

EUROPEAN  
CURRICULUM VITAE  
FORMAT



PERSONAL INFORMATION

Name **CRISTIAN BORRAZZO**  
E-mail **cristian.borrazzo@uniroma1.it**  
Nationality **ITALIAN**

EDUCATION AND TRAINING  
PERSONAL SKILLS  
AND COMPETENCES.

**Date (10/2017 – 02/2021)** **Dottorato XXXIII ciclo in sanità pubblica e malattie infettive** (Università di Roma Sapienza)  
Valutazione: ottimo cum laude  
**Tesi: Extracellular volume quantification in Cardiac CT: a new marker of Cardiovascular risk in HIV positive individuals?** Descrizione: Uso di nuove tecniche per la mappatura dei tempi di rilassamento in Risonanza Magnetica e CT in pazienti HIV positivi. Biostatistica e analisi inferenziale.

**Date (02/2014 – 03/2017)** **Scuola di specializzazione in Fisica Medica** (Università di Roma Sapienza)  
Valutazione: 70/70 cum laude  
**Tesi: Sistema di imaging multimodalità: Studi di fattibilità per applicazioni neurologiche**  
Descrizione: Uso di sistemi Monte Carlo per simulare i processi fisici. Valutare attraverso una metodica modellistica la fattibilità di sistemi che combinano la terapia degli ultrasuoni focalizzati e l'imaging della PET.

**Dates (09/2011– 10/2013)** **Laurea magistrale in Fisica delle particelle elementari**(Università di Roma tre)  
Valutazione: 110/110  
**Tesi: GEANT4 e l'imaging biomedico”(Simulazioni Monte Carlo per studiare alcuni nuovi cristalli scintillanti per sistemi SPECT).**

**Dates (11/202– 12/2009)** **Laurea triennale in Fisica**(Università di Roma Tre)  
**Tesi: “Calibrazione di un apparato per imaging radioisotopico per applicazioni mediche” (Misure su una gamma camera di nuova generazione di piccole dimensioni con cristallo scintillante di Bromuro di Lantanio).**

WORK EXPERIENCE

- Dates (from – to) **02/2021 - Today**
- Name and address of employer **Marrelli Hospital – Crotone**
- Type of business or sector **Unità di Radioterapia**
- Occupation or position held **Dirigente Fisico**
- Main activities and responsibilities Pianificazione dei piani di trattamento in Radioterapia e controlli di Qualità degli acceleratori per la Radioterapia
  
- Dates (from – to) **04/2020 to 01/2021**
- Name and address of employer **Ospedale San Pietro di Roma**
- Type of business or sector **Unità di Radioterapia**
- Occupation or position held **Dirigente Fisico**

- Main activities and responsibilities
  - Dates (from – to) **09/2019 to 09/219**
  - Name and address of employer **NG DETECTOR s.r.l - Via Monte Matese 8, Aquila**
  - Type of business or sector Rivelatoi per la medicina
  - Occupation or position held Ricercatore IV° livello
- Main activities and responsibilities
  - Dates (from – to) **09/2018 to 09/218**
  - Name and address of employer **NG DETECTOR s.r.l - Via Monte Matese 8, Aquila**
  - Type of business or sector Rivelatoi per la medicina
  - Occupation or position held Ricercatore IV° livello

MOTHER TONGUE

**ITALIAN**

OTHER LANGUAGES

**ENGLISH**

TECHNICAL SKILLS  
AND COMPETENCES

Uso di internet e posta elettronica, conoscenza del Pacchetto Office 2013 (Word, Excel, Power Point, Outlook).  
 Conoscenza eccellente dei linguaggi di programmazione C, C++, Fortran77, java.  
 Sviluppo applicazioni web con HTML, HTML5.  
 Uso di ambienti di scrittura: LateX, LyX, MicTeX;  
 Analisi statistica: SPSS (Statistical Package for the Social Sciences), Prism Graph 8.  
 Software per analisi dati scientifici: MATLAB, R, Origin, Nwplot, ROOT Scientific, Octave, Scilab, Phyton, R e IDL.  
 Sistemi di simulazione Monte Carlo: GEANT4, COMSOL Multiphysics, GAMOS, FLUKA, GATE, EGS e PENELOPE.  
 Sviluppo di interfacce grafiche user-friendly per applicazioni mediche (QT4, Phyton, MATLAB GUI e visual studio).  
 Pianificazione di trattamenti radioterapici 3D-CRT, IMRT e VMAT (Elekta Monaco e Eclipse).

