André Rodrigo da Silva

Brazilian, 29 years old
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BIO & SKILLS

I have experiences and abilities in spectroscopy in visible, x-rays and gamma rays. Also, teaching physics and middle school level sciences . I was a public servant of São Paulo City Municipal Government as a middle school Science Teacher. I have experience with python, and R programming for Science, with interests in developing machine learning tools for stellar astrophysics and galactic archaeology.

ACADEMIC INFORMATION

- **PhD in Astronomy - GeoPlanet School (2019 - Ongoing)**
  Nicolaus Copernicus Astronomical Center - Polish Academy of Sciences (CAMK-PAN)
  Thesis Theme: The origins of r-process elements

- **Masters degree in Nuclear Technology – Applications (2018)**
  University of São Paulo (USP) – Institute of Energy and Nuclear Research (IPEN)
  Dissertation: Vertical distribution of natural radionuclides from ^{238}U and ^{232}Th decay series, and ^{40}K, and inorganic chemical characterization of soil profiles and sediment cores collected in the catchment area of Ponte Nova reservoir, São Paulo state - Brazil

- **Sciences - Physics (Licenciature) (2014)**
  Federal University of São Paulo (UNIFESP)
  Monography: On the teachings obstacles in basic astronomy education.

PROFESSIONAL/RESEARCH EXPERIENCES

- **Nicolaus Copernicus Astronomical Center - Polish Academy of Sciences (2019 - today)**
  Position: PhD student
  Main activities: The observational origins of r-process elements.

  Developed Works:
  DA SILVA, A. R.; SMILJANIC, R.; GIRIBALDI, R.E. Chemo-kinematic analysis of metal-poor stars with unsupervised machine learning. In: ADASS (Astronomical Data Analysis Software and Systems) XXX, 2020, online.

- **Institute of Energy and Nuclear Research – IPEN/USP (2014-2018)**
  Position: Master student.
  Main activities: Research and development on activity concentration of radionuclides and major and minor elements in soil and sediment samples and statistical evaluation of soil and sediment quality parameters.

  Developed Works:
  SILVA, A. R.; DAMATTO, S. R. ; LEONARDO, L. ; SOUZA, J. M. ; GONCALVES, P. N. ; MADUAR, M. F. ; MAZZILLI, B. P. Radionuclides from 238U and 232Th series and 40K determined in environmental samples collected in the catchment area of Ponte Nova reservoir, São Paulo, Brazil. In: International Conference on Nuclear Analytical Methods in the Life Sciences, 2015, Delft. 11th International Conference on Nuclear Analytical Methods in the Life Sciences, 2015.

  DAMATTO, S. R. ; LEONARDO, L. ; MADUAR, M. F. ; GONCALVES, P. N. ; **SILVA, A. R.** ; SOUZA, J. M. ; MAZZILLI, B. P. Preliminary results of 238U, 232Th and trace elements

determined in soil and sediment profiles collected in Ponte Nova Reservoir, São Paulo, Brazil. In: ENVIRA 2015 International Conference on Environmental Radioactivity, 2015, Thessaloniki. ENVIRA 2015 International Conference on Environmental Radioactivity, 2015. p. 254-254.

SILVA, A. R.; DAMATTO, S. R. ; LEONARDO, L. ; SOUZA, J. M. ; GONCALVES, P. N. ; MADUAR, M. F. ; MAZZILLI, B. P. Speaker at Eighth International Symposium on Naturally Occurring Radioactive Material – NORM VIII, from October 18th to 21st 2016, theme 116 - NATURAL RADIONUCLIDES OF THE U-238 AND TH-232 SERIES AND K-40 DETERMINED IN SOIL AND SEDIMENT FROM PONTE NOVA RESERVOIR, SÃO PAULO, BRAZIL.

- **Federal University of São Paulo - UNIFESP (2010-2014)**
  Position: Undergrad Student

  Developed Works:
  SILVA, A. R.; Levenhagen, R. S. ; KUNZEL, R. ; LEISTER, N. V. . ALS 2883: Analysis of spectroscopic features. In: Latin America Regional International Astronomical Union Meeting, 2014, Florianópolis. ALS 2883: Analysis of spectroscopic features. Ciudad de México: Revista Mexicana de Astronómia y Astrofísica, 2013. v. 44. p. 167.

- **Castro Alves High School (2015-2016)**
  Position: Physics Teacher
  Main activities: Teaching Physics to high school level, applying tests and participating in Physics Olympiads

- **Max-Planck-Gesellschaft (2014)**
  Position: Exposition Exhibitor
  Main Activities: Responsible for the module Universe of the Science Tunel Exhibition.

- **Singular High School (2017)**
  Position: Physics Teacher
  Main activities: Teaching Physics to high school level, applying tests and participating in Physics Olympiads

- **São Paulo City Government (2017 - Currently)**
  Position: Science Teacher
  Main activities: Teaching Physics, Chemistry, and Biology to middle school level, applying tests and participating in Scientific Olympiads

COMPLEMENTARY EDUCATION

- **Radiation Protection Training - IPEN (2014)**
  Instituto de Pesquisas Energéticas e Nucleares.

- **Informatics technician (2008)**

  Radial Professional High School.

- **Scientific Photography (2016)**
  Federal University of São Paulo.

- **International Masterclasses in Particle Physics (2014)**
  CERN.

AWARDS & SCHOLARSHIPS

- Civil Service Examinations for São Paulo Municipality – Science Teacher (2016)
- Civil Service Examinations for São Paulo Municipality – Physics Teacher (2016)
- Social Service for the Industries (SESI) Examinations for Physics Teacher 1st place (2015)
- National Council for Scientific and Technological Development(CNPq) Grant (2014 – 2016)
- Federal University of São Paulo Scholarship on Classes Monitorship (2013-2014)
- National Council for Scientific and Technological Development(CNPq) Grant (2012 – 2013)
- National Council for Scientific and Technological Development(CNPq) Grant (2011 – 2012)
- National Council for Scientific and Technological Development(CNPq) Grant (2010 – 2011)

LANGUAGE INFORMATION

- English: advanced (TOEFL iTP - 623/677)
- Japanese: advanced (Nihongo Nouryoku Shiken - 3 kyū - 2009)