumbo, M.C. Marzola, L. Evangelista and O. Schillaci. Radiomics and theranostics with molecular and metabolic probes in prostate cancer: toward a personalized approach. *Expert review of molecular diagnostics* 23(3):243-255, 2023.

[8] S. Nuvoli, **F. Bianconi**, M. Rondini, A. Lazzarato, A. Marongiu, M.L. Fravolini, S. Cascianelli, S. Amici, L. Filippi, A. Spanu, and B. Palumbo. Differential diagnosis of Alzheimer disease vs mild cognitive impairment based on left temporal lateral lobe hypomethabolism on ^{18}F-FDG PET/CT and automated classifiers. *Diagnostics* 12(10), 2022, art. no. 2425.
[9] E. Buchicchio, A. De Angelis, F. Santoni, P. Carbone, **F. Bianconi** and F. Smeraldi. Dataset on broadband electrochemical impedance spectroscopy of Lithium-Ion batteries for different values of the state-of-charge. *Data in Brief* 45, 2022, art. no. 108589.
[10] **F. Bianconi**, I. Palumbo, M. L. Fravolini, M. Rondini, M. Minestrini, G. Pascoletti, S. Nuvoli, A. Spanu, M. Scialpi, C. Aristei, and B. Palumbo. Form factors as potential imaging biomarkers to differentiate benign vs. malignant lung lesions on CT scans. *Sensors*, 22(13), 2022. Art no. 5044
[11] S. Nuvoli, B. Palumbo, A. Marongiu, **F. Bianconi** and A. Spanu 123I-MIBG cardiac scintigraphy and heart/mediastinum ratio in neurodegenerative disorders: Is delayed scan really necessary? *Current Radiopharmaceuticals* 15(4):257—258, 2022
[12] L. Filippi, **F. Bianconi**, O. Schillaci, A. Spanu and B. Palumbo The role and potential of ^{18}F-FDG PET/CT in malignant melanoma: prognostication, monitoring response to targeted and immunotherapy, and radiomics, *Diagnostics* 12(4), art no. 929, 2022
[13] B. Palumbo, **F. Bianconi**, M.L. Fravolini, I. Palumbo, S. Nuvoli and A. Spanu PET con trazadores de aminoácidos y radiómica: una oportunidad emergente para el diagnóstico de tumores cerebrales [PET with amino acid tracers and radiomics: An emerging opportunity for the diagnosis of brain tumours] *Revista Española de Medicina Nuclear e Imagen Molecular*, 41(2):136, 2022
[14] **F. Bianconi** and E. Brugnoli Enumerating necklaces with transitions, Bulletin of the Australian Mathematical Society 105(1):1-11
[15] **F. Bianconi**, A. Fernández, F. Smeraldi and G. Pascoletti Colour and texture descriptors for visual recognition: A historical overview, *Journal of Imaging* 7(11), art. no. 245
[16] E. Chirikhina, A. Chirikhin, S. Dewsbury-Ennis, **F. Bianconi** and P. Xiao Skin characterizations by using contact capacitive imaging and high-resolution ultrasound imaging with machine learning algorithms. *Applied Sciences* 11(18), art. no. 8714, 2021
[17] B. Palumbo, **F. Bianconi** and I. Palumbo Solitary pulmonary nodule: Is positron emission tomography/computed tomography radiomics a valid diagnostic approach? *Lung India* 38(5):405-407, 2021
[18] **F. Bianconi**, M.L. Fravolini, I. Palumbo, G. Pascoletti, S. Nuvoli, M. Rondini, A. Spanu and B. Palumbo Impact of lesion delineation and intensity quantisation on the stability of texture features from lung nodules on CT: a reproducible study, *Diagnostics* 11 (7), art no. 1224, 2021
[19] **F. Bianconi** and E. Brugnoli Enumerating necklaces with transitions, *Bulletin of the Australian Mathematical Society* (2021), online first
[20] **F. Bianconi**, M.L. Fravolini, S. Pizzoli, I. Palumbo, M. Minestrini, M. Rondini, S. Nuvoli, A. Spanu and B. Palumbo, B. Comparative evaluation of conventional and deep learning methods for semi-automated segmentation of pulmonary nodules on CT, *Quantitative Imaging in Medicine and Surgery*, 11(7) pp. 3286-3305, 2021
[21] **F. Bianconi**, A. Fernández and R.E. Sánchez-Yáñez Special Issue Texture and Color in Image Analysis (Editorial), *Applied Sciences*, 11 (9), art. no. 3801
[22] B. Palumbo, **F. Bianconi**, S. Nuvoli, A. Spanu and M.L. Fravolini Artificial intelligence techniques support nuclear medicine modalities to improve the diagnosis of Parkinson's disease and Parkinsonian syndromes, *Clinical and Translational Imaging,* 9:19-35*,* 2021
[23] B. Palumbo, **F. Bianconi**, I. Palumbo, M.L. Fravolini, M. Minestrini, S. Nuvoli, M.L. Stazza, M. Rondini, and A. Spanu, Value of shape and texture features from ^{18}F-FDG PET/CT to discriminate between benign and malignant solitary pulmonary nodules: An experimental evaluation, *Diagnostics* (10)9, 696, 2020
[24] E. Chirikhina, A. Chirikhin, P. Xiao, S. Dewsbury-Ennis and **F. Bianconi**. In vivo assessment of water content, trans-epidermial water loss and thickness in human facial skin. *Applied Sciences* 10(17), 6139, 2020

