PRESS RELEASE



NASA turns to freelancers to design a robotic arm for a flying robotic assistant on the International Space Station

Sydney, August 14, 2018: NASA and <u>Freelancer.com</u> announced three of the winners of the ongoing Astrobee Challenges Series, the latest crowdsourcing contest held by NASA via Freelancer.com.

In recent years, NASA has used <u>Freelancer.com</u> to hold several crowdsourcing campaigns in order to find innovative solutions to engineering problems they come across. This time the Astrobee Challenges Series encouraged participants to design a robotic arm for a project on the International Space Station (ISS).

NASA sought candidates to design alternatives for an attachment and orientation arm for Astrobee, the flying robotic assistant that will provide support to astronauts on the space station ISS. Three of the winners have already been selected: Nino Wunderlin, from South Africa; Myrdal Manzano, from the Philippines; and Amit Biswas, from India, who entered the competition with his company Triassic Robotics.



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Nino Wunderlin is a 23-year-old University student. He is studying for a Master's degree in Mechanical Engineering, specializing in liquid rocket propulsion systems. Nino joined the "**Design an Attachment Mechanism**" challenge applying his knowledge on electronics and control, aerostructures for light-weight design and 3D modeling and design. "I wanted to challenge myself and see if my work was good enough for NASA", said Wunderlin.

Myrdal Manzano, a 37-year-old Conceptual Engineer, joined <u>Freelancer.com</u> after being laid off from work over two years ago. Mydal worked on the "**Design a "Smart" Attachment Mechanism**" challenge and used his skills in 3D design, PCB layout design, manufacturing and circuit design. His experience in robotics and automation also came in handy.

Amit Biswas is a 36-year-old Software Engineer who was excited to participate in the "**Design a Simple Deployment Mechanism**" contest. He relied on his skills in Mechanical Engineering along with CAD and his knowledge of electronics. Because the design had to meet very strict requirements in terms of size, weight and power consumption, Amit worked on it for about 2 weeks."I am very passionate about robotics in general and space robotics is particularly interesting. I was excited to work on this project right from the beginning", said Amit.

Astrobee will be replacing the existing SPHERES robot. The free-flying robot is heading for ISS in 2019 and will help astronauts with different tasks ranging from housekeeping to spacecraft monitoring. It can take direction from NASA's Mission Control Center at the agency's Johnson Space Center in Houston as well as perform tasks autonomously.

The Astrobee Challenges Series is still ongoing as there are nine contests that have not been unlocked yet. A total of \$25,000 will be awarded when the entire Series is completed, with individual prizes ranging from \$250 to \$5000. The final challenge is set to conclude in September, 2018.

The NASA-<u>Freelancer.com</u> collaboration began in 2015 when the NASA Tournament Lab began piloting contests on <u>Freelancer.com</u>. Since then it has continued to open the door to designers and engineers who are ready to showcase their skills regardless of where they come from.

About Freelancer ®

Eleven-time Webby award-winning Freelancer.com is the world's largest freelancing and crowdsourcing marketplace by total number of users and jobs posted. More than 29 million registered users have posted almost 14 million jobs and contests to date in over 1,000 areas as diverse as website development, logo design, marketing, copywriting, astrophysics, aerospace engineering and manufacturing.

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About NASA Center of Excellence for Collaborative Innovation (CoECI)

The challenge is managed by NASA's Center of Excellence for Collaborative Innovation (CoECI). CoECI was established with support from the White House Office of Science and Technology Policy to assist NASA and other federal agencies in using new tools – such as challenges – to solve tough, mission-critical problems. The Center launches challenges under the umbrella of the NASA Tournament Lab and offers a variety of open innovation platforms that engage the crowdsourcing community in challenges to create the most innovative, efficient and optimal solutions for specific, real world challenges.

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