THARINDU WEERARATHNE

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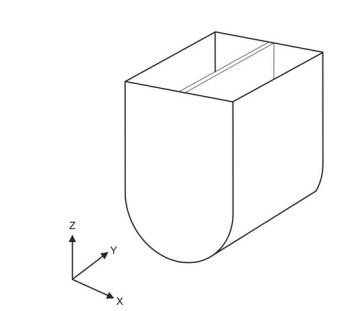
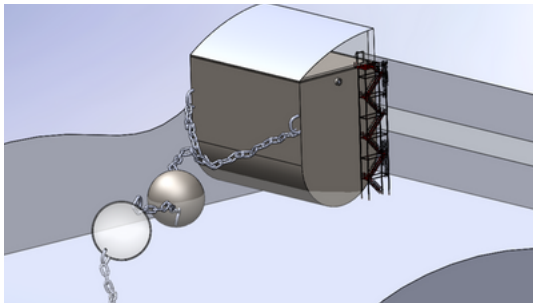
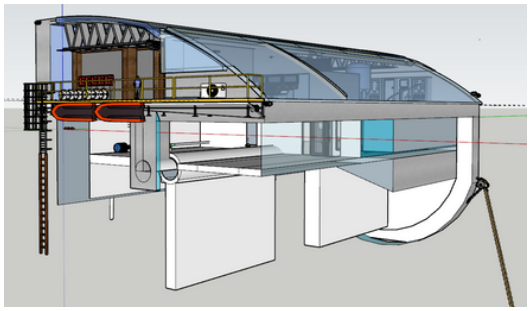
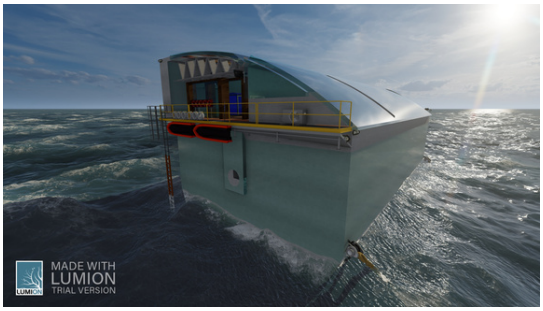
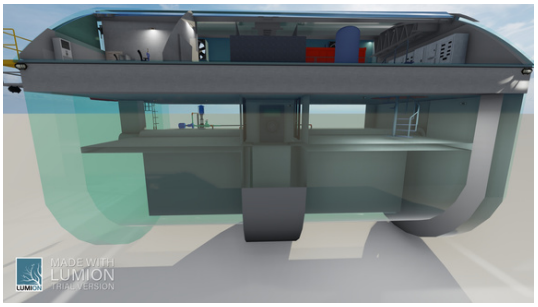
CONCEPTUAL DESIGN - WAVE ENERGY DEVICE









