

# CURRICULUM VITAE

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## Positions

From Jul 2008 Permissionary/Senior Professor  
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1977 to Professor of Physics  
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Jul 1967	Livre-Docente Instituto de Fisica, Universidade de São Paulo São Paulo, Brazil
Jun 1966	Assistant Professor Instituto de Fisica, Universidade de São Paulo São Paulo, Brazil

## Education

May 1966	Ph.D. in Physics Massachusetts Institute of Technology, USA
Dec 1961	Bacharel em Fisica Faculdade de Filosofia, Ciências e Letras Universidade de São Paulo, Brazil

## Membership

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 Academia de Ciências do Estado de São Paulo  
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## Publications

1. Goldman, D.; Silva, E. and **de Toledo Piza, A. F. R.** “ $^{38}\text{K}$  Isomeric State Formation by  $(\gamma, n)$  Reaction”, *Il Nuovo Cimento* **25**, 41- (1962)
2. Brink, D. M.; Kerman, A. K. and **de Toledo Piza, A. F. R.** “Interval Rules and Intensity Ratios in Vibrating Spherical Nuclei”, *Phys. Letters* **19**, 413-415 (1965)
3. **de Toledo Piza, A. F. R.**; Kerman, A. K.; Fallieros, S. and Venter, R. H., “Damping of Isobaric Analogue States”, *Nucl. Phys.* **89**, 369-376 (1966)
4. **de Toledo Piza, A. F. R.** and Kerman, A. K., “Studies in Isobaric Analogue Resonances I - Gross Properties”, *Ann. Phys. (N.Y.)* **43**, 363-381 (1967)
5. Kerman, A. K. and **de Toledo Piza, A. F. R.**, “Studies in Isobaric Analogue Resonances II - Fine Structure”, *Ann. Phys. (N.Y.)* **48**, 173-194 (1968)
6. Kerman, A. K. and **de Toledo Piza, A. F. R.**, “Intensity Rules for Partial Widths of Deformed Analog Resonances”, *Ann. Phys. (N.Y.)* **66**, 351-365 (1971)
7. **de Toledo Piza, A. F. R.**, “Analogue Resonances in Isospin Forbidden Deuteron Channels”, *Nucl. Phys.* **A184**, 303-320 (1972)
8. Coelho, H. T., Coutinho, F. A. B. and **de Toledo Piza, A. F. R.**, “Backscattering of  $\alpha$  particles by light nuclei”, *Phys. Rev. C* **14**, 1280-1284 (1976)
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10. Nemes, M. C. and **de Toledo Piza, A. F. R.**, “A Quantum phenomenology of viscosity”, Rev. Bras. Fis. **7**, 261-270 (1977)
11. **de Toledo Piza, A. F. R.**, de Passos, E. J. V., Galetti, D., Nemes, M. C. and Watanabe, M. M., “Properties of Griffin-Hill-Wheeler Spaces”, Phys. Rev. **C15**, 1477-1482 (1977)
12. **de Toledo Piza, A. F. R.** and de Passos, E. J. V., “On the Kinematics of Generator Coordinates”, Nuovo Cim. **45B**, 1-30 (1978)
13. Galetti, D. and **de Toledo Piza, A. F. R.**, “Numerical treatment of the Grifin-Hill-Wheeler Equation”, Phys. Rev. **C17**, 774-776 (1978)
14. Chen, H. T. and **de Toledo Piza, A. F. R.**, “Variations on the Hydrogen Atom”, Am. Jour. Phys. **47**, 1063-1066 (1979)
15. De Passos, E. J. V. and **de Toledo Piza, A. F. R.**, “Properties of Grifin-Hill-Wheeler spaces II”, Phys. Rev **C21**, 425-438 (1980)
16. Galetti, D. and **de Toledo Piza, A. F. R.**, “Collective Hamiltonians in the Generator Coordinate Method: Isoscalar Monopole Vibrations in Light Spherical Nuclei”, Phys. Rev. **C24**, 2311-2321 (1981)
17. Nemes, M. C. and **de Toledo Piza, A. F. R.**, “Non Unitary effects in the time evolution of one-body observables”, Phys. Rev. **C27**, 862-871 (1983)
18. Nemes, M. C. and **de Toledo Piza, A. F. R.**, “Collisional spreading of small amplitude nuclear vibrations”, Zeit. Phys. **A310**, 339-344 (1983)
19. Nemes, M. C. and **de Toledo Piza, A. F. R.**, “Quantization of a phenomenological viscous force”, Phys. Rev. **A27**, 1199-1202 (1983)
20. Pessoa, E. F. and **de Toledo Piza, A. F. R.**, “Analysis of stripping to isolated analog resonances”, Phys. Rev. **C29**, 403-408 (1984)

