BEGONA ARANGUREN

begonaaranguren@tamu.edu | LinkedIn
(956) 635-1515

EDUCATION

Texas A&M University — Doctor of Philosophy, Nuclear Engineering — Spring 2022
GPA: 4.0
Graduate Certificate in Nuclear Security

Texas A&M University — Bachelor of Science, Nuclear Engineering — May 2018
Minor: Radiological Health Engineering
GPA: 3.578

EXPERIENCE

Texas A&M University – *Graduate Research Assistant;* College Station, TX — August 2018 – Present
- Contributed to preliminary design of the Learning by Immersive Tools for Education (LITE) program aimed to develop interactive modules for students at various knowledge levels for the Nuclear Engineering & Science Center (NESC) TRIGA reactor and support systems
- Developed experimental unit for Nuclear Thermionic Avalanche Cell (NTAC) energy conversion system for generating conduction-band electrons in an avalanche cell inside a vacuum chamber, by irradiating the experiment with photons
- Modeled experimental unit design in Geant4 for validation of reaction rates to be recorded in experimental processes
- Utilized MCNP for modeling NESC TRIGA reactor dry cell with experimental unit for estimation of dose rate

Idaho National Laboratory – *Nuclear Systems Design and Analysis Intern;* Idaho Falls, ID — Jun. 2020 – Aug. 2020
- Conducted MCNP studies on feasibility of utilizing Transient Reactor Test (TREAT) facility with TREAT Upgrade (TU) program fuel assemblies containing higher uranium concentrations
- Modeled TREAT reactor core design in several configurations with TU fuel with objectives of hardening the neutron spectrum and increasing energy deposition
- Considered TU buffer and converter assemblies along with different assembly configurations to determine the value and ability of considering incorporating TU program fuel assemblies in the TREAT facility

Becara Sociedad Limitada – *Marketing Intern;* Mexico City, MX — May 2018 – Jul. 2018
- Performed a market analysis study detailing the attractiveness and dynamics of potential storefronts and factories in Mexico
- Collaborated with the business intelligence department aimed toward making improvements to the business model and foundation

Texas A&M Nuclear Engineering & Science Center – *Research Assistant;* College Station, TX — Jun. 2016 – Dec. 2017
- Assisted with calibration of High-Purity Germanium (HPGe) detectors for experimental use at NESC
- Prepared small samples to be pneumatically inserted into the TRIGA reactor core for various experiments

ACADEMIC PROJECTS AND PAPERS

Senior Capstone Design — Apr. 2018
Thorium Fuel Design in Westinghouse AP1000

LEADERSHIP EXPERIENCE AND ACTIVITES

Institute of Nuclear Materials Management (INMM) Texas A&M Chapter President — Fall 2021 - Present
Texas A&M Women's Golf Student Athlete — Fall 2013 – Spring 2018
Alpha Nu Sigma Honor Society Member — Spring 2017
Tau Sigma National Honor Society Member — Fall 2016

HONORS

Nuclear Engineering Graduate Student of the Year — Sept. 2021
Student Athlete Athletic Scholarship Recipient — Fall 2013 – Spring 2017
Keys to Aggieland Scholarship Recipient — Fall 2015 – Spring 2016

ADDITIONAL INFORMATION

Advanced Computer Skills: MCNP, RadResponder, TurboFRMAC, Microsoft Excel, Office, PowerPoint
Basic Computer Skills: Geant4, FreeWRL, MOOSE, Python, ParaView, Linux/Unix, CASMO, SIMULATE
Certificates: FEMA Certificates for IS-100, IS-200, IS-700
Languages: Fluent in English, Spanish, Working Knowledge in French
Work Eligibility: Eligible to work in the U.S. with no restrictions