

AIXEEN MANUEL FONTANILLA

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Professional Summary

Hardworking doctoral researcher focused on radiation detection and measurements specifically detector development and construction, with strong knowledge of Monte Carlo simulations for radiation transport. Highly effective and motivated professional with highly-ethical, meticulous and thorough approach.

Skills

- Experimental Design
- Independent Research
- Research Proposals
- Developing Project Strategy
- Project Management
- Tutoring and Mentoring
- Complex Data Interpretation
- Verbal and Written Communication
- Strategic Planning
- Time Management

Work History

RESEARCH FELLOW, 06/2021 - 12/2022

Istituto Nazionale de Fisica Nucleare Laboratori Nazionale di Frascati, Frascati, Italy

- Developed unique and innovative researches in ionizing radiation measurement applied to medicine, industry, nuclear and environmental sectors.
- Designed and carried out complex experiments for the development of sensors for neutrons and gamma rays, spectrometers, and area and personal dosimeters.
- Collaborated with experts to advance research and gain deeper understanding of the characterization of radiation fields.
- Carried out Monte Carlo simulations of the radiation interaction and transport.
- Supported and supervised MS Physics students in research programs.
- Authored/Co-authored professional scientific papers for publishing in peer-reviewed journals.

PROJECT MANAGER, 11/2020 - 05/2021

Philippine Council for Industry, Energy, and Emerging Technology Research and Development (PCIEERD), Philippines

- Evaluated project proposals under advanced materials, nanotechnology and photonics sector for funding.
- Outlined work plans, determined resources, wrote timelines and generated initial budgets.
- Identified plans and resources required to meet project goals and objectives, working closely with senior leaders.
- Accelerated progress by continually reviewing and monitoring performance, budgets and project timelines.

SCIENCE TEACHER, 07/2016 - 07/2018

Department of Education - Tarlac National High School, Philippines

- Provided courses in Physics, Research and General Sciences in Middle and High School level
- Planned, and prepared instructional materials, and activities to facilitate teaching-learning process.

- Assessed submitted class assignments, determined grades and reviewed work with struggling students to boost success chance.
- Demonstrated positive and effective classroom management skills.

Education

Ph.D.: Energy and Nuclear Science and Technology
Politecnico Di Milano – Milan, Italy, Expected in 2025

- Nuclear Measurements Laboratory
- Thesis: Development of XRF techniques for electrochemical devices

Master of Science: Applied Physics (Medical Physics)
University of Santo Tomas - Philippines, Italy, 06/2020

- Magna Cum Laude
- Department of Science and Technology Accelerated S&T Human Resources Development Program (DOST-ASTHRDP) Scholarship Recipient
- Thesis: Evaluation of the Neutron Spectra in a Linear Accelerator Facility using a Modified Bonner Sphere Spectrometer

Bachelor of Science: Physics
University of The Philippines Baguio - Philippines, 06/2016

- Cum laude
- Department of Science and Technology Junior Level Science Scholarship Recipient
- Thesis: Chemically deposited Zinc Oxide/Graphene Oxide Nanocomposite and its Potential as a Supercapacitor

Publications

- Calamida, A., [Fontanilla, A.](#), Russo, L. *et al.* Effects of soil moisture variations on the neutron spectra measured above ground: feasibility of a soil moisture monitor system based on neutron moderating cylinders. *Eur. Phys. J. Plus* **139**, 212 (2024).
- Calamida, A., Bedogni, R., [Fontanilla, A.](#) *et al.* DOIN: a novel electronic personal dosimeter for neutrons. *Eur. Phys. J. Plus* **138**, 462 (2023).
- Bedogni, R., [Fontanilla, A.](#), Calamida, A. *et al.* Cosmic neutrons at ground: new spectral measurements at 3480 m a.s.l. and benchmarking of the cascade component as a function of the elevation at around 45° geomagnetic latitude. *Eur. Phys. J. Plus* **138**, 421 (2023).
- [Fontanilla, A.](#), Calamida, A., Campoy, A.I.C. *et al.* Extended range Bonner sphere spectrometer for high-elevation neutron measurements. *Eur. Phys. J. Plus* **137**, 1315 (2022).
- Bedogni, R., Calamida, A., Castro Campoy, A.I., [Fontanilla, A.](#) *et al.* On neutron detection with silicon carbide and its resistance to large accumulated fluence. *Eur. Phys. J. Plus* **137**, 1358 (2022).
- Bedogni, R., Calamida, A., [Fontanilla, A.](#) *et al.* The NCT-WES directional neutron spectrometer: validation of the response with monoenergetic neutron fields. *Eur. Phys. J. Plus* **138**, 270 (2023).
- Bedogni, R., Calamida, A., [Fontanilla, A.](#) *et al.* Measuring the near-target neutron field of a D-D fusion facility with the novel NCT-WES spectrometer. *Eur. Phys. J. Plus* **137**, 773 (2022).
- [A.M. Fontanilla](#), A. Astronomo, C. Silvestre, C. Balderas, D.J. Manlapaz, R.C. Caballar, and R. Bedogni (2021). “Neutron Spectrometry with an ¹¹⁵In-based multi-shell neutron spectrometer in a medical accelerator facility”. *Nuclear Inst. And Methods in Physics Research*, A vol. 993.
- R.T. Ngaloy, [A.M. Fontanilla](#), M.R. Soriano, C.S. Pascua, Y.M. Matsushita, and I.J. Agulo (2019). “Highly Efficient Photocatalysis by Zinc Oxide-Reduced Graphene Oxide (ZnO-rGO) Composite Synthesized via One-Pot Room-Temperature Chemical Deposition Method” *Journal of Nanotechnology*, vol. 2019, Article ID 1895043.
- I.J. Agulo, [A.M. Fontanilla](#), M.R. Soriano, Y. Matsushita, C.S. Pascua (2017). “Highly efficient photocatalysis by partially reduced graphene oxide (prGO) – zinc oxide composite synthesized via one-pot room temperature chemical deposition method. *Graphene* 2017