CARLOS SALINAS

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EDUCATION

Purdue University, West Lafayette, IN   Aug. 2020
Master of Science in Mathematics   *GPA: 3.73/4.0*

University of Texas–Pan American, Edinburg, TX   May 2014
Bachelor of Science in Mathematics   *GPA: 3.86/4.0*

TECHNICAL SKILLS

Programming Languages: Python, Scheme, C++, Java, JavaScript, Matlab/Octave, SQL
AI Libraries/Frameworks: NumPy, Pandas, Scikit-Learn, Keras, Matplotlib
Developer Tools: Vim, Emacs, Git, Jupyter, GCC, Valgrind, Gradle
Other Software: Linux, LaTeX, Kramdown, Markdown, Jekyll, Bash, Awk
Natural Languages: English—native, Spanish—native, Russian—fluent, Persian—conversant, French—proficient

WORK EXPERIENCE

Department of Mathematics, Purdue University   West Lafayette, IN
Research Assistant/Teaching Assistant   *Aug. 2014 – May 2020*

- Led recitation for undergraduate courses, such as Calculus 1, 2, 3, Differential Equations, and Linear Algebra.
- Created course-related content for students, such as notes, quiz and midterm solutions, and performance statistics.
- Wrote code to study the finite quotients of triangle and nilpotent groups.

School of Mathematical and Statistical Sciences, University of Texas–Pan American   Edinburg, TX
Undergraduate Research Assistant/System Administrator   *Sep. 2013 – May 2014*

- Managed the Experimental Algebra and Geometry Lab's Linux cluster, which included administering users, installing software, running services, and configuring the lab's GPU.
- Wrote an algorithm to compute 2-special word families up to word-length 30 which leverages the existence of trace formulas, and dependence on lower degree polynomials together with memoization to significantly reduce the search space. Published the sequence on the On-line Encyclopedia of Integer Sequences A237623.

Department of Materials Science and Engineering, Massachusetts Institute of Technology   Cambridge, MA
Undergraduate Research Assistant   *Jun. 2010 – Aug. 2010*

- Tested heat-treated Ti-Ta alloys of varying compositions for shape-memory and superelastic properties by means of hot oil recovery test. Took metallographs of samples to study the microstructure. Performed a variety of mechanical tests, such as tensile test, and fatigue tests, and recorded the results.

OUTREACH EXPERIENCE

College of Agriculture, Purdue University   West Lafayette, IN
Academic Boot Camp for Purdue's Minority Engineering Program   *Jun. 2018 – Aug. 2018*

- Simulated a first semester Calculus experience for incoming undergraduate students in the MEP. Prepared and graded student homework and midterms. Assigned final letter grades and gave course recommendations.

School of Mathematical and Statistical Sciences, University of Texas–Pan American   Edinburg, TX
Outreach Assistant for the Experimental Algebra & Geometry Lab   *Sep. 2012 – May 2014*

- Introduced K12 students in the Texas RGV to abstract mathematics, such as modular arithmetic, complex numbers, and spherical geometry through kinesthetic activities.

WRITING & PROJECTS

cdrlos.github.io   A small portfolio hosted on GitHub Pages. Currently under construction.

math.purdue.edu/~salinac   University webpage. Mostly contains teaching material.