**ADDITIONAL INFORMATION**

REVIEWER OF

- Measurement Science and Technology Journal (Meas. Sci. Technol.)
- Diagnostic and Interventional Radiology (Diag. Interv. Radiol.)

- L Tarsitani, ..., C Borrazzo et al. **Post-traumatic Stress Disorder Among COVID-19 Survivors at 3-Month Follow-up After Hospital Discharge.** Journal of General Internal Medicine, (2021). <https://doi.org/10.1007/s11606-021-06731-7> Impact factor:4.597
- G Ceccarelli, ..., C Borrazzo et al. **The role of teicoplanin in the treatment of SARS-CoV-2 infection: a retrospective study in critically ill COVID-19 patients (Tei-COVID Study).** Journal of Medical Virology (2021). <https://doi.org/10.1002/jmv.26925>. Impact factor: 2.02
- L F Sulekova, ..., C Borrazzo et al. **The Pregnancy Outcomes Among Newly Arrived Asylum-Seekers in Italy: Implications of Public Health,** Journal of Immigrant and Minority Health, (2021). <https://doi.org/10.1007/s10903-020-01126-y> Impact factor: 1.425
- Araimo F, ..., C Borrazzo et al. **Ozone as adjuvant support in the treatment of COVID-19: A preliminary report of probiozoid trial,** Journal of medical virology, (2021). <https://doi.org/10.1002/jmv.26636> Impact factor: 2.021
- Arrico L, ... C. Borrazzo, et al. **Oral Citicoline: influence of long-term therapy on perimetric glaucoma defects,** Panminerva Medica, (2021). <https://doi.org/10.23736/S0031-0808.21.04005-2> Impact factor: 3.467
- N Galea, ..., Borrazzo, et al. **Early myocardial damage and microvascular dysfunction in asymptomatic patients with systemic sclerosis: A cardiovascular magnetic resonance study with cold pressor test.** PloS one, (2020). <https://doi.org/10.1371/journal.pone.0244282> Impact factor: 2.740
- V. Silvestri, C. Borrazzo, et al. **Carotid artery aneurysm in HIV. A review of case reports in literature.** Annals of vascular surgery, (2019). <https://doi.org/10.1016/j.avsg.2019.09.01> Impact factor: 1.179
- G. Ceccarelli, C. Borrazzo et al. **Diagnostic Issues of Asymptomatic Neurosyphilis in HIV-Positive Patients: A Retrospective Study.** Brain Sciences, 9(10), 278, (2019). <https://doi.org/10.3390/brainsci9100278> Impact factor: 2.786
- C. Landi, L. Santinelli, L. Bianchi, E. Shaba, G. Ceccarelli, E. N. Cavallari, C. Borrazzo, L. Bini. **Cognitive impairment and CSF proteome modification after oral bacteriotherapy in HIV patients.** Journal of neurovirology, 1-12, (2019). <https://doi.org/10.1007/s13365-019-00801-7> Impact factor: 2.302
