Timoteo Daniel Herrera

About me: I am a trained radiotherapy medical physicist, with over 4 years of clinical experience. I have a master´s degree in Medical Physics, obtained at Instituto Balseiro (Bariloche, Argentina). I am interested in research and development of innovative cancer therapies, specially in the improvement of treatment planning.

WORK EXPERIENCE

03/2019 – 11/2021 – Comodoro Rivadavia, Argentina
SPECIALIST IN RADIOTHERAPY PHYSICS – CENTRO DE APLICACIONES BIONUCLEARES CABIN

I worked as a Licensed Specialist, supervising and taking part in all stages of clinical practice. I took part of installation, acceptance and commissioning of new equipment for the clinic: simulation CT, two linacs, HDR Brachytherapy and related software.

06/2017 – 02/2019 – San Carlos de Bariloche, Argentina
TRAINING IN RADIOTHERAPY PHYSICS – CNEA - INTECNUS

Training with an A1-P fellowship, granted by the National Atomic Energy Commission (CNEA), in the Radiotherapy Physics Department in Intecnus Clinic. I took part in the installation, acceptance and commissioning of new equipment for start up of the clinic: simulation CT, two linacs, HDR brachytherapy and related software.

EDUCATION AND TRAINING

26/07/2015 – 12/12/2016 – San Carlos de Bariloche, Argentina
MASTER IN MEDICAL PHYSICS – Instituto Balseiro - FUESMEN, Universidad Nacional de Cuyo

- With a scholarship granted by the National Atomic Energy Commission (CNEA).
- Master's degree, with theoretical and practical education in the main areas of medical physics: Dosimetry, Radiation Protection, Radiobiology, Radiotherapy, Nuclear Medicine and Medical Imaging.
- Thesis: "Patient Positioning in Radiotherapy Using Augmented Reality".

28/07/2013 – 15/12/2015 – San Carlos de Bariloche, Argentina
BACHELOR (LICENCIATE) IN PHYSICS – Instituto Balseiro, Universidad Nacional de Cuyo

- With a scholarship granted by the National Atomic Energy Commission (CNEA).
- Bachelor (Licenciate - 4 years) degree, includes 2 years of Basic Sciences Education required for entry, taken at Universidad Nacional de Rosario, Argentina.
- Theoretical and experimental education in Mathematics, Computer Simulations, Classical and Modern Physics.

LANGUAGE SKILLS

Mother tongue(s): SPANISH

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1
FRENCH	B1	B2	B1	B1	B1

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

DIGITAL SKILLS

Microsoft Office | C/C++ | Python | MATLAB | LaTeX | Vuforia AR SDK | Unity 3D | Meshlab | ImageJ | Gnuplot | PyDicom

ADDITIONAL ACADEMIC EXPERIENCE

Courses, Workshops and Conferences

- 05/03/2020 – 06/03/2020. **Workshop "Experimental Radiobiology: Physics meets Biology and Medicine"**. Heidelberg Centre for Latin America, Santiago, Chile.
- 08/09/2019 – 11/09/2019. **24th ICMP (International Congress of Medical Physics), 8th ALFIM (Latin American Congress of Medical Physics), 2nd SOFIMECH (Chilean Congress of Medical Physics).** As part of the Congress, I took the courses: "Theoretical and practical workshop on Dosimetry of Small Static Fields in External Beam Radiotherapy" (IAEA, AAPM), and "Radiotherapy Educational Course: Advances in Physics and Dosimetry in Brachytherapy" (SEFM). Santiago, Chile.
- 17/07/2019 – 19/07/2019. **1st Argentinian Workshop on Protontherapy.** University of Buenos Aires.
- 07/06/2019 – 08/06/2019. **2nd Workshop for Actualization in Radiotherapy: SRS.** CEMENER, Entre Ríos, Argentina.
- 01/11/2018 – 30/11/2018. **Advanced Workshop "José Antonio Balseiro" in Applied Physics and Technological Innovation.** Instituto Balseiro - CNEA.
- 02/2018 – 06/2018. **Introduction to Atomic, Molecular and Optical Physics.** Postgraduate course. Instituto Balseiro - CNEA (128 hours).
- 08/2017 – 10/2017. **Introduction to Python for Physics and Engineering.** Postgraduate course. Instituto Balseiro - CNEA (64 hours).
- 09/2016 – 09/2016. **7th ALFIM (Latin American Congress of Medical Physics), 13th SAFIM (Argentinian Congress of Medical Physics).** Carlos Paz, Córdoba, Argentina. Oral Presentation of Thesis "Patient Positioning in Radiotherapy Using Augmented Reality".

08/2017 – 11/2017
Assistant Professor

For the course: "Computing Workshop", part of the Master in Medical Physics, Instituto Balseiro.

Member of the Examining Commitee for Master and Licenciate Thesis

- "Characterization and commissioning of an OSLD dosimetry system for radiotherapy audits", Instituto Balseiro, 2021.
- "Development of a redundant dose calculation system for intensity modulated and arc modulated radiation therapy", Instituto Balseiro, 2018.
- "Commissioning of IMRT and VMAT techniques in lineal accelerator with MLC collimator", Instituto Balseiro, 2017.
- "Myocardial perfusion SPECT/CT: Evaluation of attenuation correction through CT maps", Instituto Balseiro, 2017.

OTHER PROFESSIONAL SKILLS AND QUALIFICATIONS

03/2020 – CURRENT
Specialist in Radiotherapy Physics License

License granted by the Argentinian Nuclear Regulatory Authority (ARN), after a 1 year professional practice. Individual permit to work in a radiotherapy facility as a medical physicist.

Radiotherapy Equipment and Software Experience

- Treatment planning with techniques: 3DCRT, IMRT, VMAT, SRS, Brachytherapy. Operation and machine QA of linacs, HDR Brachytherapy equipment. Dosimetry equipment and software: ionization chambers, automated water phantoms, IC and diode arrays, water equivalent phantoms, end-to-end and patient specific QA. Software analysis of QA images and measurements. Image processing and hospital software. Knowledge and practice of international protocols and guidelines.