ANTENEH ENGINEERING

NEW EFFICIENT WAVE POWER GENERATOR INVENTION

This project is about building a new kind of mechanism that harnesses the wave energy on shores with less cost and complexity in an efficient way.

This is done by using the linear movement of the shore's water wave to create an oscillating mechanism that can be converted in to rotating shaft which will be connected to an electric generator to produce usable power. Meaning, the oceans shore always have wave traveling in to the land with constant interval periods. The water comes in to the land at high speed with some specific volume and goes back which is a linear motion but not a constant one. This interval force is challenging to generate constant rotating shaft because Wave power is typically produced by floating turbine platforms. For that reason this design uses oscillation mechanism to cancel the time interval where the wave energy is not present. Meaning when the wave comes near the land it will be collected by a V – structure to be directed in to a chamber which contains a rotor blade turbines. As the fast moving shore wave comes in contact with the blades, it crates angular movement of the rotor up to 90 degrees. As the water waves goes back all the water entered in to the V – structure will go out forcing the blades of the turbine move back in to their position travelling back in to the angular rotation because of basic gravity rule. This will force the rotor to oscillate symmetric to the position where the blades are when they are being pushed by the wave. This movement will cancel the no force time of the wave energy combining wave energy and oscillation/ gravity to supply a constant force. This oscillating mechanism will be connected to a mechanism that converts oscillation in to shaft rotation which will be connected to electric generator.

Note that the conversation of the oscillation in to rotating shaft design will be submitted on request but it is simple.

The following drawings show the basic structure and operating mechanism of the system.