- V. Bellelli, G. d'Ettoire, L. Celani, C. Borrazzo et al. **Clinical significance of lymphocytopenia in patients hospitalized with pneumonia caused by influenza virus.** Critical Care, 23(1), 330 (2019). doi: <https://link.springer.com/article/10.1186/s13054-019-2608-1> Impact factor: 6.959
- V. Silvestri, G. D'Ettoire, C. Borrazzo, and R. Mele. **"Many different patterns under a common flag: aortic pathology in HIV. Review of case reports in literature"**. Annals of vascular surgery, (2019). doi: <https://doi.org/10.1016/j.avsg.2019.01.016> Impact factor: 1.179
- G. Ceccarelli, O. Spagnolello, C. Borrazzo et al. **"Impact of the 2017 measles outbreak on the emergency care system of a large tertiary-care teaching hospital in Italy: a retrospective analysis"**. European Journal of Public Health, (2019). doi: <https://doi.org/10.1093/eurpub/ckz056> Impact factor: 2.234
- A. Gigante, N. Galea, C. Borrazzo et al. **Role of autonomic dysfunction in the regulation of myocardial blood flow in systemic sclerosis evaluated by cardiac magnetic resonance."** International journal of rheumatic diseases, (2019). doi: <https://doi.org/10.1111/1756-185X.13569> Impact factor: 1.938
- N. Galea, G. Cundari, C. Borrazzo et al. **Splenic Blood Flow Increases after Hypothermic Stimulus (Cold Pressor Test): A Perfusion Magnetic Resonance Study.** BioMed research international, 2019, 7, (2019). doi: <https://doi.org/10.1155/2019/8437927> Impact factor: 2.583
- G. Ceccarelli, C. Pinacchio, L. Santinelli, P. E. Adami, C. Borrazzo et al. **"Physical Activity and HIV: Effects on Fitness Status, Metabolism, Inflammation and Immune-Activation."** AIDS and Behavior, p. 1-9, (2019). doi: <https://doi.org/10.1007/s10461-019-02510-y> Impact factor: 3.312
- M. De Angelis, C. Scagnolari, A. Oliva, E. Nelson Cavallari, L. Celani, L. Santinelli, C. Borrazzo et al. **"Short-Term Probiotic Administration Increases Fecal Anti Candida Activity in Healthy Subjects"**. Microorganisms, 7(6), 162 (2019). doi: <https://doi.org/10.3390/microorganisms7060162> Impact factor: 4.167
- G. D'Ettoire, C. Borrazzo et al. **"Increased IL-17 and/or IFN-g producing T cell subsets in gut mucosa of long-term treated HIV-1 infected women"**. AIDS, (2019). doi: <https://doi.org/10.1097/QAD.0000000000002122> Impact factor: 4.499