[25] B. Palumbo, R. Capozzi, **F. Bianconi**, M.L. Fravolini, S. Cascianelli, S.G. Messina, G. Bellezza, A.Sidoni, F. Puma and M. Ragusa, Classification model to estimate MIB-1 (Ki 67) proliferation index in NSCLC patients evaluated with ^{18}F-FDG-PET/CT, *Anticancer Research*, 40(6):3355-3360, 2020
[26] C. Buratti, E. Belloni, F. Merli and **F. Bianconi** Experimental characterization of the color rendering properties of transparent monolithic aerogel, *Solar Energy*, 205:183-191, 2020
[27] **F. Bianconi**, I. Palumbo, A. Spanu, S. Nuvoli, M.L. Fravolini and B. Palumbo PET/CT radiomics in lung cancer: an overview, *Applied Sciences*, 10(5), 1718, 2020
[28] F. Smeraldi, **F. Bianconi**, A. Fernández and E. González Partial order rank features in colour space, *Applied Sciences*, 10(2), 499, 2020
[29] **F. Bianconi**, C. Cusano, P. Napoletano and R. Schettini CNN-based refactoring of hand-designed filters for texture analysis: a classic revisited, *IEEE Access*, 7(1): 173076 – 173085, 2019
[30] S. Nuvoli, A. Spanu, M.L. Fravolini, **F. Bianconi**, S. Cascianelli, G. Madeddu and B. Palumbo *[123I]Metaiodobenzylguanidine (MIBG)* Cardiac Scintigraphy and Automated Classification Techniques in Parkinsonian Disorders*, Molecular Imaging and Biology*, in press
[31] **F. Bianconi**, I. Palumbo, M.L. Fravolini, R. Chiari, M. Minestrini, L. Brunese and B. Palumbo Texture analysis on [18F]FDG PET/CT in non-small cell lung cancer: correlations between PET features, CT features and histological types, *Molecular Imaging and Biology*, 21(6): 1200-1209, 2019
[32] R. Bello-Cerezo, **F. Bianconi**, F. Di Maria, P. Napoletano and F. Smeraldi Comparative evaluation of hand-crafted image descriptors vs. off-the-shelf CNN-based features for colour texture classification under ideal and realistic conditions, *Applied Sciences*, 9(4), Art. no. 738, 2019
[33] **F. Bianconi** and E. González Counting local *n*-ary patterns *Pattern Recognition Letters*, 117:24-29, 2019
[34] **F. Bianconi**, M.L. Fravolini, R. Bello-Cerezo, M. Minestrini, M. Scialpi and B. Palumbo Evaluation of shape and textural features from CT as prognostic biomarkers in non-small cell lung cancer *Anticancer Research*, 38(4), pp. 2155-2160, 2018
[35] S. Cascianelli, C. Tranfaglia, M.L. Fravolini, **F. Bianconi**, M. Minestrini, S. Nuvoli, N. Tambasco, M.E. Dottorini and B. Palumbo Right putamen and age are the most discriminant features to diagnose Parkinson's disease by using 123 I-FP-CIT brain SPET data by using an artificial neural network classifier, a classification tree (CIT) *Hellenic journal of nuclear medicine*, 20, p. 165, 2017
[36] **F. Bianconi**, R. Bello-Cerezo and P. Napoletano Improved Opponent Colour Local Binary Patterns: An effective local image descriptor for colour texture classification *Journal of Electronic Imaging*, 27(1), art. no. 01102, 2017
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PROFESSIONAL AND SCIENTIFIC AFFILIATIONS

- Member of the Italian Society of Nuclear Medicine and Molecular Imaging (AIMN) since 2023

- Member of the Applied Geotechnologies Research Group ('TF1') at the Universdade de Vigo, Spain, Since 2023
- IEEE Senior Member since 2013
- IEEE Member from 2000 to 2013
- Member of the research group 'Gestión integrada del territorio y tecnologías de la información espacial', Universidad de Almería, Spain
- Chartered Engineer since 1997
- Court-appointed expert since 1998.