



## Francesco Fellin

Date of birth: 25 Mar 1987 | **Nationality:** Italian | **Gender:** Male | (+39) 3408593694 |

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### WORK EXPERIENCE

1 JAN 2012 – CURRENT – Trento, Italy

**DOSIMETRIST - RADIOTHERAPY TECHNOLOGIST (RTT) – AZIENDA PROVINCIALE PER I SERVIZI SANITARI (APSS)**

Main activities:

- Planning and optimization of proton therapy treatment plans, with Single-Field (SFO) and Multi-Field Optimization (MFO) techniques;
- Execution of quality assurance checks on approved treatment plans and proton therapy equipment;
- Collaboration in the creation of internal procedures and documents;
- Collaboration in the optimization of internal workflows and processes;
- Collaboration with Physicists and Radiation Oncologists in different proton therapy research and development activities;
- Collaboration with Physicists in the Pencil Beam Scanning proton beam characterization before the start of clinical activity in the Proton Therapy department (2014);
- Technical support and collaboration for the implementation of the new Proton Therapy Center in Trento before the start of clinical activity (2014).

Proton Therapy department | <https://protonterapia.provincia.tn.it/> | Via Al Desert 14, 38122, Trento, Italy

1 JAN 2014 – CURRENT – Trento, Italy

**SYSTEM ADMINISTRATOR – AZIENDA PROVINCIALE PER I SERVIZI SANITARI (APSS)**

Main activities:

- Contact person in the Proton Therapy department staff for problems with IT systems;
- System administrator in the Proton Therapy department, in particular for the configuration and optimization of applications, based on clinical and managerial needs, the verification of the correct functioning of the software and related services, the management of users and related policies, the resolution of problems encountered by Proton Therapy staff in the use of applications (Treatment Planning System [RayStation], Oncology Information System [Mosaiq], RIS-PACS systems [Synapse-Syncromed], ...);
- Collaboration in the optimization of workflows involving information systems in the proton therapy department;
- Preparation of user guidelines relating to the use of applications in the proton therapy department;
- Collaboration with the supplier of the proton therapy system (IBA) in solving technical and IT problems related to the IT systems in the Proton Therapy department;
- Collaboration with the supplier of the proton therapy system (IBA) during Treatment Planning System and Oncology Information System updates;
- Collaboration with the APSS Technology department for the development of integrations between the IT systems of the Proton Therapy department and the external ones (provincial registry, Hospital Information System, RIS-PACS System, ...);
- Extrapolation and analysis of clinical and physical data using different software (Crystal Report, Microsoft Excel, MatLab, R Studio, ...);
- Creation of clinical reports from the data stored in the Oncology Information System using Crystal Report and R Studio software;
- Scripting with different languages and syntax (Python, Java, MatLab, Crystal, Basic, ...).
- Checking the log files of the software in use in the Proton Therapy department.

Proton Therapy department | <https://protonterapia.provincia.tn.it/> | Via Al Desert 14, 38122, Trento, Italy

7 JUN 2010 – 31 DEC 2011 – Trento, Italy

**DOSIMETRIST - RADIOTHERAPY TECHNOLOGIST (RTT) – AGENZIA PROVINCIALE PER LA PROTONTERAPIA (ATREP)**

Main activities:

- Technical support and collaboration for the design of the new Proton Therapy Center in Trento;
- Collaboration in research and development activities in Proton Therapy;

- Optimization and dosimetric comparison of treatment plans with protons and photons;
- Training about treatment planning and quality assurance activities in some protons and photons radiotherapy departments (Roberts Proton Therapy Center (Philadelphia, USA), Spedali Civili di Brescia (Brescia, Italy), San Raffaele Hospital (Milano), Santa Chiara Hospital (Trento, Italy), ...)

Provincial Agency for Proton Therapy | Via Perini 181, 38122, Trento, Italy

## ● EDUCATION AND TRAINING

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1 OCT 2020 – 14 DEC 2021 – Via Zamboni 33, Bologna, Italy

**MASTER IN SYSTEM ADMINISTRATOR** – Alma Mater Studiorum - University of Bologna

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Main subject: basic information technology, computer architecture, networks, server infrastructure, systems integration, data and information security, information dematerialization, digital signature, conformance statement, health technology, DICOM and HL7 standards, risk management, health documentation management, safety in clinical-assistance activities, forensic IT, ISO/IEC 27001 certification for data security.

