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SUMMER 2017 EDITION



WHOI OTT & MIT Innovation Initiative to Host Business Hackathon

WHOI OTT is partnering with the MIT Innovation Initiative to host a new kind of business hackathon set to take place late 2017/ early 2018. We hope to leverage Boston's unique entrepreneurial ecosystem by holding the event on MIT's campus in Cambridge.

The Hackathon will feature only WHOI innovations with the goal of garnering interest and support from local entrepreneurs and motivated students to engage and participate

in the commercial development of WHOI's technology portfolio.

The format for the event has not yet been finalized but will likely feature 5-10 WHOI technologies centered around a common theme or challenge. Participants will be asked to use a combination of imagination and business savvy to brainstorm plans for the development and commercialization of either
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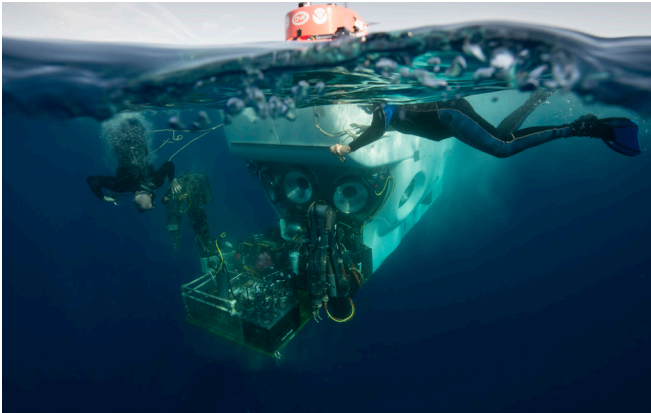


WHOITechTransfer

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an individual technology or a package of technologies. Public pitches will be made and awards presented to close the event. As the event approaches, WHOI will be looking for qualified mentors and judges with industry knowledge interested in participating in the event. OTT will also be seeking corporate sponsors interested in supporting this unique event.

For updates, please subscribe to our [News & Events page](#).



Shark Tank 2017: What's New?

This year's Shark Tank (TRF) has undergone some significant process changes. As mentioned in previous newsletters, OTT has worked on updating the application process to be more beneficial to WHOI Scientists and Engineers applying for Proof of Concept funding. This year's TRF features ten qualified Business Advisors, many of which have been drawn from our Mentors and Champions community. These Business Advisors have been paired with scientists and engineers applying for funding and are currently working on the market research for the pitch presentation.

Each Business Advisor participating was required to attend a training session where WHOI culture was discussed in-depth as well as the ins and outs of the Translational Research Fund.

There are 8 technologies applying for funding this year - a brief description of each is provided on the following page.

OTT IN THE NEWS

INTERNATIONAL OCEAN SYSTEMS: WHOI COMPACT WINCH

Both commercial and research marine operations rely on winches for deployment, hauling and retrieval of equipment and instruments. Over the years, winch design has undergone extensive advancements in control systems while at the same time structural changes have been few and far between. Woods Hole Oceanographic Institution (WHOI), engineers James Haley and Josh Eaton thought it time to incorporate mechanical advantage to build on the capabilities of innovative control systems.

“The WHOI Compact Winch is the most advanced portable winch design in the world,”

says co-inventor James Haley. Each component was designed and fabricated to serve multiple purposes with the goal of creating a smaller, lighter and more compact winch, capable of outperforming its heavier and bulkier predecessors.....

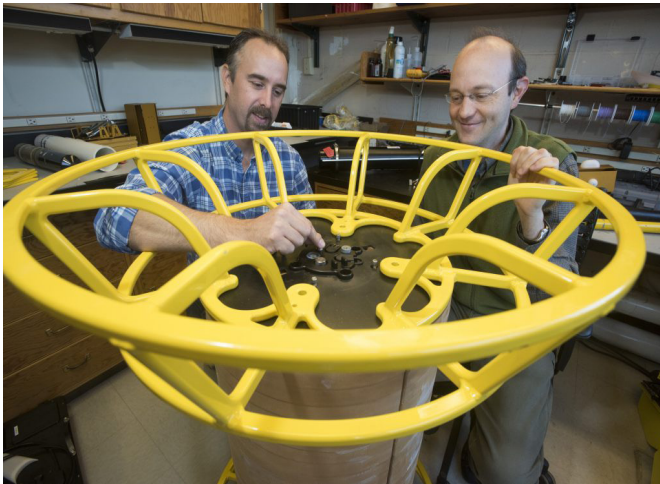
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SHARK TANK 2017- MEET THE APPLICANTS

On-Call Buoy - Jim Partan & Keenan Ball: The On-Call Buoy replaces the vertical endline and buoy found on strings of deep water lobster traps. The On-Call Buoy holds the vertical endline on a spool anchored to the seafloor, thereby reducing the risk of entangling whales in the rope. When the fishing crew is ready to haul the traps, an acoustic signal is used to release the anchored buoy from the seafloor to float to the surface ("On-Call"). Part of the technology is a mechanism to rapidly re-spool and re-deploy the string of traps at sea.



