# Carlos Salinas

Mobile: (765) 337-9606
Email: cemiliosal@gmail.com
GitHub: cdrlos
Linkedin: carlos-salinas-64588b160

## Skills

**Programming Languages**: Python, C++, Clojure, JavaScript, Java, R, Matlab
**Developer Tools**: Vim, Emacs, Jupyter, Git, PostgreSQL, Leiningen, Gradle, Valgrind
**Other Software**: Linux, LaTeX, Markdown, Jekyll, Bash
**Natural Languages**: English—native, Spanish—native, Russian—fluent, French—proficient

## 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 program to compute 2-special word families up to word-length 30 which leveraged the existence of trace formulas, dependence on lower order polynomials together with memoization to reduce the time complexity. 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 of mechanical tests, such as tensile test, and fatigue tests, and recorded the results.

## 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*

## 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.