EQF level 7

1 OCT 2016 – 6 NOV 2017 – Via Don Carlo Gnocchi 3, Roma, Italy

**MASTER IN COORDINATION MANAGEMENT IN HEALTHCARE PROFESSIONS** – Niccolò Cusano University

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Main subject: business economics, business organization, business management, general sociology and economic processes of work, management of human and training resources, social, work and organizational psychology, sociology of cultural and communication processes, public law institutions, labor law and EU law, forensics, deontology and ethics in the health professions.

EQF level 7

1 OCT 2006 – 21 OCT 2009 – Via dell'Artigliere 8, Verona, Italy

**DEGREE IN MEDICAL RADIOLOGY TECHNIQUES FOR IMAGING AND RADIOTHERAPY** – University of Verona

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Main subject: basics of physics, radiotherapy, anatomy and radiological anatomy, conventional radiology, Nuclear Magnetic Resonance, Computed Tomography, Nuclear Medicine, Health Physics.

EQF level 6

1 SEP 2001 – 30 JUL 2006 – Via Brigata Acqui 19, Trento, Italy

**DIPLOMA IN ACCOUNTING WITH IT FOCUS** – A. Tambosi - Technical Commercial Institute

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Main subject: accounting, business economics, basic information technology, computer architecture, computer programming with C++ and Visual Basic.

EQF level 5

## 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>	B1	B2	B1	B1	B2
<b>GERMAN</b>	A2	A2	A2	A2	A2

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

## DRIVING LICENCE

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**Driving Licence:** B

## MAIN SKILLS

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### Communication and relational skills

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I have developed good communication and relational skills thanks to years of work carried out in close contact with other professionals. In general, I have a strong propensity for exchanging ideas and constructive confrontation. I am inclined to team working because I think that teaming up means joining forces and being able to create the right cooperative environment to achieve a common goal. Thanks to my creativity and inventiveness, I have planned, implemented and monitored some work optimization projects, working both independently and in a team.

### Organizational and management skills

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I have good organizational and managerial skills in my work activities and in those carried out in collaboration with colleagues; the ability to better organize and manage work proved to be a fundamental peculiarity that I have therefore tried to improve more and more over the years. I am able to organize my work in order to respect the schedule for completing a specific activity that has been assigned to me. I am a responsible person with a high tolerance to stress that allows me to cope with critical issues and easily adapt to changes.

### Technical and IT skills

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I have acquired a good knowledge in the configuration, management and use of computer systems (hardware, software and network) thanks to the master in systems administrator and the experience in the field during the work in recent years. My passion for new information technologies has created in me the desire to continually update and improve myself. At work, I always try to improve IT systems to make my and my colleagues' work better, more comfortable, safer and faster. During my work, I have analyzed and solved (or collaborated to analyze and solve) many problems reported by colleagues relating to IT systems in a reasonable time. Since I have been working in a proton therapy department for years, I have extensive experience in DICOM and DICOM-RT standards, healthcare software management and scripting; I have basic programming skills, too.

### Manual skills

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I am very inclined to carry out manual activities. For example, in these years of work, I have designed and built some phantoms useful for the proton therapy department activities. Even in my free time I like to do manual work; for example, I assembled my current PC from scratch and completely restored (engine and body) my two vintage Piaggio Vespas.

## **PUBLICATIONS**

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### **Is it beneficial to use apertures in proton radiosurgery with a scanning beam? A dosimetric comparison in neurinoma and meningioma patients**

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J Appl Clin Med Phys. 2021 Nov 9  
2021

R. Righetto, F. Fellin, D. Scartoni, M. Amichetti, M. Schwarz, D. Amelio, P. Farace

### **Clinical validation of a GPU-based Monte Carlo dose engine of a commercial treatment planning system for pencil beam scanning proton therapy**

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Phys Med. 2021 Aug; 88:226-234.  
2021

Fracchiolla F, Engwall E, Janson M, Tamm F, Lorentini S, Fellin F, Bertolini M, Algranati C, Righetto R, Farace P, Amichetti M, Schwarz M

### **Rosette-Forming Glioneuronal Tumor of the Fourth Ventricle: A Case of Relapse Treated with Proton Beam Therapy**

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Diagnostics (Basel) . 2021 May 19;11(5):903  
2021

Cacchione A, Mastronuzzi A, Carai A, Colafati GS, Diomedi Camassei F, Marrazzo A, Carboni A, Miele E, Pedace L, Tartaglia M, Amichetti M, Fellin F, Lodi M, Vennarini S

