



# Giacomo Feliciani

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## ● WORK EXPERIENCE

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31/10/2020 – CURRENT – Bologna, Italy

**PHD CANDIDATE PHYSICS – UNIVERSITY OF BOLOGNA**

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12/02/2017 – CURRENT

**MEDICAL PHYSICIST – ISTITUTO SCIENTIFICO ROMAGNOLO PER LO STUDIO E LA CURA DEI TUMORI (IRST), IRCCS**

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- Radiotherapy and brachytherapy planning
- Diffusing alpha emission radiation therapy: participation to the international first in man clinical trial N.CTP-SCC-00
- Research in predictive models based on machine learning techniques

**Address** Meldola

14/03/2016 – 31/10/2016

**JUNIOR RESEARCHER – MAASTRO CLINIC**

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- Research on radiation treatment outcome on head and neck cancer patients through Radiomics analysis
- Horizon 2020 - PHC-30-2015 BD2DECIDE Big Data and models for personalized Head and Neck Cancer Decision support
- Research and develop of a dedicated phantom for Radiomics Research
- Commissioning of Varian TrueBeam

**Address** Maastricht, Netherlands

16/12/2010 – 29/09/2011

**MEDICAL PHYSICIST – UNIVERSITY OF BOLOGNA**

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- Hemodynamics measurements (strain gauge plethysmography )
  - Angiography imaging Quality Assurance
  - Dose assessment in interventional cardiology
- Corazza et al, *Mechanical aspects of CO2 angiography*, Physica Medica (2013) 29, 33-38  
Bianchini et al *Carbon dioxide angiography simulation of operative conditions for diagnostic image optimization* J. Mech. Med. Biol. (2015) 15

**Address** Bologna, Italy

02/11/2015 – 14/03/2016

**MEDICAL PHYSICIST - VOLUNTARY FREQUENCY – IRST - ISTITUTO ROMAGNOLO PER LO STUDIO E LA CURA DEI TUMORI**

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- Radiomics implementation in research for head and neck and glioblastoma multiforme
- Development of a phantom for quality assurance for an MR guided High Focused Ultrasound System

**Address** Meldola, Italy

30/09/2011 – 01/10/2015

**SCHOOL OF SPECIALIZATION IN MEDICAL PHYSICS (INTERNSHIP IN HOSPITAL) – UNIVERSITY OF BOLOGNA**

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-Research in Radiomics field: phantom studies (CT and PET) and clinical application ( Head and Neck cancer, Hodgkin Lymphoma, Glioblastoma - MRI)  
-Research and quality assurance in CT (dose modulation protocols, quality assurance measurement, Monte Carlo FLUKA code simulations for dose assessment) and MRI (DWI, Phase Contrast-MRI) techniques,  
-Dose assessment in radiometabolic therapy (SPECT/CT based)  
-Nuclear Medicine quality assurance procedures  
- Radiotherapy treatment planning: external beams (Varian TrueBeam, Tomotherapy) and brachytherapy (Nucletron)

**Address** Bologna, Italy

04/08/2013 – 04/12/2013

**MEDICAL PHYSICIST – ACADEMISCH MEDISCH CENTRUM (AMC) - INTERNSHIP**

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- Research on the hemodynamics of intracranial aneurysms  
Feliciani et al, *Multi-scale 3D+t Intracranial Aneurysmal Flow Vortex Detection*, IEEE Trans. Biomed. Eng. (2015) 62, 1355-62

**Address** Amsterdam, Netherlands

**ESPERTO QUALIFICATO II GRADO**

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● **EDUCATION AND TRAINING**

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30/09/2011 – 09/09/2015 – Bologna, Italy

**MEDICAL PHYSICS EXPERT – University of Bologna**

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**Address** Bologna, Italy | **Level in EQF** EQF level 8

16/10/2008 – 16/12/2010 – Bologna, Italy

**MASTER DEGREE IN MEDICAL PHYSICS – University of Bologna**

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Final Score 110/110 with Honours

