Carmen Arena CV

Carmen Arena is Associate Professor of Ecology at the Department of Biology at the Federico II University of Naples and an associate member of the Center for Studies on Bioinspired Agro-Environmental Technology (BAT Center, Portici, Italy) and National Biodiversity Future Center (NBFC, Palermo, Italy). She graduated in Biological Sciences, University of Naples Federico II with full marks and price and received her Ph.D. in Terrestrial Ecology - Plant and Soil in 2001.
Her research activity is articulated on four main themes:

1. Regulation of the photosynthetic process in response to abiotic factors in the context of environmental changes.
2. Study of plant adaptations in extreme and extraterrestrial environments.
3. Plant-soil interactions in natural and anthropized ecosystems.
4. Reuse of natural by-products as resources in a circular economy and human health perspective.

In particular, the attention is focused on structural and functional ecological traits and photo-protective photosynthetic strategies conferring higher plants and macroalgae the capability to overcome mono and multiple stresses, with applications in the ecological, spatial and agronomic fields. In her studies, C. Arena uses a multidisciplinary approach combining the quantitative estimations of CO_2 fixation with biochemical and molecular essays to analyze photosystems' functionality and overall plant health. She has broad experience in gas exchange and chlorophyll fluorescence emission techniques, enzymatic assays, and proteomic analysis of Photosystem II.
She is Leader of the laboratory of Plant Ecology, University of Naples Federico II, Department of Biology (https://www.researchgate.net/lab/Carmen-Arena-Lab);
She is currently involved in numerous National and International projects aimed to study primary production in terrestrial, marine and extraterrestrial environments. Among them the most significant are:

- "NATIONAL BIODIVERSITY FUTURE CENTER" MUR: CN00000033 – Spoke 1 - Mapping and monitoring actions to preserve marine ecosystem biodiversity and functioning. https://www.nbfc.it
- "MARINEPLAN" HORIZON-CL6-2021-BIODIV-01 (Biodiversity and ecosystem services), https://maritime-spatial-planning.ec.europa.eu/projects/marineplan
- "ACTNOW" HORIZON-CL6-2021-BIODIV-01 (Biodiversity and ecosystem services) https://cordis.europa.eu/project/id/101060072
- "MOM - Moss on Mars – funded by European Space Agency (ESA) ID.UGOV:000001, CUP:E77G24000350005.
- "ReBUS - In-situ REsource Bio-Utilization per il supporto alla vita nello Spazio", WP 1300. Italian Space Agency (Rif. DC-VUM-2017-080), funded by the Italian Space Agency.

Prof Arena is Associate Editor for Frontiers in Plant Science (category Q1 in Plant Science), Editorial Board member for Plants Basel, Peer J, and Scientific Reports (category Q1 in Plant Science and Environmental Science). During her career, Prof Arena has received several prizes from the Italian Society of Ecology, the Italian Space Agency for project LISS (Lessons on International Space Station), and from Melissa Scientific Teams within the 1° Joint AgroSpace-MELiSSA Workshop in Roma, Italy. Carmen Arena has participated in over 120 National and International Congresses, in most of them as speakers and invited speakers.
She is author of more than 140 publications peer-reviewed ISI-WoS/Scopus.
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