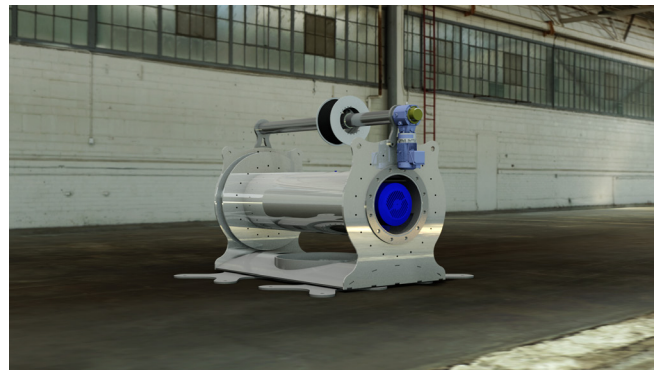
Marine microalgal: A source of specialty food supplements and high-end health/beauty products- Christopher Reddy: Alkenones are high molecular weight insoluble hydrocarbon generally considered as waste in the various manufacturing processes employing algae as source materials. Products or alkenones and other co-products could have great value in specialty food products and health and beauty products. Alkenones may represent an excellent non-toxic, natural abrasive for beauty soaps to offer a sustainable, natural replacement for the recently banned plastic microbead abrasives.

Ocean Based Predictions of Terrestrial Rainfall- Ray Schmitt: New insights into the global water cycle have revealed Sea Surface Salinity (SSS) measurements may be used to provide greatly improved seasonal to sub-seasonal forecasts of terrestrial rainfall. Use of SSS in machine learning tools has provided a quantum leap in weather forecasting accuracy by improving forecasting accuracy from 7-10 days to 3-12 weeks.

The Chicken Bot Pie - Paul Fucile and Alex Ekholm: A circuit board and support materials - the first proposed product for an WHOI technology online marketplace. This product would serve

as the test case for development of an online store for WHOI tech manufactured by third parties.

Compact Winch and Machine Vision Level Wind - Josh Eaton and Jamie Haley: A low-footprint marine winch, adaptable for many uses, with a unique level wind technology using a camera system to control spooling of hauling cables onto a drum. It automatically adjusts to current conditions, including self-correction. There are currently no devices that automatically adjust - levelwinds are currently fixed speed or pre-programmed.



Channelized Optical System (CHANOS)- Aleck Wang: Precise and accurate determination of marine carbon dioxide system is essential to studying the marine carbon cycle and ocean acidification - both important for understanding the impact of climate change. Rapid and high-accuracy measurements are obtained through simultaneous measurement of dissolved inorganic carbon (DIC) and ocean pH. CHANOS uses a modular design that is capable of making simultaneous spectrophotometric measurements of seawater DIC and pH. CHANOS is versatile and suitable for deployment on mobile and stationary platforms, such as buoys, profilers, AUVs, and ROVs. (cont. on page 4)



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High-Power Mooring Stretch Hose- Don Peters: Designed to support wave or wind-based floating power installations, where mooring and powerline fatigue represent a critical issue. This high capacity electrical throughput mooring that stretches in response to wave action is capable of power transmission for grid connection applications.

Asymmetric Propulsion System for Underwater Vehicles- Jeff Kaeli: An asymmetric propulsion system utilizing a single-bladed propeller to produce both thrust and maneuverability from a single degree of freedom, eliminating rudders. Many AUVs have limited maneuverability at low speeds due to their need for flow over their control surfaces. Using an asymmetric propulsion system affords vehicle control down to zero speed.

UPCOMING OPPORTUNITIES

SHARK TANK 2017

Final Deadline for Applications: September 15, 2017

Shark Tank Pitch Competition Presentations:
Limited seats available- October 2017 - please contact OTT if interested in attending

BUSINESS HACKATHON WEEKEND

Boston, MA - Date and Location TBD

SUBSCRIBER SIGN-UP

Based on feedback from your 2016 Communications Survey - OTT has implemented a subscriber sign-up for our News & Events page. In addition to our newsletters, we regularly post updates on events involving the office and updates on new technologies.

If you would like to receive an email when new posts are published head to this link: techtransfer.who.edu/newsevents and register your email at the bottom right of the page. You can unsubscribe at any time.

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