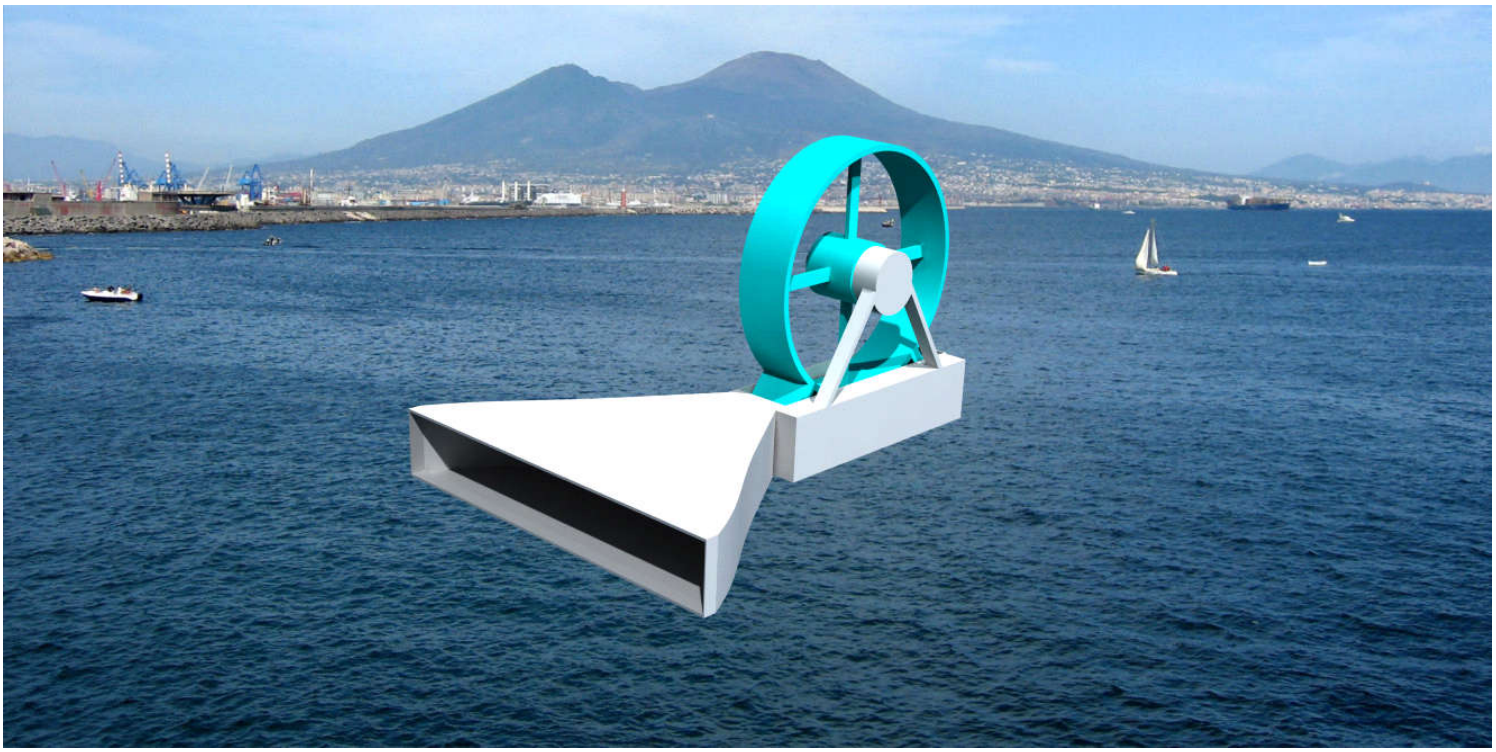

Figure 1 – basic design of the mechanism

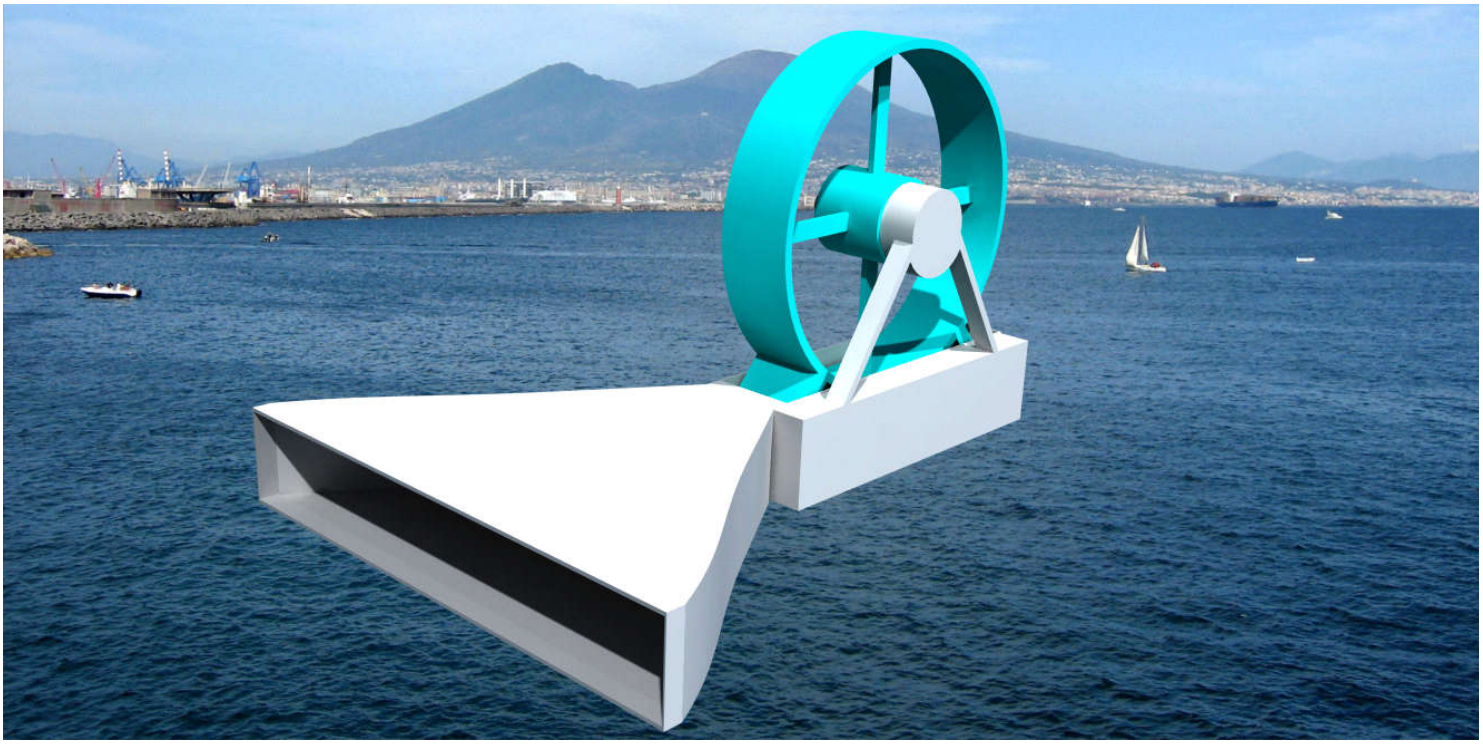

Figure 2 – basic design of the mechanism

Figure 3 – basic design of the mechanism

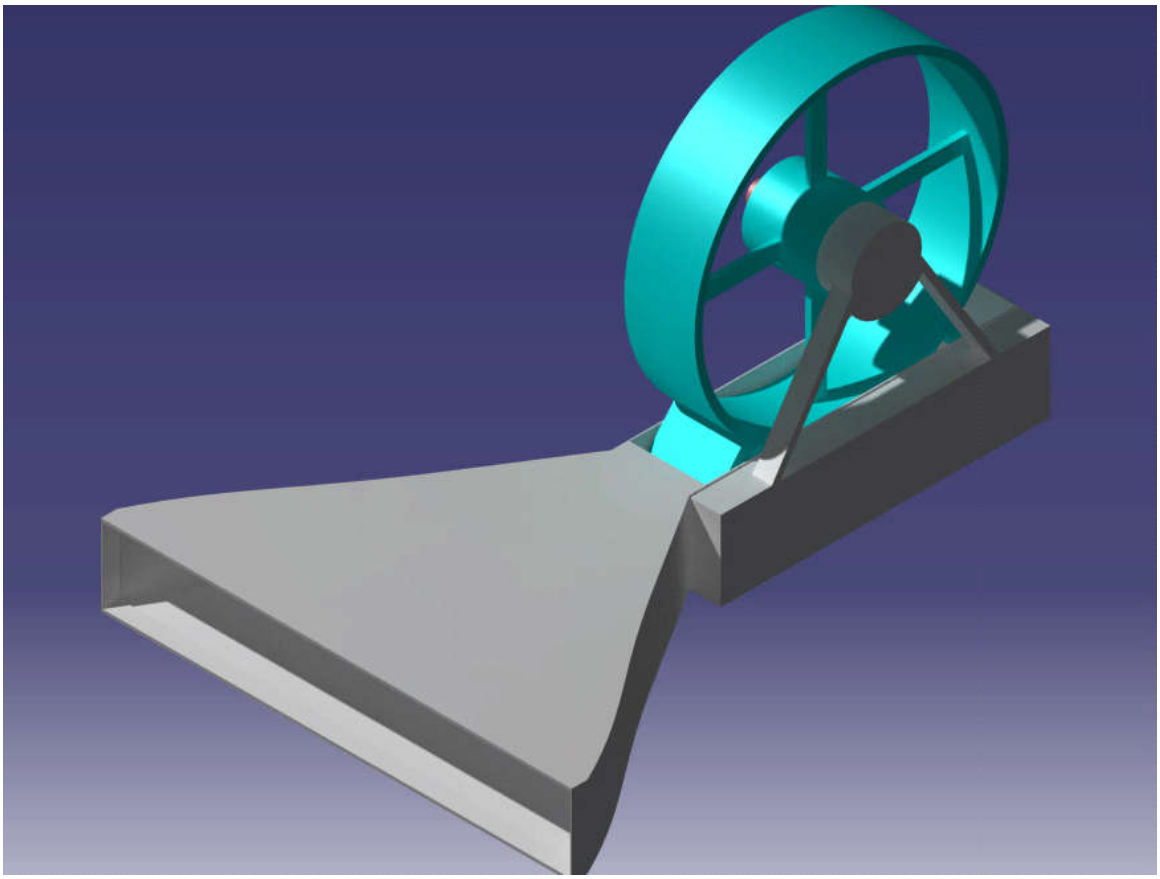

Figure 4 – basic design of the mechanism

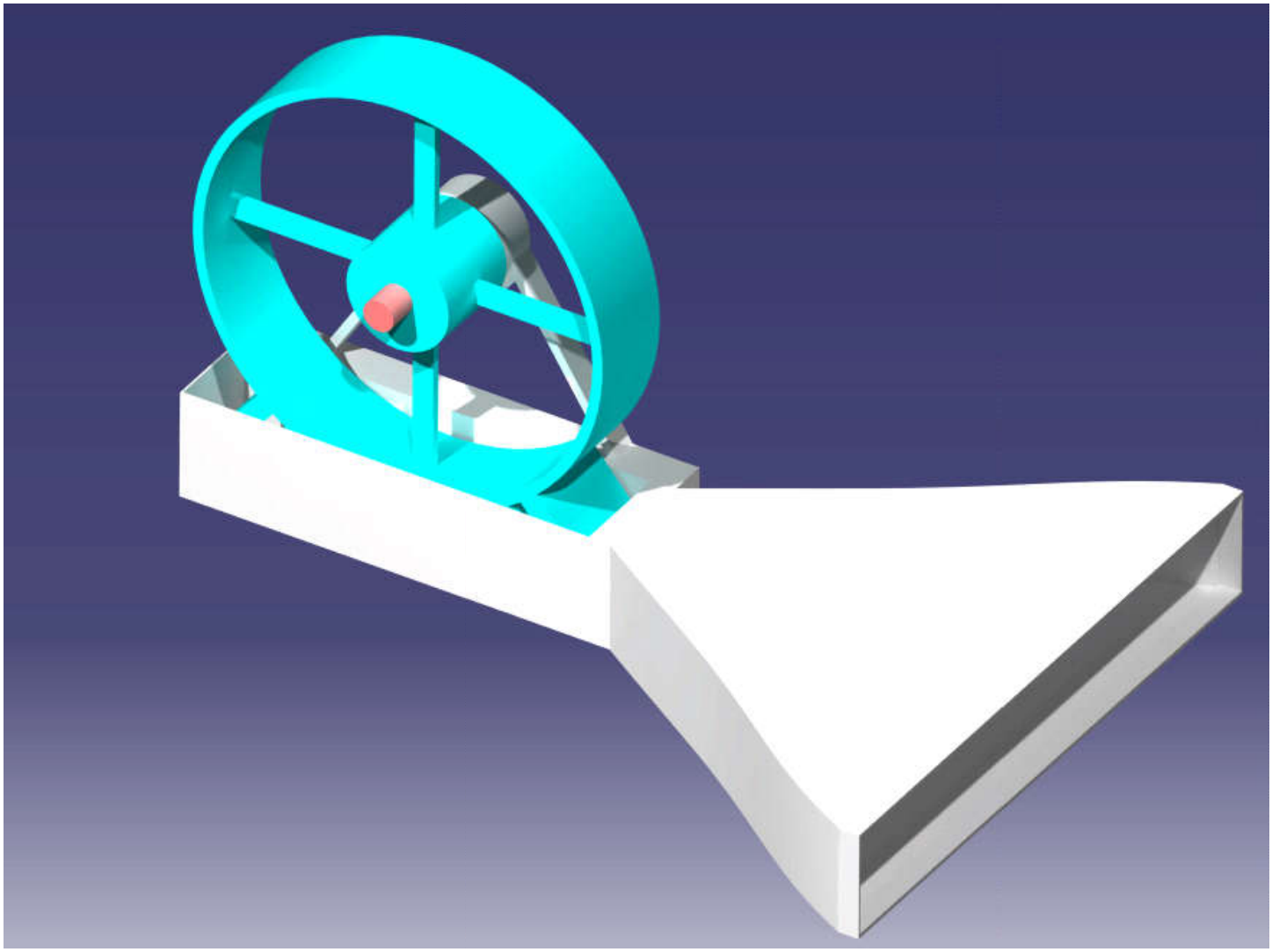

Figure 5 – basic design of the mechanism

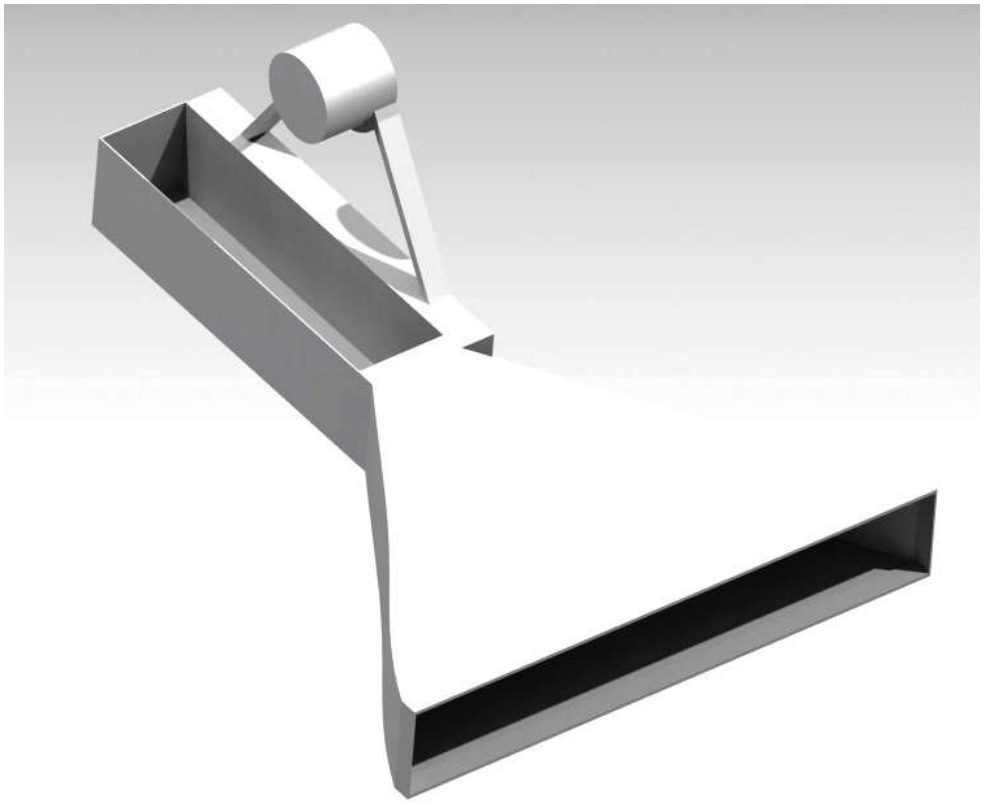

Figure 6 – basic design of the support structure

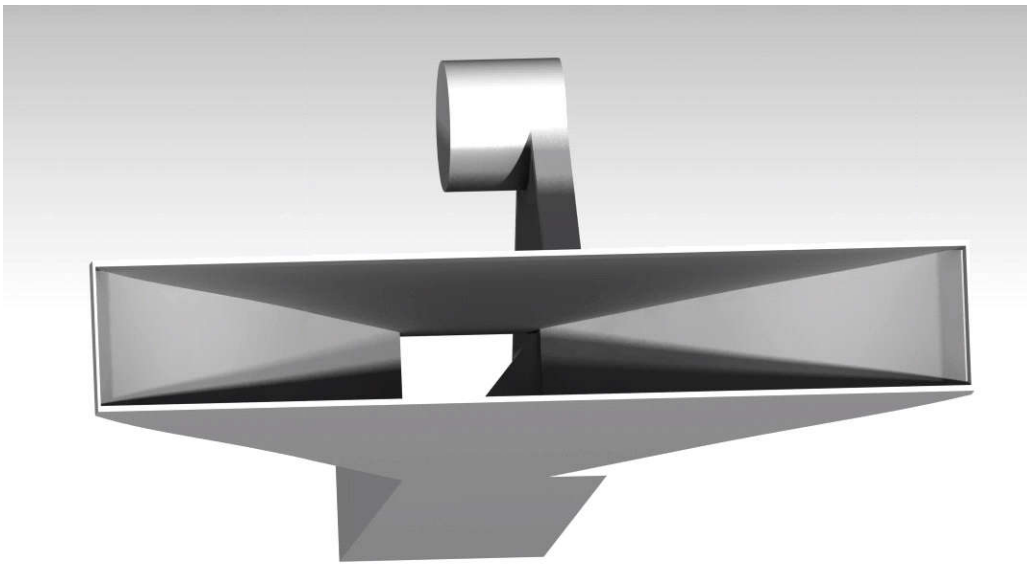

Figure 7 – basic design of the support structure

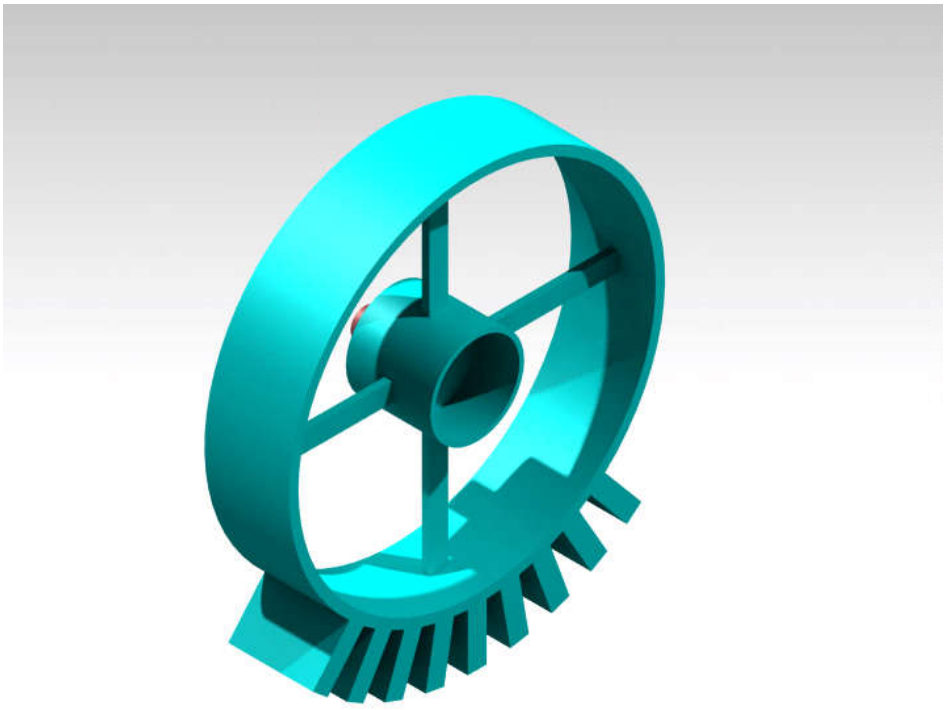

Figure 8 – basic design of the oscillator

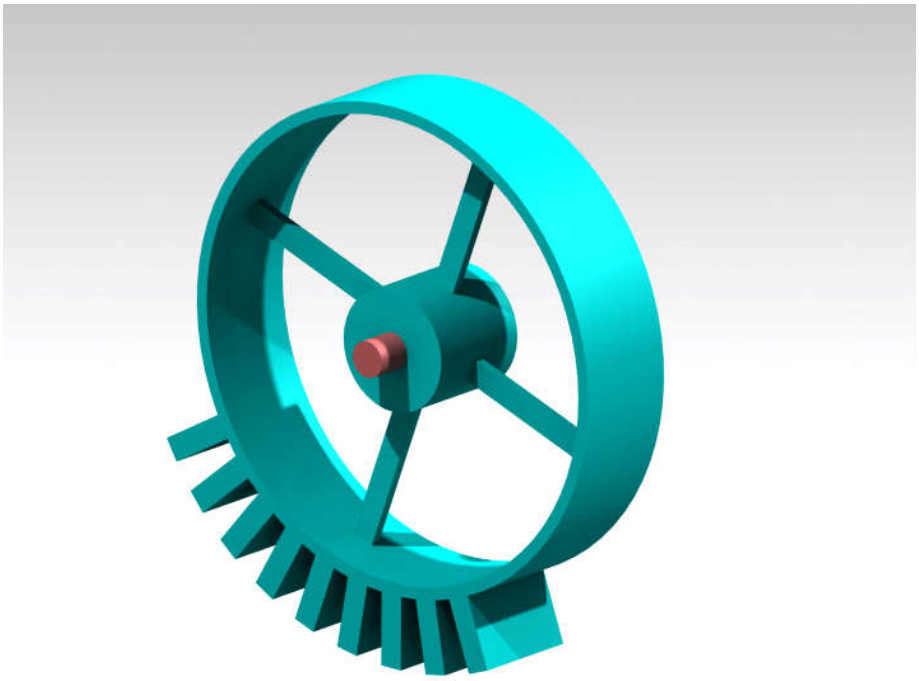

Figure 9 – basic design of the oscillator

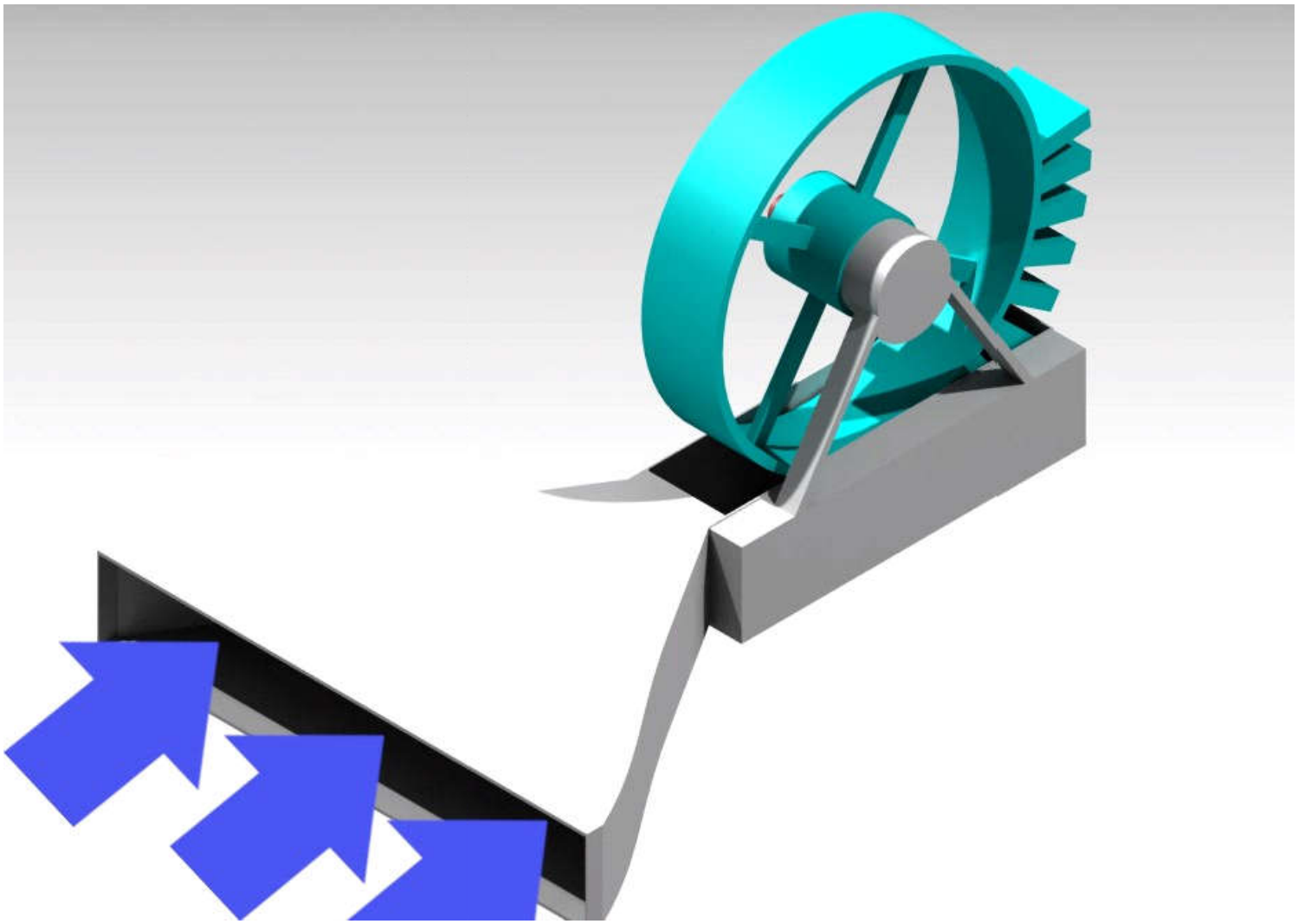