21. Tostes, J. G. R. and **de Toledo Piza, A. F. R.**, “Nonadiabatic generator coordinate calculation of  $H_2^+$ ”, Phys. Rev. **A28**, 538-543 (1984)
22. Nemes, M. C. and **de Toledo Piza, A. F. R.**, “Harmonic approximation to small amplitude nuclear vibrations”, Zeit. Phys. **A319**, 323-325 (1984)
23. Nemes, M. C. and **de Toledo Piza, A. F. R.**, “Dynamics of the one-body density: small amplitude regime”, Phys. Rev. **C31**, 613-620 (1985)
24. Corradi Rabelo, M. L. and **de Toledo Piza, A. F. R.**, “Collision dynamics of the coherent Jaynes-Cummings model”, Rev. Bras. Fis. **14**, 353-363 (1984)
25. Nemes, M. C. and **de Toledo Piza, A. F. R.**, “Collision Terms and Effective Interactions”, Phys. Lett. **172B**, 119-121 (1986)
26. Nemes, M. C. and **de Toledo Piza, A. F. R.**, “Effective dynamics of quantum subsystems”, Physica **137A**, 367-388 (1986)
27. Carlson, B. V., Nemes, M. C. and **de Toledo Piza, A. F. R.**, “Quantum Collisional Evolution of a one-dimensional Fermi Gas: Numerical Solution”, Nucl Phys. **A457**, 261-272 (1986)
28. **de Toledo Piza, A. F. R.**, “Scattering in particle-hole space: simple approximation to nuclear RPA calculation in the continuum”, Rev. Bras. Fis. **17**, 195-212 (1987)
29. Nemes, M. C., **de Toledo Piza, A. F. R.** and da Providência, J., “Van Kampen waves in extended Fermi systems and the Random Phase Approximation”, Physica **146A**, 282-294 (1987)
30. Galetti, D. and **de Toledo Piza, A. F. R.**, “Extended Weyl-Wigner transformation for special finite spaces”, Physica **149A**, 267-282 (1988)

31. Nielsen, M. and **de Toledo Piza, A. F. R.**, “Density-matrix expansion in the Gaussian wave packet phase space representation”, Phys. Rev. **C39**, 720-723 (1989)
32. Cruz Barrios, S. and **de Toledo Piza, A. F. R.**, “Functional mean-field expansion for the many-body initial condition problem”, Physica **159A**, 440-458 (1989)
33. Lin Chi Yong and **de Toledo Piza, A. F. R.**, “Kinetic Approach to the initial value problem in Quantum Field Theory”, Mod. Phys. Lett. **A5**, 1605-1614 (1990)
34. Salvetti, A. R. and **de Toledo Piza, A. F. R.**, “Width of M1 states in even Ca isotopes”, Rev. Bras. Fis. **20**, 347-355 (1990).
35. Mariano, A., Bauer, E., Krmpotic, F. and **de Toledo Piza, A. F. R.**, “Ground-State Correlations and Transverse Electron Scattering”, Phys. Let. **268B**, 332-338 (1991)
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37. Lin Chi Yong and **de Toledo Piza, A. F. R.**, “Kinetic Approach to the initial value problem in  $\phi^4$  field theory”, Phys. Rev. **D46**, 742-756 (1992)
38. Menezes, D. P. and **de Toledo Piza, A. F. R.**, “Comments on photonuclear reactions at intermediate energies”, Int. Jour. Mod. Phys. **E1**, 397-403 (1992)
39. Barz, L. L. and **de Toledo Piza, A. F. R.**, “Correlated Nucleon Emission in Peripheral Relativistic Heavy-Ion Collisions”, Int. Jour. Mod. Phys. **A8**, 2287-2296 (1993)

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51. Thomaz, M. T. and **de Toledo Piza, A. F. R.**, “Equivalence of classical spins and Hartree-Fock-Bogoliubov approximation of the fermionic anharmonic oscillator”, Physica **A218**, 237-244 (1995)
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  72. Carlson, B. V., Hussein, M. S. and **de Toledo Piza, A. F. R.**, “Decay Theory of Double Giant Resonances”, Phys. Letters **B431**, 249-253 (1998)
  73. de Passos, E. J. V., **de Toledo Piza, A. F. R.** and Krmpotić, F., “Self-consistent and renormalized particle-particle random phase approximation in a schematic model”, Phys. Rev. **C58**, 1841-1844 (1998)
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100. Salgueiro, A. N., **de Toledo Piza, A. F. R.**, Lemos, G. B., Drumond, R., Nemes, M. C. and Weidemller, M., “Quantum dynamics of bosons in a double-well potential: Josephson oscillations, self-trapping and ultralong tunnelling times”, *Eur. Phys. J. D***44**, 537-540 (2007).
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## Books

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- Schrödinger & Heisenberg, A Física além do senso comum, Col. Imortais da Ciência, Odysseus Editora, 225 pages, 2003.
- Uma introdução à física quântica, Editora Núcleo, 120 pages, 2013.

## Graduate Students

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| 1985 | Sara Cruz Barrios (D)  |
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| 1988 | Marina Nielssen (D)  |
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| 1991 | Lin Chi Yong (D)<br>Graciela Alicia Foglia (D)   |

- 1995 Augusto Horiguti (M)  
Paulo Laerte Natti (D)  
Paolo R. I. Tommasini (D)  
Ligia L. Barz (D)
- 1997 Andrea N. Salgueiro (M)
- 1998 Erica R. Takano Natti (D)  
Wagner Duarte Jose (D)
- 2000 Andrea N. Salgueiro (D)
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