- **C. Borrazzo et al. "T1 and extracellular volume fraction mapping in cardiac magnetic resonance: estimation of accuracy and precision of a novel algorithm".** Physics in Medicine and Biology, (2019). doi: <https://doi.org/10.1088/1361-6560/aafcca> Impact factor: 3.030
- V. Silvestri, **C. Borrazzo**, et al. **Carotid artery aneurysm in HIV. A review of case reports in literature.** Annals of vascular surgery, (2019). <https://doi.org/10.1016/j.avsg.2019.09.01> Impact factor: 1.179
- G. Ceccarelli, **C. Borrazzo** et al. **Diagnostic Issues of Asymptomatic Neurosyphilis in HIV-Positive Patients: A Retrospective Study.** Brain Sciences, 9(10), 278, (2019). <https://doi.org/10.3390/brainsci9100278> Impact factor: 2.786
- C. Landi, L. Santinelli, L. Bianchi, E. Shaba, G. Ceccarelli, E. N. Cavallari, **C. Borrazzo**, L. Bini. **Cognitive impairment and CSF proteome modification after oral bacteriotherapy in HIV patients.** Journal of neurovirology, 1-12, (2019). <https://doi.org/10.1007/s13365-019-00801-7> Impact factor: 2.302
- V. Bellelli, G. d'Ettoire, L. Celani, **C. Borrazzo** et al. **Clinical significance of lymphocytopenia in patients hospitalized with pneumonia caused by influenza virus.** Critical Care, 23(1), 330 (2019). doi: <https://link.springer.com/article/10.1186/s13054-019-2608-1> Impact factor: 6.959
- V. Silvestri, G. D'Ettoire, **C. Borrazzo**, and R. Mele. **"Many different patterns under a common flag: aortic pathology in HIV. Review of case reports in literature".** Annals of vascular surgery, (2019). doi: <https://doi.org/10.1016/j.avsg.2019.01.016> Impact factor: 1.179
- G. Ceccarelli, O. Spagnolello, **C. Borrazzo** et al. **"Impact of the 2017 measles outbreak on the emergency care system of a large tertiary-care teaching hospital in Italy: a retrospective analysis".** European Journal of Public Health, (2019). doi: <https://doi.org/10.1093/eurpub/ckz056> Impact factor: 2.234
- A. Gigante, N. Galea, **C. Borrazzo** et al. **Role of autonomic dysfunction in the regulation of myocardial blood flow in systemic sclerosis evaluated by cardiac magnetic resonance."** International journal of rheumatic diseases, (2019). doi: <https://doi.org/10.1111/1756-185X.13569> Impact factor: 1.938
- N. Galea, G. Cundari, **C. Borrazzo** et al. **Splenic Blood Flow Increases after Hypothermic Stimulus (Cold Pressor Test): A Perfusion Magnetic Resonance Study.** BioMed research international, 2019, 7, (2019). doi: <https://doi.org/10.1155/2019/8437927> Impact factor: 2.583
- G. Ceccarelli, C. Pinacchio, L. Santinelli, P. E. Adami, **C. Borrazzo** et al. **"Physical Activity and HIV: Effects on Fitness Status, Metabolism, Inflammation and Immune-Activation."** AIDS and Behavior, p. 1-9, (2019). doi: <https://doi.org/10.1007/s10461-019-02510-y> Impact factor: 3.312
- M. De Angelis, C. Scagnolari, A. Oliva, E. Nelson Cavallari, L. Celani, L. Santinelli, **C. Borrazzo** et al. **"Short Term Probiotic Administration Increases Fecal Anti Candida Activity in Healthy Subjects".** Microorganisms, 7(6), 162 (2019). doi: <https://doi.org/10.3390/microorganisms7060162> Impact factor: 4.167
- G. D'Ettoire, **C. Borrazzo** et al. **"Increased IL-17 and/or IFN-g producing T cell subsets in gut mucosa of long-term treated HIV-1 infected women".** AIDS, (2019). doi: <https://doi.org/10.1097/QAD.0000000000002122> Impact factor: 4.499
- **C. Borrazzo** et al. **"T1 and extracellular volume fraction mapping in cardiac magnetic resonance: estimation of accuracy and precision of a novel algorithm".** Physics in Medicine and Biology, (2019). doi: <https://doi.org/10.1088/1361-6560/aafcca> Impact factor: 3.030
- **C. Borrazzo** et al. **"Myocardial blood flow estimates from dynamic contrast-enhanced magnetic resonance imaging: Three quantitative methods".** Physics in Medicine and Biology, (2018). link: <http://iopscience.iop.org/article/10.1088/1361-6560/aaa2a8/pdf> Impact factor: 3.030
- M. Bettiol, E. Preziosi, **C. Borrazzo** et al. **LaBr3: Ce and NaI: Tl performance comparison for single photon emission detector.** Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, (2017). doi: <https://doi.org/10.1016/j.nima.2017.11.010> Impact factor: 1.433
- L. Altabella, **C. Borrazzo** et al. **A feasible and automatic free tool for T1 and ECV mapping".** Physica Medica, Volume: 33, p. 47-55, (2017). doi: <http://dx.doi.org/10.1016/j.ejmp.2016.12.002> Impact factor: 2.532

