

ADU Professors Granted a Patent in the Field of Renewable Energy



[Abu Dhabi University's \(ADU\)](#) [Dr. Anas Al Tarabsheh](#), Associate Professor of Electrical Engineering, and [Dr. Mohammed Ghazal](#), Professor of Electrical and Computer Engineering, were granted a patent in the field of renewable energy from the United States Patent and Trademark Office (USPTO). In line with ADU's commitment to fostering research and innovation, the University's Office of Research and Sponsored Programs (ORSP) supported both Professors in their project's development journey, which the U.S.-based federal agency awarded the patent in recognition of the pioneering inventions. In line with the UAE's Year of Sustainability, this patent demonstrated a practical solution for improving the efficiency and sustainability of renewable energy generation, which aligns with the global shift towards cleaner and greener energy sources. In addition, this achievement aims to provide ADU's students with a platform to delve into various aspects of renewable energy, such as system optimization, embedded systems, solar tracking algorithms, and many more. Students will also be able to gain hands-on experience and develop their skills and knowledge in cutting-edge energy technologies.



Dr. Al Tarabsheh and Dr. Ghazal's project aims to enhance the energy output of photovoltaic-wind hybrid energy systems, as the patent, titled **“Deformable model for performance enhancement of photovoltaic-wind hybrid system,”** was designed to combine wind and photovoltaic energy sources in one system as an alternative to traditional hybrid systems for these two energy sources. This model enables precise adjustments to the wind turbine arms by dynamically controlling the tilt of the PV modules at ideal angles to enhance energy production. It presents a distinctive and pioneering approach to integrating wind and photovoltaic energy into one autonomous system that improves energy harvesting rates.

In recognition of this noteworthy accomplishment, **Dr. Anas Al Tarabsheh and Dr. Mohammed Ghazal** expressed their appreciation to the University's leadership for their unwavering support during their journey and for providing them with the necessary resources and tools, which played a vital role in achieving this milestone. In addition, they stressed the importance of the patent in advancing the UAE's renewable energy initiatives and highlighted the role of the awards in fostering innovative solutions that will benefit the students and the community.

