Ayla Paloma Sánchez, PhD

SanchAyla@Gmail.com
ASanchezMath.com

Programming | Technical Writing | Geometry | Statistics | Data Analysis

Experience

MathWorks, Natick, Massachusetts   July 2019 – Present
Engineering Technical Writer II, Statistics and Machine Learning Toolbox

- Refactored and expanded documentation for probability distributions functions in XML.

- Coded examples in MATLAB to demonstrate toolbox functionality for users.

- Coordinated with development team to enhance usability of machine learning apps.

Wheaton College, Norton, Massachusetts   July 2017 – June 2019
Visiting Assistant Professor of Mathematics

- Taught courses in Calculus I, Introductory Statistics, Linear Algebra, Differential Equations, and Differential Geometry, generating all primary and supplementary course materials used.

- Created programs for visualization and computation utilized in class with detailed, commented source code and comprehensive documentation given to students for their own academic use.

- Debugged and troubleshot student code in C++, Mathematica, MATLAB, and Python.

Tufts University, Medford, Massachusetts   August 2013 – June 2017
Instructor of Record, Teaching Assistant, Graduate Researcher

- Taught courses in Introductory Statistics, Calculus III, and Pre-College SAT Math Prep.

- Debugged and troubleshot student code in R.

- Conducted independent and collaborative research in geometric analysis, geometric group theory, and random methods in geometry, resulting in: a dissertation, three joint publications with different research groups, and multiple presentations at various conferences and seminars.

- Modeled objects of research interest for use in publications, presentations, and 3D printing.

Education

Tufts University, Medford, Massachusetts
Doctor of Philosophy, Mathematics   May 2017
Advisor: Moon Duchin
Thesis title: A Theory of sub-Finsler Surface Area in the Heisenberg Group

University of Miami, Coral Gables, Florida
Master of Science, Mathematics   May 2013
Bachelor of Science, Mathematics with a minor in Economics   May 2011

Selected Awards and Honors

Open Education Resources Grant, Wheaton College   2018

Distinguished Teaching Prize, Tufts University Department of Mathematics   2016

Dean's Science Fellowship, Tufts University Graduate School of Arts and Sciences   2013

Bright Futures Scholarship, Florida Department of Education   2009

Programming Languages

C++   LaTeX   Mathematica   MATLAB   Python   R   SageMath   XML