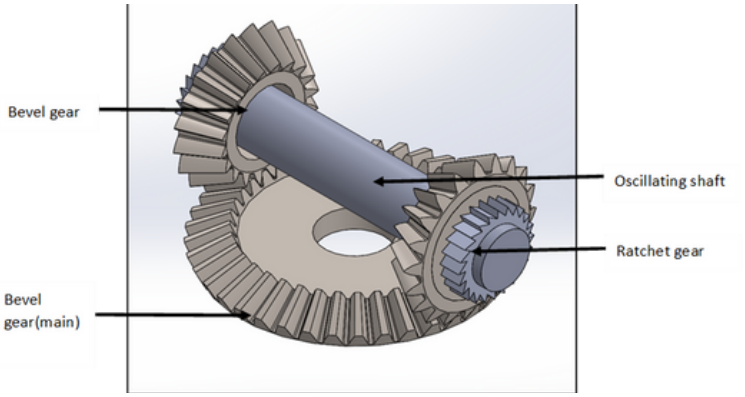


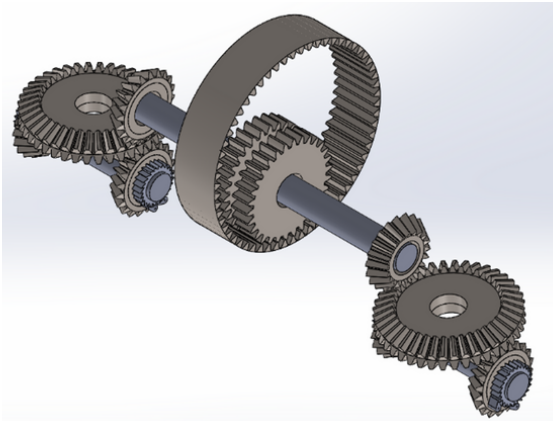
Designing a Hull-Reservoir Wave Energy Device (HRWED) to extract tidal energy at rough sea conditions.

- 2D illustrations - CorelDRAW
- 3D modelling - SolidWorks, Sketchup
- Rendering & animation - Lumion

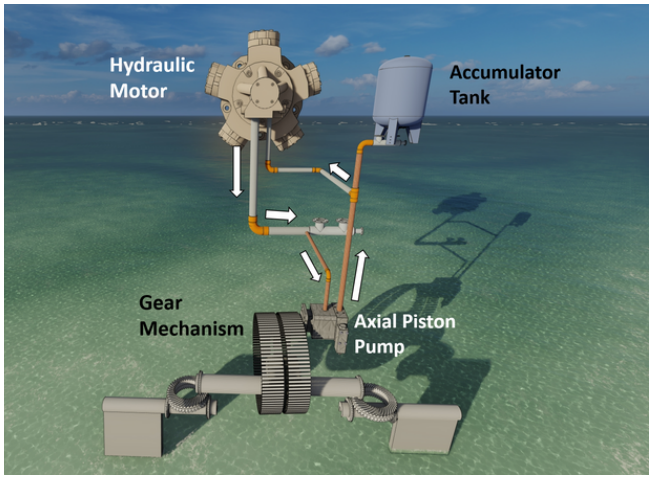
https://www.youtube.com/watch?v=9lbCy2j59Us

INNOVATION OF A NOVEL MECHANISM FOR HRWED





Designing a mechanism to convert oscillatory motion of the Hull-Reservoir Wave Energy Device to rotary motion (HRWED), making it efficient and convenient to generate electricity



- Innovation of a novel gear mechanism to convert oscillatory motion of two separate flaps to one rotary motion.
- Designing the conversion system using hydraulics, increasing the efficiency.
- 3D modelling - SolidWorks, Sketchup
- Rendering - Lumion
- Animation - SolidWorks

https://www.youtube.com/watch?v=C_guiR1TavA

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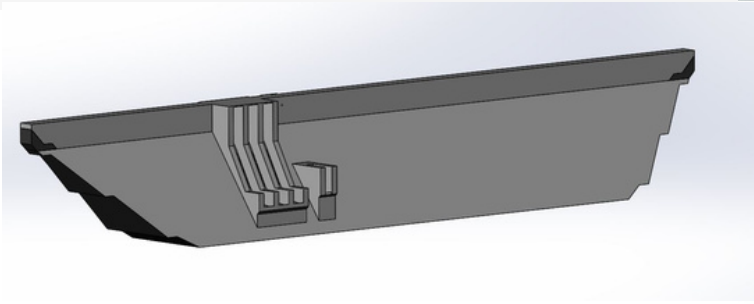
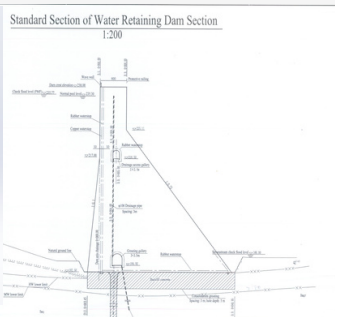
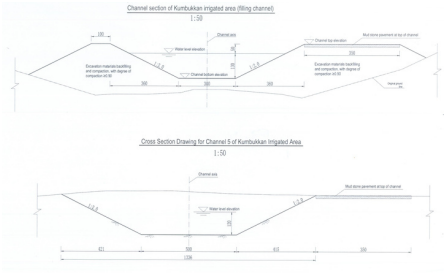
DAM DESIGN (FOR EDUCATIONAL PURPOSES)

