

# CIVIL ENGINEERING SCHOLARS



*Explore*

*Experiment*

*Excel*

## A RECENT SUCCESS

In Fall 2019, the scholar program kicked off with three students enrolled in the program each starting on their own research project. All three scholars were paired up with a CE professor at SF State to help guide them in research.



**Top picture** – scholars first official meeting. **Bottom picture** – scholars presented their current status of their research to the Director of Engineering Department and Head of College of Science and Engineering.



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## WHAT IS AN SF STATE SCHOLAR?

A San Francisco State University Scholar is an undergraduate student who has maintained an excellent academic record of a 3.0 GPA or higher. The students are enrolled in a 4+1 program to accelerate their continuation of school to pursue a Master of Science degree in Structural/Seismic Hazardous Design. These scholars also begin their graduate research early giving them a jumpstart to learning new programs and teaching them the skills they might use in their future careers.

## WHAT BENEFITS ARE OFFERED TO THE STUDENTS ENROLLED IN THE PROGRAM?

The main benefit of being in the scholar program is the fast-track system that allows the student to finish their post baccalaureate a year after receiving a bachelor's degree as opposed to 2+ years. The student enrolled in the program can do research in any field related to civil engineering and will be mentored by a Civil Engineering professor at SFSU who will help guide the student on their research journey. Additionally, the ability to start research early lets students push their limits in critical thinking and decision-making skills, while also exploring areas of personal interest within Civil Engineering.

## WHAT ARE THE QUALIFICATIONS NEEDED FOR THE PROGRAM?

The student must be at a Junior or Senior standing at San Francisco State University. Their overall grade point average must be a 3.0 or higher; alternatively, it can be averaged from the past six semesters. The last qualification is to pass the structural analysis class with a B or higher.

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*The Student-  
explore,  
with results of their*

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*Researcher can  
experiment, and excel  
own.*

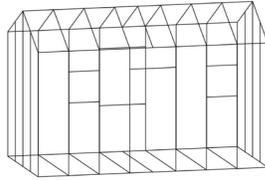
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## FALL 2019 SCHOLARS + THEIR RESEARCH

**Arturo Dominguez**

Advisor: Jenna Wong

### ***Seismic Performance of Tiny homes.***

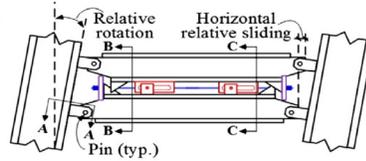


“The project consists to evaluate the performance of 2 models: First one is a replica of Oakland’s Tuff shed and the second one is built upon the International Residential Code.”

**Cielo Martinez**

Advisor: Cheng Chen

### ***Finite element modeling of self-centering coupled beam.***

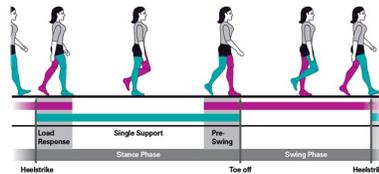


“In this research project, a coupled beam moment frame with posttension elements will be developed to analyze the self-centering behavior in effort to enhance public safety and building sustainability.”

**Charlie Vidal**

Advisor: Zhaoshuo Jiang

### ***Inferring Gait Parameters from Floor Vibrations.***



“This project consists of measuring floor vibrations to predict a person’s walking patten (gait). Being able to predict this allows for many health applications such as post-surgery monitoring.”



1: Jan 16 & 17 – SF Scholar Arturo Dominguez at the PEER (Pacific Earthquake Engineering Research) in Berkeley

## SPRING 2020 SCHOLARS



**Loren Abrea**

Hello, my name is Loren Rae Abrea, but most people simply call me “Loren”. I am currently working on my Bachelor’s degree in Civil Engineering, and intend to focus on Structural Engineering after I graduate. My interest in engineering is deeply rooted in my affinity to the mathematics and sciences, as well as my innate curiosity towards the mechanics of the world around me. Additionally, my interest in structural engineering was born by my appreciation for architecture as well as my hobby of designing and constructing models of buildings.

My name is Alan Garcia, and I am a first-generation Mexican American student that is attending SFSU. One of the goals in my life is to graduate college. I do this not only for myself but for my parents because they have sacrificed so much for me to be where I am today. I realized that I wanted to be an engineer since high school learning physics and also building projects such as rockets, solar powered cars, fighting robots, etc. I knew then and there, that that’s what I wanted to do in life.



**Alan Garcia**



**Brandon Romero**

Hello my name is Brandon Romero. I have a passion for making an imprint by helping structure and design products that are useful for my community. I have always had a love for problem solving; therefore, I have been extremely hands on with mathematics. I have always had a solid foundation and supportive family structure. My family helps keep me focused and motivates me to be the best I can be. The reason I believe I am successful in anything I do is that failure is not an option for me.

My name is Arten Chan, born and raised in San Francisco. I graduated from Mills High School the year 2017 and decided to pursue my true passion for engineering. I especially love learning how each story of the house is built and the formation of the building skyline simply amazes me. As my third year at San Francisco State University pursuing a Civil Engineering, I hopefully would be able to participate and design a building to contribute to the breathtaking San Francisco Downtown skyline.



**Arten Chan**



**Johnny Chen**

My name is Johnny G. Chen; I transferred to San Francisco State University from City College of San Francisco in fall 2017. My path to being an engineer started from high school when my friend and I to join robotics club to assemble simple machines to pick up objects via remote control. After graduation I promptly swapped to Civil Engineering as I found that it is more interesting to build structures like bridges or analyze modern wonders. I believe the joining the scholars program and focusing solely on Structural I may one day have a hand in designing a structure that can stand the tests of time.

My name is Jenika McClay and I am a San Francisco native, born and raised right next to the city. I am excited to continue my life here in San Francisco to finish my Master's, where my roots have been planted and flourished. Other than school, I teach engineering to kids ranging from kindergarten to 5th grade, as well as other STEM based lessons. I really enjoy my work because I am utilizing my knowledge and exposing the next generation to the STEM field in a fun and fulfilling way.



**Jenika McClay**



**Maria Salvador**

My name is Maria Salvador and I am originally from the Philippines. As an aspiring civil engineering student, my goal is to master my craft and inspire future generations of women engineers. Growing up, I have always had a great appreciation for different structures and how they contribute to our everyday lives. Ultimately, I want to find ways to innovate the process of design, construct, and maintenance of various structures to transition it into something sustainable. Like many engineers, I want the product of my hard work to stand long after I'm gone.

## **CURRENT NEWS!**

Starting Spring 2020, the seven students above will officially be admitted to the scholar program. This next class of scholars will have a chance to explore their own research topics and find feasible outcomes or solutions both individually and as a group. Along with the other members and the program faculty, the 'veteran' scholars will be available to assist the new scholars with any questions or suggestions that they have relating to the program, their research, or any ongoing challenges. If you are not in the program and are interested in learning more, we are always open to questions about anything you need. Contact information is below, and we will see you in the next newsletter!

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*Issue edited by – Arturo Dominguez, Cielo Martinez and Charlie Vidal*

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## **FOR MORE INFORMATION?**

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