- E. Preziosi, S. Sánchez, A. J. González, R. Pani, **C. Borrazzo**, M. Bettiol, ... and J.M. Benlloch. **Performance study of a PET scanner based on monolithic scintillators for different DoI-dependent methods**. Journal of Instrumentation, 11(12), C12076, (2016). doi: <http://10.1088/1748-0221/11/12/C12076> Impact factor: 1.366
- G. Borasi, A. Nahum, M.N. Paulides, G. Powathil, G. Russo, L. Fariselli, ... **C. Borrazzo** et al. **Fast and high temperature hyperthermia coupled with radiotherapy as a possible new treatment for glioblastoma**. Journal of Therapeutic Ultrasound, 4(1), 32, (2016). link: <https://jtuultrasound.biomedcentral.com/articles/10.1186/s40349-016-0078-3> Impact factor: -
- E. Preziosi, R. Pani, C. Trigila, C. Polito, M. Bettiol, **C. Borrazzo**, ... and R. Pellegrini **A crystal identification method for monolithic phoswich detectors based on scintillation light distribution**. Journal of Instrumentation, 11(12), P12009, (2016). doi: <http://10.1088/1748-0221/11/12/P12009> Impact factor: 1.366
- M. Bettiol, E. Preziosi, M.N. Cinti, **C. Borrazzo**, et al. **"A Depth-of-Interaction encoding method for SPECT monolithic scintillation detectors"**., Journal of Instrumentation, 11(12), P12009, (2016). link: <http://iopscience.iop.org/article/10.1088/1748-0221/11/12/C12054/meta> Impact factor: 1.366
- S. Pozzi, **C. Borrazzo**, M. Carni, E. Di Castro, S. Valentini and B. Caccia **"A computational tool for evaluating HIFU safety"**. Annali dell'Istituto Superiore di Sanità, 52(2), 256-260, (2016). link: <http://www.annali-iss.eu/article/view/280> Impact factor: 1.390
- R. Pani, M. Bettiol, E. Preziosi, M. N. Cinti, **C. Borrazzo** et al. **"Position algorithm for monolithic scintillation crystals based on charge projection readout"**. Journal of Instrumentation, 11(01), C01061, (2016). link: <http://iopscience.iop.org/article/10.1088/1748-0221/11/01/C01061/meta> Impact factor: 1.366
- R. Pani, R. Pellegrini, M.N. Cinti, Longo, M., Donnarumma, A. D'Alessio, **C. Borrazzo** et al. **"Development of a novel gamma probe for detecting radiation direction"**. Journal of Instrumentation, 11(01), C01002, (2016). link: <http://iopscience.iop.org/article/10.1088/1748-0221/11/01/C01002/meta> Impact factor: 1.366
- M. Galasso, A. Fabbri, **C. Borrazzo**, V.O. Cencelli and R. Pani. **"A Theoretical Model for Fast Evaluation of Position Linearity and Spatial Resolution in Gamma Cameras Based on Monolithic Scintillators"**. IEEE Transactions on Nuclear Science, Volume: 63, Issue: 3, (2016). doi: <http://dx.doi.org/10.1109/TNS.2016.2558101> link: <http://ieeexplore.ieee.org/document/7462262/?arnumber=7462262> Impact factor: 1.428
- R. Pani, M. Bettiol, E. Preziosi, **C. Borrazzo** et al. **"Novel Method for g-photons Depth-of-Interaction Detection in Monolithic Scintillation Crystals"**. IEEE Transactions on Nuclear Science, Volume: PP, Issue:99, Pages:1-9, (2016). doi: <http://dx.doi.org/10.1109/TNS.2016.2539287> Impact factor: 1.428
- R. Pani, A. J. González, M. Bettiol, A. Fabbri, M.N. Cinti, E. Preziosi, **C. Borrazzo** and S. Majewski. **"Preliminary evaluation of a monolithic detector module for integrated PET/MRI scanner with high spatial resolution"**. Journal of Instrumentation, 10(06), C06006, (2015). link: <http://iopscience.iop.org/article/10.1088/1748-0221/10/06/C06006/meta> Impact factor: 1.366
- M. Galasso, **C. Borrazzo** and A. Fabbri. **"A scintillation light radial distribution model for monolithic crystal gamma cameras"**. Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, Volume 786, Pages 40-46, ISSN 0168-9002,(2015) doi: <http://dx.doi.org/10.1016/j.nima.2015.03.035> link: <http://www.sciencedirect.com/science/article/pii/S0168900215003514> Impact factor: 1.43