**Address** Bologna, Italy | **Level in EQF** EQF level 7

31/08/2005 – 16/10/2008 – Bologna, Italy

**BACHELOR DEGREE IN PHYSICS – University of Bologna**

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Final Score 110/110 with Honours

**Address** Bologna, Italy | **Level in EQF** EQF level 6

## ● LANGUAGE SKILLS

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Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
<b>ENGLISH</b>	C1	C1	C1	C1	C1
<b>GERMAN</b>	B1	B2	B1	B1	B1
<b>DUTCH</b>	A2	A2	A2	A2	A2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

## ● PUBLICATIONS

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### Publications

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- Feliciani et al, *The Role of a DirectDensity® CT Reconstruction in a Radiotherapy Workflow: A Phantom Study*, *Appl Sci* (2022)
- Feliciani et al, *Radiomics Analysis on [68Ga]Ga-PSMA-11 PET and MRI-ADC for the Prediction of Prostate Cancer ISUP Grades: Preliminary Results of the BIOPSTAGE Trial*, *Cancers* (2022)
- Feliciani et al, *A New Approach for a Safe and Reproducible Seeds Positioning for Diffusing Alpha-Emitters Radiation Therapy of Squamous Cell Skin Cancer: A Feasibility Study*, *Cancers* (2022)
- Sarnelli et al, *Modelling a new approach for radio-ablation after resection of breast ductal carcinoma in-situ based on the BAT-90 medical device*. *Sci Rep* (2022)
- Feliciani et al, *An annotated T2-weighted magnetic resonance image collection of testicular germ and non-germ cell tumors*, *Sci. Data.* (2021)
- Feliciani et al, *The potential role of MR based radiomic biomarkers in the characterization of focal testicular lesions*, *Sci Rep* (2021)
- Popovtzer et al, *Initial Safety and Tumor Control Results From a "First-in-Human" Multicenter Prospective Trial Evaluating a Novel Alpha-Emitting Radionuclide for the Treatment of Locally Advanced Recurrent Squamous Cell Carcinomas of the Skin and Head and Neck*, November 2019 *International journal of radiation oncology, biology, physics* 106(3)
- Bellia, S.R., Feliciani et al, *Clinical evidence of abscopal effect in cutaneous squamous cell carcinoma treated with diffusing alpha emitters radiation therapy: a case report*, September 2019 *Journal of Contemporary Brachytherapy* 11(5):1-9
- Feliciani et al, *Radiomic Profiling of Head and Neck Cancer: 18 F-FDG PET Texture Analysis as Predictor of Patient Survival*, September 2018 *Contrast Media & Molecular Imaging* 2018
- Sarnelli et al, *Efficiency and calibration factors for continuous monitoring systems of airborne radioactivity in ducts: Monte Carlo, analytical and experimental approaches compared*, May 2018 *Radiation Physics and Chemistry* 151
- Larue et al, *Influence of gray level discretization on radiomic feature stability for different CT scanners, tube currents and slice thicknesses: a comprehensive phantom study*, September 2017 *Acta oncologica (Stockholm, Sweden)* 56(11):1-10
- Feliciani et al, *Cold pressor test using strain-gauge plethysmography*, September 2016 *AJP Advances in Physiology Education* 40(3):410-417
- Feliciani et al, *Multi-scale 3D+t Intracranial Aneurysmal Flow Vortex Detection*, *IEEE Trans. Biomed. Eng.* (2015) 62, 1355-62
- Bianchini et al *Carbon dioxide angiography simulation of operative conditions for diagnostic image optimization* *J. Mech. Med. Biol.* (2015) 15

## ● **JOB-RELATED SKILLS**

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### **Job-related skills**

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- Expert of Brachytherapy and external beam TPS
- Expert MATLAB programmer in particular for medical imaging manipulation and advanced statistical tools.
- Expert in medical imaging CT, NMR, PET techniques.
- Expert in quality assurance in radiological (EQ I grado) and nuclear medicine environment
- Expert in Monte Carlo simulations (FLUKA) for dose assessment in radiology.
- Expert in standard Dose Assessment procedures both in Radiology and Nuclear Medicine
- Good knowledge of basic electronics and circuitry (OP-amp , acquisition systems)