### **An Avoidance Method to Minimize Dose Perturbation Effects in Proton Pencil Beam Scanning Treatment of Patients With Small high-Z Implants**

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Phys Med Biol. 2020 May 28  
2020

F. Fellin, M. Artoni, R. Righetto, V. E. Bellinzona, L. Widesott, F. Dionisi, P. Farace

### **Modelling the Risk of Radiation Induced Alopecia in Brain Tumor Patients Treated With Scanned Proton Beams**

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Radiother Oncol. 2020 Mar;144:127-134  
2020

G. Palma, A. Taffelli, F. Fellin, V. D'Avino, D. Scartoni, F. Tommasino, E. Scifoni, M. Durante, M. Amichetti, M. Schwarz, D. Amelio, L. Cella

### **An advanced junction concept in pediatric craniospinal irradiation by proton pencil beam scanning**

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Phys Med. 2019 Apr;60:168-173  
2019

F. Fellin, F. Fracchiolla, B. Rombi, M. Lipparini, S. Vennarini, P. Farace

### **Potential skin morbidity reduction with intensity-modulated proton therapy for breast cancer with nodal involvement**

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Acta Oncol. 2019 Jun;58(6):934-942  
2019

F. Fellin, M. Iacco, V. D'Avino, F. Tommasino, P. Farace, G. Palma, M. Conson, I. Giacomelli, C. Zucchetti, and others

### **A pre-absorber optimization technique for pencil beam scanning proton therapy treatments**

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Phys Med. 2019 Jan;57:145-152  
2019

F. Fracchiolla, F. Fellin, M. Innocenzi, M. Lipparini, S. Lorentini, L. Widesott, P. Farace, M. Schwarz

## **Radiation-induced moyamoya syndrome after proton therapy in a child with clival craniopharyngioma: natural history and surgical treatment**

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World Neurosurg. 2018 Dec 21  
2018

*M. Scala, S. Vennarini, ML. Garrè, D. Tortora, M. Cianchetti, F. Fellin, S. Lorentini, M. Pavanello*

## **Impact of dose engine algorithm in pencil beam scanning proton therapy for breast cancer**

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Phys Med. 2018 Jun;50:7-12  
2018

*F. Tommasino, F. Fellin, S. Lorentini, P. Farace*

## **Universal field matching in craniospinal irradiation by a background-dose gradient-optimized method**

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JApplClin MedPhys. 2017 Nov 7  
2017

*E. Traneus, N. Bizzocchi, F. Fellin, B. Rombi, P. Farace*

## **Workflow in a proton therapy department - real difference from photon therapy?**

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Radiotherapy and Oncology, 2017 May, Vol. 123 Supl. 1, SP-0217  
2017

*F. Fellin*

## **Supine craniospinal irradiation in pediatric patients by proton pencil beam scanning**

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Radiother Oncol. 2017 Apr;123(1):112-118  
2017

*P. Farace, N. Bizzocchi, R. Righetto, F. Fellin, F. Fracchiolla, S. Lorentini, L. Widesott, C. Algranati, B. Rombi, S. Vennarini, M. Amichetti, M. Schwarz*

## **Water equivalent thickness of immobilization devices in proton therapy planning - Modelling at treatment planning and validation by measurements with multi-layer ionization chamber**

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PhysMed. 2017 Mar;35:31-38  
2017

*F. Fellin, R. Righetto, G. Fava, D. Trevisan, D. Amelio, P. Farace*

## **Evaluation of different CT lung anatomies for proton therapy with pencil beam scanning delivery, using a validated non-rigid image registration method**

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Acta Oncol. 2016 May;55(5):647-51  
2016

*E. Scalco, M. Schwarz, M. Sutto, D. Ravanelli, F. Fellin, G. M. Cattaneo, G. Rizzo*

## **Nasal cavity reirradiation: a challenging case for comparison between proton therapy and volumetric modulated arc therapy**

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Tumori 2016 Nov 11;102(Suppl. 2)  
2016

*R. Ruggieri, F. Dionisi, R. Mazzola, F. Fellin, A. Fiorentino, M. Schwarz, F. Ricchetti, M. Amichetti, F. Alongi*

## **Proton therapy re-irradiation for large-volume recurrent high-grade gliomas**

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Radiotherapy & Oncology, 2016 April, Vol 119 Suppl. 1 S549  
2016

*D. Amelio, L. Widesott, F. Maines, F. Fellin, R. Righetto, S. Vennarini, B. Rombi, M. Cianchetti, F. Dionisi, D. Donner, U. Rozzanigo, M. Schwarz, F. Chierichetti, E. Galligioni, M. Amichetti*