Figure 10 – movement of the oscillator when the wave comes in

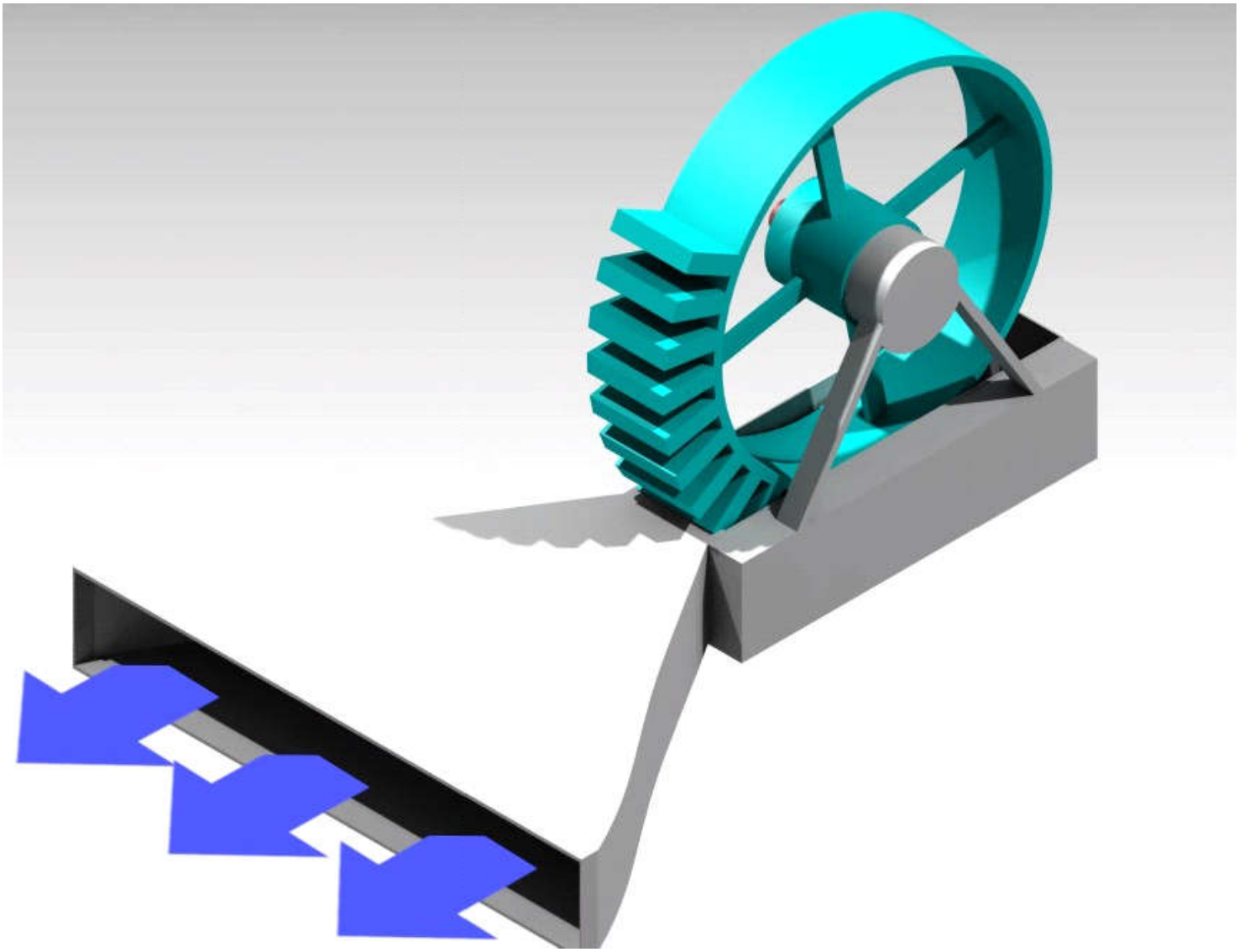

Figure 11 – movement of the oscillator when the wave comes out back

Inventor profile

To say few words about my background, I have dedicated my life for invention and research because not only I have big dreams but also it is my only way out of poverty. We all have a talent we know or did not find out yet. Mine happens to be inventing. I discovered this talent of mine when I was in second year student during my university life. Starting from that point everything seemed not important except creating new ideas. So, until now I have invented more than 70 inventions.

You can find some of my inventions via
https://contest.techbriefs.com/profile?user=89682