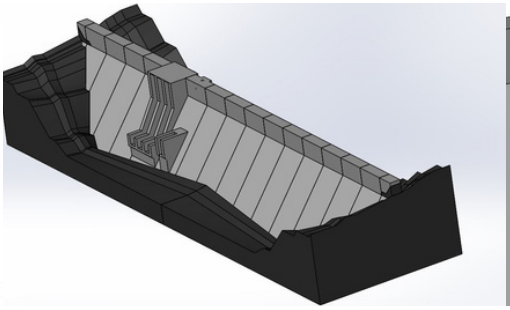
Modelling of a prototype of Kumbukkan Oya dam site in Sri Lanka. The purpose of the modelling was to conduct a workshop on SolidWork modelling for Civil Engineers involved in the project.

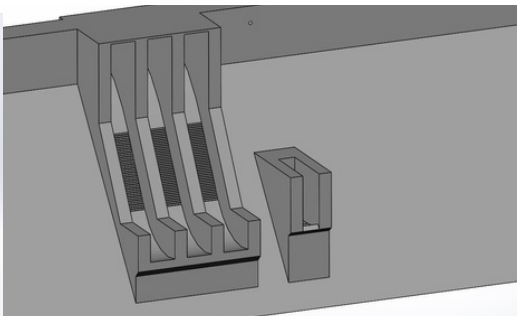
- 3D modelling - SolidWorks











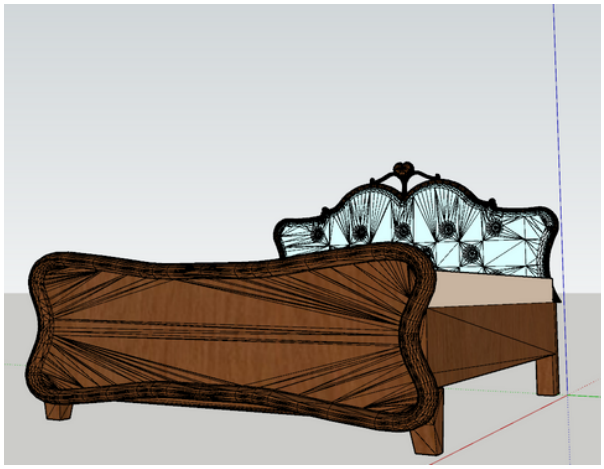
https://www.youtube.com/watch?v=Z18y2IeRJTI

PERSONAL STARTUP PROJECT - TEAK GALLERY

Designing furniture and modelling for marketing and outsourcing woodwork.

- Main considerations - Ergonomics, usability and comfort
- 3D modelling - SolidWorks, Sketchup
- Rendering - Lumion

