



Human exoskeleton takes top prize in international manus awards, presented at Hannover Messe

California based Pathway LLC, partnered with Levitate Technologies has been selected as the winner the golden manus from nearly 550 applicants worldwide.

April 28, 2017 - At the 2017 Hannover Messe, plastic bearings expert igus announced the winners of its 8th manus awards for unique plastic bearing applications. An independent jury, with representatives from the research, business, and specialist media organization, awarded the 2017 golden manus trophy, along with a €5,000 prize to California based Pathway LLC for its design for manufacturing of the Airframe™ exoskeleton, developed by Levitate Technologies, Inc.

The exoskeleton system was developed to facilitate assembly work by relieving muscles and supporting movement sequences to prevent worker fatigue and discomfort. The Airframe™ system uses a wide variety of iglide plastic bearings to minimize weight and maintain smooth rotation while under high axial loads. Lack of external lubrication keeps the users clothing from oil and grease exposure, and allows for use in difficult environmental conditions.

Underwater gripping arm takes the silver manus award

French company, Ocean Innovation System, was awarded the silver manus for their electric manipulator arm, which can be used in salt or fresh water at depths up to 1640 feet, or 500 meters. The gripping arm utilizes more than 30 iglide plastic bearings, including those made from the iglide T500 material, which is able to withstand very high loads and possesses very low rates of moisture absorption. The arm, while in the extended state, has a dynamic load-bearing capacity of 35 pounds (16 kg), or 110 pounds (50 kg) while static.

Outer space research takes bronze manus award

German student researchers claimed the bronze manus for 2017 with their UB-SPACE project, which analyzes how object move in space. The system was deployed on the sounding rocket REXUS 21 in March of 2017. The 5 man research team developed a module which transports a so-called “free falling unit,” or FFU into space in order to record how the FFU moves using a systems of a camera and sensors, mounted to the wall of the rocket wall using a 3D printed



iglide bearing. Additionally, the ejection chute where the FFU is release is lined with iglide V400 low-friction tribo tape.

To learn more about the winning applications, to see more entries, or past winners, please visit the manus international homepage at www.igus.eu/manus

About igus®

igus® develops industry-leading energy chain® cable carriers, chainflex® continuous-flex cables, drylin® linear bearings and linear guides, iglide® plastic bushings, and igubal® spherical bearings. These seemingly unrelated products are linked together through a belief in making functionally advanced, yet affordable plastic components and assemblies. With plastic bearing experience since 1964, cable carrier experience since 1971 and continuous-flex cables since 1989, igus provides the right solution from over 100,000 products available from stock. No minimum order required. For more information, contact igus at 1-800-521-2747 or visit www.igus.com.

Photos:



Picture PR-0517-manus-award-goes-to-USA-01, igus GmbH.

The 2017 manus award winners were honored at Hannover Messe by igus CEO Frank Blase (right), Gerhard Baus, Vice President bearings (4th from left) and Tobias Vogel, Division Head of iglide bearings and drylin linear systems (left). The golden manus was won by the company Pathway, who conducted the final design for manufacturing of the Levitate Technologies Airframe™ exoskeleton. The silver award went to the French company Ocean Innovation System, and the bronze manus to student project UB-SPACE from Germany.



Picture PR-0517-manus-award-goes-to-USA-02 and 03, igus GmbH.

The Airframe™ human exoskeleton supports movement during assembly work, reducing stress on the back, neck, and shoulders.



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