Single Power Takeoff for Multiple Source Energy Harvesting

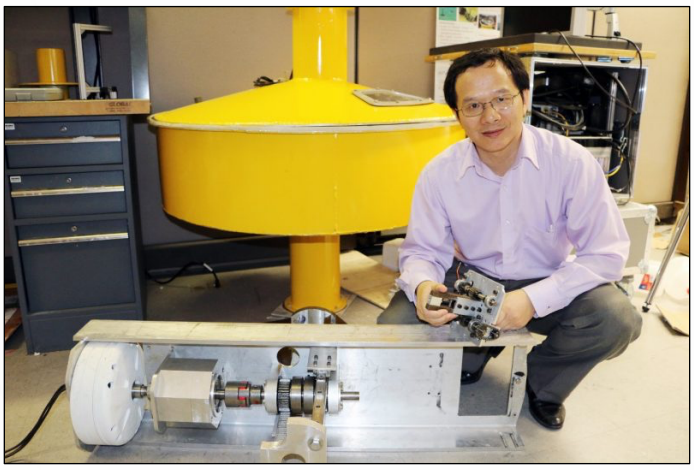
VTIP 20-055: "Simultaneous Ocean Wave and Current Energy Harvesting using a Single Power Takeoff"

THE CHALLENGE

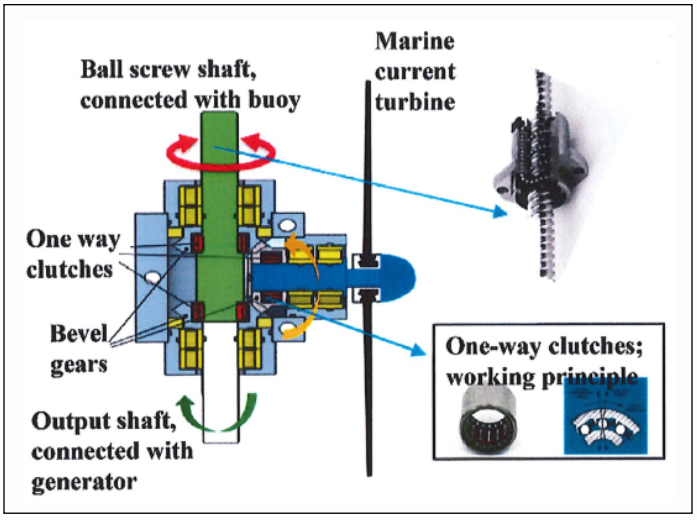
Existing ocean energy converters can only convert one source of energy; either ocean waves, tidal streams, or marine current energy. Highly complex mechanisms to harvest energy from multiple sources is expensive and also low efficiency.

OUR SOLUTION

Lei Zuo and Robert Parker have created a singular energy harvesting device for converting the energy from ocean wave, ocean current, and tidal stream into electricity. It is developed on their award winning mechanical motion rectifier (MMR) based power takeoff that converts oscillatory wave motion into unidirectional rotation.



Lei Zuo with the working prototype.



The hybrid power take-off.

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