



**CALIFORNIA STATE SCIENCE FAIR
2017 PROJECT SUMMARY**

Name(s) Aren M. Melkonian	Project Number S0315
Project Title A Research Study: Forming an Effective Countermeasure against Tsunamis	
Abstract Objectives/Goals Tsunamis have been deadly forces for thousands of years, and with new and advanced nuclear power plants, they have been fueled causing devastating aftermaths. My objective was to build an efficient and reliable method to assist in redirecting the energy of tsunamis and high tidal waves. Based on my research I assumed by creating a concave seawall, that is located 10.668 meters deep and 3 kilometers outland it would more effectively stop a tsunami. Methods/Materials To build my concave seawall, I needed several materials, five varying sizes of plexiglass, acrylic cement, access to a 3D printer able to print larger than 25.4 cm by 25.4 cm by 25.4 cm, access to CNC laser cutter, two large sheets of steel, 3 adjustable rope locks, 5 pulleys and 7 carabiners. My first step would be the assembly of all my parts. After assembling the pulley system, I would place the pulley system into the tank, then carefully fill the tank to approximately to 1' 8" height. The last step is to measure your waves force and height. Results After doing all three tests I was successful in my result with an average decrease of the waves height about 56%. Conclusions/Discussion My hypothesis was proven correct. Although further testing must be done, and new methods must be analyzed, this experiment has opened a new route to stopping tsunamis	
Summary Statement Finding a new and effective counter-measure against tsunami, while considering feasibility issues	
Help Received Dr. Armen Baronien , Mr. John Shiradjian, Professor Claire Atsinkon	