

Students win \$10,000 Ricoh scholarship for innovation that tackles energy crisis, combats climate change

16th annual Ricoh Sustainable Development Award presented to students for harvesting solar energy from 3D-printed trees with eco-friendly, photovoltaic "leaves"

EXTON, Pa., June 2, 2021 /PRNewswire/ -- [Ricoh USA, Inc.](#), today announced that 11th grade students Charikleia Moraitaki and Maria-Eleni Batatoudi of Athens College in Psychiko, Greece, are the winners of the 16th annual Ricoh Sustainable Development Award (RSDA) presented at the Regeneron [International Science and Engineering Fair](#) (Regeneron ISEF). The innovators have been awarded a \$10,000 scholarship for their winning invention, "Solar Park with Photovoltaic 3D-printed Trees: Technology Allies with Nature." The RSDA honors students who develop innovations that strengthen environmental sustainability and support Ricoh's global commitment to pursue excellence, improve quality of life and drive sustainability in accordance with the United Nations [Sustainable Development Goals](#) (SDGs).

"Ricoh is proud to honor, celebrate and support students who take action to support environmental sustainability through innovation and break with the status quo to create long-term value for our communities, society and the planet," said Donna Venable, Executive Vice President, Human Resources and Deputy General Manager, Shared Services, Ricoh North America. "Ricoh's commitment to environmental sustainability has been a long-standing component of the Ricoh Way and our Spirit of Three Loves that inform how we do business. Charikleia and Maria-Eleni's work exemplifies the type of groundbreaking innovation and allegiance to creating a more sustainable future that Ricoh puts at the center of everything we do, and we are delighted to participate in the students' future success."



Moraitaki and Batatoudi won the RSDA at Regeneron ISEF, the world's largest international pre-college science competition. Owned and produced by the [Society for Science](#), Regeneron ISEF provides a platform for the best and brightest young scientists to showcase their science, technology, engineering or math research. This year, a total of 1,833 finalists from 64 countries, regions and territories competed for more than \$5 million in awards and scholarships.

Finalists' projects were evaluated by how well they harmonize practical business and environmental sustainability, as well as how they align with [Ricoh's Sustainable Environmental Management Pillars](#). Judgement criteria included project novelty, readiness, development, cost efficiency, global applicability and creativity. Submitting students were also evaluated on their willingness to learn new things and ability to overcome obstacles.

Moraitaki and Batatoudi's innovation is a 3D-printed forest made from eco-friendly materials that is designed to tackle the global energy crisis and combat climate change by harvesting solar energy. The innovators' prototype takes the form of a tree – nature's own perfect, energy-harnessing design – with panels, or "leaves," made of photovoltaic cells to harvest solar energy. The model tree includes three critical innovations: 1) a gyroscopic mechanism that adjusts the leaves' position and inclination toward the sun for maximum solar absorption; 2) an automated process to control individual tree height when model trees are arranged in a forest array to capture maximum energy; and 3) a revolution system to prevent excess heat from reducing output efficiency. The long-term project goal, as envisioned by its creators, is to build photovoltaic parks and forests with 3D-printed trees that harvest solar energy and offer a pleasing aesthetic that complements the natural landscape.

"Congratulations to Charikleia Moraitaki and Maria-Eleni Batatoudi on winning the RSDA from Ricoh at the 2021 Regeneron International Science and Engineering Fair," said Maya Ajmera, President & CEO of the Society for Science and Publisher of *Science News*. "The students who competed in Regeneron ISEF this year conducted their research under unique circumstances, given the current pandemic. Their dedication to conducting scientific and engineering research gives me hope for the future."

The RSDA is a prime example of the many ways in which Ricoh is helping to build a more sustainable society. In addition to its ongoing support of the scholarship program, Ricoh has committed to [seven material issues and SDGs](#) and set 14 [Environmental, Social and Governance](#) (ESG) targets linked with the material issues. Ricoh has also won ENERGY STAR[®] Partner of the Year award for six consecutive years and signed the [RE100](#) pledge to work toward sourcing 100% of its energy from renewable sources in the coming decades.

With this most recent RSDA win, Ricoh has totaled more than \$440,000 in scholarships awarded for sustainability projects at Regeneron ISEF. The RSDA has awarded hundreds of thousands of dollars in scholarships to more than 35 students since its inception in 2005. The program underscores Ricoh's continued investment in sustainability.

For more information about Ricoh, [click here](#) or follow the company's social media channels on [Twitter](#), [Facebook](#) and [LinkedIn](#).

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