

Eduardo Martínez López

Curriculum Vitae

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Date of birth: May 9, 1996

Education

August 2019 - **M.Sc. in Medical Physics**, Universidad Nacional Autónoma de México
June 2021 (UNAM)

- GPA: 9.08/10

First Class

M.Sc. Thesis: "*Numerical Evaluation of a Scintillating Fiber Optic Detector for Tomodosimetry*"

Thesis advisor: Dr. Arnulfo Martínez Dávalos (Instituto de Física, UNAM)

August 2014 - **B.Sc. in Physics**, Universidad Nacional Autónoma de México (UNAM)
December 2018

- GPA: 9.13/10

Courses and hospital residencies

- 6-Month hospital residency in Nuclear Medicine, Radiotherapy and Radiological Imaging at the Instituto Nacional de Cancerología de México (INCan), June 2021.
- Advanced course in Radiation Protection for managers of radiation safety in medical facilities recognized by the Comisión Nacional De Seguridad Nuclear Y Salvaguardias de México (CNSNS), June 2020.

Scientific talks in conferences and seminars

- "*Numerical Evaluation of a Scintillating Fiber Optic Detector for Tomodosimetry*", LXIV Congreso Nacional de Física, Mexico, October 2021.
- "*Digital mammography: proposal of quality control guidelines to the Ministry of Health*", LXII Congreso Nacional de Física, Mexico, October 2019.
- "*Comparative performance of modern digital mammography systems in a large breast screening program*", Article review at Journal Club in Medical Physics, Instituto de Física, UNAM, Mexico, March 2019.

Scientific research experience

September 2022 - **Indefinite employment contract by Consejo Superior de Investigaciones Científicas (CSIC)**, to work within the framework of a line of research and to carry out, among others, the following works:

- Design studies and beam dynamics optimization of a linear accelerator for C6+ and He2+ ions for radiotherapy
- Monte Carlo simulation studies and radiation dose measurements generated in a high-gradient S-band accelerator cavity prototype under study at the IFIC high-gradient laboratory

- Radiological protection simulation studies for a C6+ and He2+ ion injector
- August 2019 - **Biomedical Imaging Laboratory (LIB)**, Department of Experimental Physics,
February 2022 Instituto de Física, UNAM
- Monte Carlo Simulation applied to Radiotherapy and Medical Imaging
- Medical imaging (especially in CT, reconstruction algorithms and regularization methods)
- August 2018 - **Dosimetry and Medical Physics Group (DOSIFICAME)**, Department of
July 2019 Experimental Physics, Instituto de Física, UNAM
- Mammography Quality Assurance

Awards and honors

- September 2021 - **Scholarship for high performance student for Master's thesis**, Instituto
November 2021 de Física, UNAM.
- August 2019 - **Full scholarship for Master's studies**, CONACyT (Consejo Nacional de
July 2021 Ciencia y Tecnología, México).
- November 2015 **First place in Experimental Physics competition**, *Sir Isaac Newton*, De-
partment of Physics and Theoretical Chemistry, Facultad de Química, UNAM.

Conferences attended

- *LXIV Congreso Nacional de Física 2021*, Mexico, October 2021.
- *LXIII Congreso Nacional de Física*, Mexico, October 2020.
- *LXII Congreso Nacional de Física*, Mexico, October 2019.
- *Medical Physics seminars*, Instituto de Física, UNAM, Mexico, 2019 and 2020.
- *Physics Colloquia*, Posgrado de Ciencias Físicas, UNAM, Mexico, 2019 and 2020.
- *Journal Club in Medical Physics*, Instituto de Física, UNAM, Mexico, 2019.

Outreach activities

- Participation in the activities of "*Día de puertas abiertas*", Instituto de Física, UNAM, Mexico, 2017, 2018 and 2019.

Computational Skills

- **Languages**
Matlab (Very High)
- **Monte Carlo Simulation for Medical Physics**
TOPAS (Very High)

Languages

- **Spanish:** First Language
- **English:** B2