https://www.herox.com/crowdsourcing-community/antenehgashaw-123126
https://desall.com/User/AntenehGashaw/Portfolio
https://challenges.openideo.com/profiles/antenh.g/contributions#recent-contributions

My latest big international honors are

- Winner of Mechanical maker challenge by NASA/ JPL- 2019 with my design invention “Mechanical eye”
- Finalist for the TIC AMERICAS 2020 competition with my project “Caribbean Sargassum Problem” project
- Finalist in TKF plastic innovation challenge 2019 with my invention “Smart green washer”
- Top 100 inventions of 2019 by create the future contest by tech briefs with my project “Cone solar panel”
- Top 10 winner of TIA challenge 2019 with my multiple unique solutions and invention
- Finalist in Enel challenge on MV & LV distribution challenge 2019 with my invention “Turbine for avoiding birds in MV & LV distribution lines”

I believe that I have made many contributions to science so far and just to mention some,

- In the recent Hawaii natural problem challenge which is the saving the Ohi'a challenge (https://conservationx.com/challenge/invasives/ohia), I submitted more than 30 possible solution which you can see via https://conservationx.com/challenge/invasives/ohia/projects
- I have developed more that 20 inventions for solution, management and prevention of the Coronavirus (COVID-19) which you can see via https://solve.mit.edu/challenges/health-security-pandemics/solutions/22229 or https://contest.techbriefs.com/profile?user=89682
