

Daniel Vázquez Lago

Algebra

Grupos



Índice general

Curvas y Superficies

1	Introduccion	3
---	--------------	---

Geometría Riemanniana

2	Introduccion	5
---	--------------	---

	Bibliografia	5
--	--------------	---

Capítulo 1

Introduccion

Capítulo 2

Introduccion

Bibliografía

- [1] James Brau. *Interaction of Charged Particles and Radiation with Matter: Ionization Loss of Charged Particles*. Physics 610, University of Oregon. Lecture notes. 2014. URL: <https://pages.uoregon.edu/jimbrou/ph610-2014/lectures/610-4.pdf>.
- [2] Theodore Frankel. *The Geometry of Physics: An Introduction*. 3.^a ed. Cambridge, UK: Cambridge University Press, 2011, pág. 748. ISBN: 978-1-107-60260-1.
- [3] D. E. Groom, S. R. Klein y P. A. Zyla et al. (Particle Data Group). “Passage of Particles Through Matter”. En: *Progress of Theoretical and Experimental Physics* 2020.8 (ago. de 2020). Revised August 2019, pág. 083C01. URL: <https://pdg.lbl.gov/2020/reviews/rpp2020-rev-passage-particles-matter.pdf>.
- [4] William R. Leo. *Techniques for Nuclear and Particle Physics Experiments: A How-to Approach*. 2nd. Springer, 1994. ISBN: 978-3-642-57922-6. DOI: [10.1007/978-3-642-57920-2](https://doi.org/10.1007/978-3-642-57920-2).
- [5] Michele Maggiore. *A Modern introduction to quantum field theory*. Oxford Master Series in Physics. 2005. ISBN: 978-0-19-852074-0.
- [6] John H. Mathews y Kurtis K. Fink. *Numerical Methods Using MATLAB*. 4th. Upper Saddle River, New Jersey, USA: Prentice-Hall Inc., 2004. ISBN: 0-13-065248-2. URL: <http://vig.prenhall.com/>.
- [7] Tom Montaruli. *Ph 801 — Exercise 4: Derive the Maximum Energy Transfer in a 2-Body Scattering*. Exercise notes, Ph 801, University of Wisconsin IceCube Group. Exercise4_801.pdf. 201x. URL: https://user-web.icecube.wisc.edu/~tmontaruli/801/Exercise4_801.pdf.
- [8] Ervin B. Podgorsak. *Radiation Physics for Medical Physicists*. 3rd. Graduate Texts in Physics. Springer, 2022. ISBN: 978-3-030-96772-5. DOI: [10.1007/978-3-030-96773-2](https://doi.org/10.1007/978-3-030-96773-2).
- [9] William H. Press et al. *Numerical Recipes 3rd Edition: The Art of Scientific Computing*. 3.^a ed. USA: Cambridge University Press, 2007. ISBN: 0521880688.
- [10] Marcos Sánchez-Élez. *Introducción a la programación en VHDL*.
- [11] Juan Jose Saborido Silva. *Particle Physics I: Fundamentals of QED and Electro-Weak Theory. Handouts*. Academic year 2025/2026. Lecture notes. Santiago de Compostela, Spain, sep. de 2025.
- [12] Mark Thomson. *Modern particle physics*. New York: Cambridge University Press, oct. de 2013. ISBN: 978-1-107-03426-6, 978-1-139-52536-7. DOI: [10.1017/CB09781139525367](https://doi.org/10.1017/CB09781139525367).
- [13] J. Walkowiak et al. “Mean Excitation Energies of all ionization stages of all atoms with $1 \leq Z \leq 86$ ”. En: *Atomic Data and Nuclear Data Tables* 161 (2025), pág. 101696. ISSN: 0092-640X. DOI: <https://doi.org/10.1016/j.adt.2024.101696>. URL: <https://www.sciencedirect.com/science/article/pii/S0092640X24000615>.

- [14] Anthony G. Williams. *Introduction to Quantum Field Theory: Classical Mechanics to Gauge Field Theories*. Cambridge University Press, 2022.
- [15] Wayne Wolf. *FPGA-Based System Design*. USA: Prentice Hall PTR, 2004. ISBN: 0131424610.
- [16] Andrew Zangwill. *Modern Electrodynamics*. Cambridge University Press, 2012.