**Ruolo del Tecnico Sanitario di Radiologia Medica (TSRM) in Protonterapia", capitolo del libro "Obiettivo Salute, Vol. 3 La protonterapia: una nuova opportunità di cura e ricerca**

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a cura di Mario Cristofolini e Maurizio Amichetti © LILT Trento 2015  
2015  
*F. Fellin, G. Fava, M. Lipparini*

**Multipurpose dosimetry phantom for QA in PBS therapy systems with commercial measurement devices**

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Radiotherapy & Oncology, 2015 April, Vol 115 Suppl. 1 S739  
2015  
*C. Algranati, N. Bizzocchi, P. Farace, F. Fellin, F. Fracchiolla, F. Lorentini, R. Righetto, L. Widesott, and others*

**Evaluation of methods for proton treatment planning in lung cancer patients**

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Radiotherapy & Oncology, 2014, Vol 111 S232-233  
2014  
*M. Sutto, D. Ravanelli, F. Fellin, M.L. Belli, G.M. Cattaneo, E. Scalco, G. Rizzo, M. Schwarz*

**Radioterapia e Futuro: la Protonterapia" capitolo del libro "La Moderna Radioterapia. Aspetti pratici ed innovazioni tecnologiche**

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Editore Radiologia e Futuro, 2014  
2014  
*F. Fellin, G. Fava, M. Lipparini*

**Helical tomotherapy and intensity modulated proton therapy in the treatment of dominant intraprostatic lesion: a treatment planning comparison**

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Radiother Oncol. 2013 May;107(2):207-12  
2013  
*F. Fellin, R. Azzaroni, A. Maggio, S. Lorentini, C. Cozzarini, N. Di Muzio, C. Fiorino, R. Calandrino, M. Schwarz*

**Intensity Modulated Radiation Therapy (IMRT) Versus Intensity Modulated Proton Therapy (IMPT) in Low-Grade Gliomas: A Dosimetric Study**

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Biology • Physics, 2013 October, Vol. 87, Issue 2, S253  
2013  
*D. Amelio, S. Lorentini, M. Giri, G. Meliadó, G. Fava, D. Ravanelli, F. Fellin, C. Cavedon, and others*

**IMRT or 3D-CRT in Glioblastoma? A Dosimetric Criterion for Patient Selection**

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Technol Cancer Res Treat. 2013 Oct;12(5):411-20  
2013  
*S. Lorentini, D. Amelio, MG Giri, F. Fellin, G. Meliado, A. Rizzotti, M. Amichetti, M. Schwarz*

**Anatomical changes in mesothelioma patients: effect on proton dose distributions and benefits of early replanning**

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Radiotherapy and Oncology, 2013 March, Vol. 106, S133-S134  
2013  
*S. Lorentini, G. Fava, F. Fellin, P. Vitali, S. Tonoli, M. Amichetti, M. Schwarz*

**Range shifter optimization in pencil beam scanning-based proton therapy**

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Radiotherapy and Oncology, 2013 March, Vol. 106, S359  
2013  
*F. Fellin, G. Fava, M. Schwarz*

## **Planning abutting fields in proton therapy delivered with pencil beam scanning: assessment of a commercial TPS**

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Radiotherapy and Oncology, 2012 May, Vol. 103, S225  
2012  
*F. Fellin, M. Schwarz*

## **Systematic evaluation of three different commercial software solution for automatic segmentation for adaptive therapy in head-and-neck, prostate and pleural cancer**

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Radiat Oncol. 2012 Sep 18;7:160  
2012  
*M. La Macchia, F. Fellin, M. Amichetti, M. Cianchetti, S. Gianolini, P. Vitali, AJ Lomax, L. Widesott*

## **In-gantry or remote patient positioning? Monte Carlo simulations for proton therapy centers of different sizes**

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Radiother Oncol. 2012 Apr;103(1):18-24  
2012  
*G. Fava, L. Widesott, F. Fellin, M. Amichetti, V. Viesi, AJ Lomax, L. Lederer, EB Hug, and others*

## **Adjuvant Intensity Modulated Proton Therapy in Malignant Pleural Mesothelioma: a comparison with Intensity Modulated Radiotherapy and a spot size variation assessment**

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Sthralenter Onkol. 2012 Mar;188(3):216-225  
2012  
*S. Lorentini, M. Amichetti, L. Spiazzi, S. Tonoli, SM Magrini, F. Fellin, M. Schwarz*