https://www.facebook.com/TeakGallery



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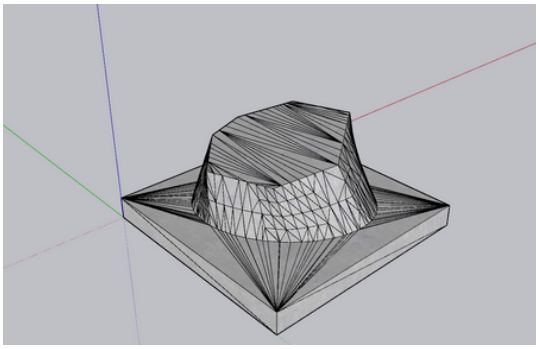
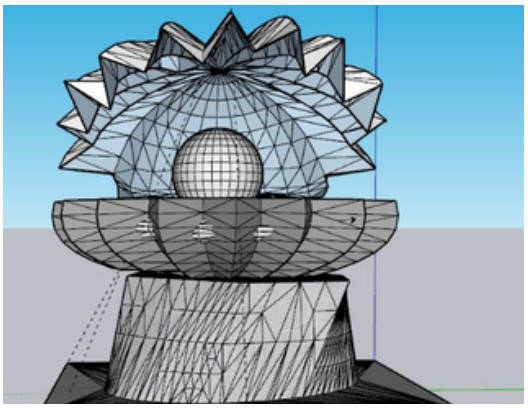
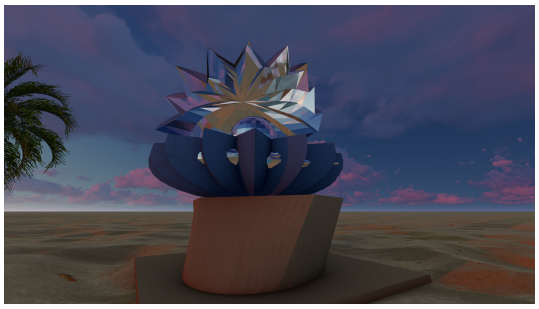
SCULPTURE DESIGN - PEARL MARINA

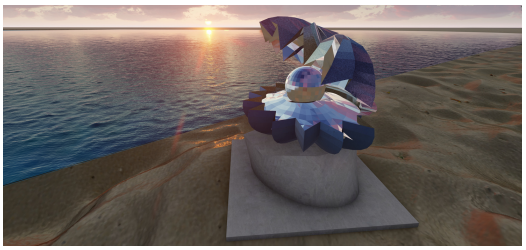
Designing a prototype of a sculpture as a part of the competition - Dream - Pearl Marina, Port City, Colombo.

- Factors considered
  - Wind factor
  - Maintenance
  - Theme
  - Aesthetics
  - Production methods
- 3D modelling - SolidWorks, Sketchup
- Rendering - Lumion



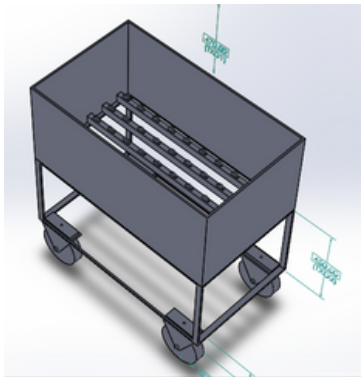


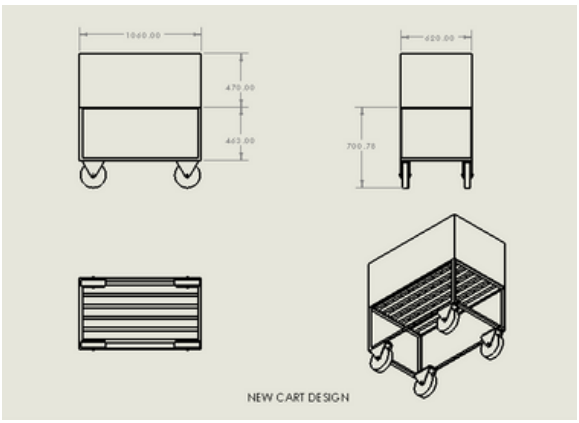




CART MODIFICATION AND LAYOUT CHANGE

Improving the quality of ceramic products by avoiding contamination occurred by carts which are entering and exiting decoration premises. A novel conveyer mechanism was introduced with a layout change and changes for the carts to be compatible with the conveyer.





- Identification of issues with the current method of carrying products.
- Design factors
  - Cost
  - Capacity
  - Functionality
  - Compatibility with the maintenance activities
  - Managing available resources