

Samuel Cavazos

717 N Tower Rd. Alamo, TX 78516

(956).787.4997

sjcavazos2@broncs.utpa.edu

Objective

Seeking internship/research opportunity in the field of Mathematics. My goal is to expand my analytic and critical thinking skills, and obtain a stronger teaching background.

Education

The University of Texas-Pan American, Edinburg Texas

BS in Mathematics with Pure Concentration

May 2013

GPA 4.0

Activities/Honors

UTPA Dean's List	September 2010-Present
National Society of Collegiate Scholars, Member	January 2011-Present
LSAMP Scholar	February 2011-Present
Pharr Rotary Student of the Month	October 2009
Alamo Palms Scholarship	May 2010
Senator Eddie Lucio Scholarship	May 2010
Wall-Mart Endowed UTPA Scholarship	February 2011
James W. Petticrew Scholarship	February 2011
SACNAS Travel Scholarship	June 2011
URI Recipient	January 2012-June 2012
Sidney S. Draeger Scholarship	August 2012
Davidson Family Charitable Scholarship	August 2012
HESTEC 1st place in Mathematics Poster Comp.	September 2012

Work Experience

Science/Math Tutor February 2009-May 2009

Pharr San Juan Independent School District, Pharr Texas

- Worked with middle and high school students to formulate, carry out, and present individual projects for their school, regional, and state science fairs. Additionally, I assisted in preparing the students for the Texas Mandated Examination.

Research Intern January 2010-May 2010

Mathematics Department, UTPA, Edinburg Texas

- Studied the effect of atherosclerosis on arteries using mathematical analysis.
- Collected data from the analysis and analyzed and produced graphics and tables.

EAGL Lab Manager January 2010-Present

Mathematics Department, UTPA, Edinburg Texas

- In charge of maintaining computers up to date, and resolving any technical difficulties on Linux systems. Also assisted in arranging and promoting Secret Student Seminars.

Research Intern

January 2010-Present

Mathematics Department, UTPA, Edinburg Texas

- Studied a special mathematical object known as a character variety. Explicitly, I studied representations of a free group F_r of rank r into the special linear group $SL_2(\mathbb{Z}_p)$, p prime, and partitioned the set into conjugate invariant strata. We then counted the number of representations in each strata to obtain the number of orbit spaces.
- Duties included proving mathematical theorems for the research project and writing up the results in preparation for publication.

Publications

- *On Arterial Blood Flow in the Presence of an Overlapping Stenosis*, 2011, Journal of Mathematical and Computer Modelling, Vol. 54, Pg. 2999-3006.

Selected Presentations

- Arithmetic of Free Group Character Varieties* September 2012
HESTEC
Edinburg, TX
- Arithmetic of Free Group Character Varieties* September 2012
LSAMP Conference
El Paso, TX
- Arithmetic of Free Group Character Varieties* May 2012
University of Texas Brownsville
Brownsville, Texas
- Arithmetic of Free Group Character Varieties* May 2012
University of Texas-Pan American, Secret Student Seminar
Edinburg, Texas
- Counting Representations of Free Groups* November 2011
University of Texas-Pan American, Secret Student Seminar
Edinburg, Texas
- Counting Representations of Free Groups* October 2011
SACNAS 2011 National Conference
San Jose, California
- Counting Representations of Free Groups* September 2011
HESTEC
Edinburg, TX
- Counting Representations of Free Groups* September 2011
LSAMP Conference
Arlington, TX
- Counting Representations of Free Groups* August 2011
Young Mathematicians Conference
Columbus, Ohio
- Counting Representations of Free Groups* April 2011
University of Texas-Pan American, Secret Student Seminar
Edinburg, Texas
- Blood Flow through an Artery with $\overset{A}{S}$ tenosis* May 2010
34th Annual Texas Differential Equations Conference
Edinburg, Texas