- I have designed a Green- technology that will solve the micro fiber problem in the oceans which you can see via https://2019.spaceappschallenge.org/challenges/earths-oceans/trash-cleanup/teams/the-saviors/project
- I have designed a Green- technology that will solve the micro Plastic problem in the oceans which you can see via https://contest.techbriefs.com/2019/entries/medical/9465
- I have many contribution for agriculture industry with my multiple project like https://challenges.openideo.com/challenge/food-system-vision-prize/open-submission/isolation-farming
- I have contributed to Teraforming Mars with my project Melting mars polar ice cap https://www.globalinnovationexchange.org/innovation/melting-mars-polar-ice-cap
- I have contributed on reduction of plastics in packaging in beverage industries with my project bottle belt https://contest.techbriefs.com/2019/entries/sustainable-technologies/9466

- I have invented a mechanism that will solve the hurricane crisis of the USA for good and I am looking for a department to submit my white paper which you can see via https://www.herox.com/ideas/128-solving-us-hurricane and few of my honorary certificates are shown below.

Figure 27 – NASA / JPL winners' certificate

Certificate of Achievement

This Certificate of Achievement Presented to

Anteneh Gashaw

Recognizing your submission as a Top 100 Entry in the
Create the Future 2019 Design Contest

Cone Solar Panel

Presented
November 2019

Joseph T. Pramberger
President, Tech Briefs Media Group

Figure 28 - Certificate of achievement for top 100 inventions of 2019

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TIC AMERICAS 2020 Talent and Innovation Competition of the Americas · startup challenge · eco challenge11 Sustainability Awards · Caribbean 2020 Innovation Competition

2020

TIC AMERICAS

Talent and Innovation Competition of the Americas

CERTIFICATE OF PARTICIPATION

Awarded to:

Caribbean Sargassum Problem

For your participation as a Finalist of the Caribbean Innovation Competition during the Talent and Innovation Competition of the Americas (TIC Americas 2020).

Washington, DC, United States of America, July 2, 2020.

Luis A. Viguria
Chief Executive Officer
Young Americas Business Trust

Valerie Lorena
Executive Director
Young Americas Business Trust

Figure 28 - Certificate of participation for the TIC AMERICAS 2020 contest finial