## CHAPTER

- **C. Borrazzo**, T. Insero, R. Pellegrini, M N Cinti, P. Bennati, R. Scafè, V. Orsolini Cencelli, A. Fabbri, P. Boccaccio, G. De Vincentis, E. Di Castro, R. Pani. **"Effect of pulse height uniformity response on imaging performance of a LaBr3:Ce gamma-camera"**. LNL-ANNUAL REPORT, ISSN: 1828-8545 (2011). Link:[http://www.inl.infn.it/annrep/read\\_ar/2011/contributions/pdfs/149\\_B\\_51\\_B046.pdf](http://www.inl.infn.it/annrep/read_ar/2011/contributions/pdfs/149_B_51_B046.pdf)

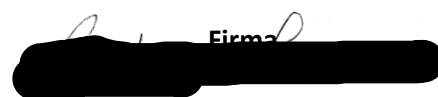
## ABSTRACT AND PROCEEDINGS

- **C Borrazzo et al. "Accuracy and precision of a novel algorithm for T1 and extracellular volume fraction mapping in cardiac magnetic resonance imaging".** Physica Medica, (2018). doi: <https://doi.org/10.1016/j.ejmp.2018.04.249>
- **V. Frantellizzi, M. Pacilio, A. Farcomeni, C. Borrazzo, G. De Vincentis. "123i-mibg Imaging For Parkinson'S Disease: The Diagnostic Value Of The Early Heart-to-mediastinum Count Ratio".** European Journal of Nuclear Medicine and Molecular imaging, Volume 45, pages S423-S424, (2018). doi: <https://doi.org/10.1007/s00259-018-4148-3>
- **M Pacilio, V Frantellizzi, E Verdolino, C Borrazzo et al. "Lesion dosimetry and follow-up for a large group of castration-resistant prostate cancer (CRPC) patients and bone metastases treated with 223Ra therapy".** European Journal of Nuclear Medicine and Molecular imaging, Volume 45, p. 233, (2018). doi: <https://doi.org/10.1007/s00259-018-4148-3>
- **M Pacilio, G Ventroni, V Frantellizzi, B Cassano, T Montesano, C Borrazzo et al. "Towards a dose-response correlation in radioiodine therapy of hyperthyroidism from nodular thyroid disease".** Physica Medica, Volume 56, Supplement 2, Pages: 121–122, (2018). doi: <https://doi.org/10.1016/j.ejmp.2018.04.10>
- **M Pacilio, C Borrazzo et al. "Patient-specific estimation of the red marrow extracellular fluid fraction for improving the accuracy of red marrow dosimetry in radioimmunotherapy"** Physica Medica, Volume 56, Supplement 2, Page: 122, (2018). doi: <https://doi.org/10.1016/j.ejmp.2018.04.108>.
- **M Bettiol, E Preziosi, C Borrazzo. "A double purpose phoswich approach for scintillation detectors in Nuclear Imaging".** Physica Medica, Volume 56, Supplement 2, Pages: 254-255, (2018). doi: <https://doi.org/10.1016/j.ejmp.2018.04.324>
- **E Preziosi, M Bettiol, C Borrazzo et al. "A novel geometry for gamma-prompt imaging in proton therapy".** Physica Medica, Volume 56, Supplement 2, Pages: 504-505, (2018). doi: <https://doi.org/10.1016/j.ejmp.2018.04.241>
- **M Carni', C Borrazzo et al. "Comparison of myocardial blood flow estimates from dynamic contrast-enhanced used in Cardiac Magnetic Resonance Imaging".** Physica Medica, Volume 56, Supplement 2, Pages: 72, (2018). doi: <https://doi.org/10.1016/j.ejmp.2018.04.029>
- **S. Sanchez, E. Preziosi, A. J. Gonzalez, P. Conde, A. Iborra, L. Moliner, C. Borrazzo, et al. "Performance evaluation of the mindview PET using GATE and STIR".** IEEE (NSS/MIC/RTSD), pp. 1-5, (2016). doi: <https://doi.org/10.1109/NSSMIC.2016.8069533>
- **C. Borrazzo et al. "Montecarlo simulation to evaluate factor affecting imaging performances of compact scintillation gamma camera".** IEEE MIC/NSS, (2016). doi: <https://doi.org/10.1109/NSSMIC.2016.8069537>
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Dichiaro, di essere informato, ai sensi e per gli effetti di cui al GDPR 679/2016 che i dati personali raccolti saranno trattati anche con strumenti informatici, esclusivamente nell'ambito del procedimento per il quale la presente dichiarazione viene resa.

Dichiaro altresì, di essere informato, ai fini della pubblicazione in ottemperanza all'art. 15 del D. Lgs. 33/2013"

Roma, 20/06/2021

 Firma