



CONSERVE AND SUSTAINABLY USE THE OCEANS, SEAS AND MARINE RESOURCES FOR SUSTAINABLE DEVELOPMENT

RESEARCH

Amazing Jellyfish

A new study conducted by Dr. Dror Angel and doctoral student Hila Dror from the Department of Maritime Civilizations, together with a group of researchers from Ort Braude College, found that a small amount of saliva produced from Mediterranean jellyfish can repel synthetic nano and microplastics from the water. The full research findings were published on the [YNET website](#) and in [Science of the total Environment](#) Journal.

The Miller Fellowship Award

[Dr. Tal Luzzatto Knaan](#) was awarded *The Dusty and Ettie Miller Fellowship* for her innovative research in metabolomics. In her Lab, hear and her team, explore the biological role, regulation, diversity, and distribution of natural products in microbes and algae, and their potential biotechnological and medicinal applications.

AI-powered solutions for the Sea

In one of his latest articles titled 'Estimating DVL Velocity in Complete Beam Measurement Outage Scenarios' published in *IEEE Sensors Journal*, [Prof. Itzik Klein](#), head of the Autonomous Navigation and Sensor Fusion



(Credit: Hagai Nativ/Morris Kahn Marine Research Station)

Lab at the Hatter Department of Marine Technologies, tackled Doppler Velocity Log (DVL) complete outages scenarios and offered a new motion model as a solution.

Grant: Low-Cost Robots for Fishery Sustainability

[Prof. Roei Diamant](#), from the Department of Marine Technologies and Leon H. Charney School of Marine Sciences, won a Schmidt Marine Technology Partners grant

through their Sustainable Fisheries Initiative. The innovators chosen to receive these grants are ensuring that fishers and fisheries—and by extension all of us who rely on them—are secure and sustainable worldwide.

Prof. Diamant's work will deal with a 'swarm' of low-cost underwater autonomous robots that coordinate for better acoustic detection and size estimation of fish populations.

PUBLIC ENGAGEMENT

SwitchMed – Fostering Blue Economy

Haifa Innovation Labs (HIL), together with the Leon H. Charney School of Marine Sciences and the European Union, invited students with innovative marine ideas to join the 9-week [SwitchMed](#) program. This ideation and innovation program aims to foster the blue economy in the Mediterranean basin and support blue growth projects in areas such as sustainable marine resource management, maritime transport,

renewable energy, food, leisure, pollution control, and more. Ms. Oshrat Ben Hamo, won the national competition and moved up to the European finals.

Impact project: Noise Pollution in the Mediterranean Sea

The Division of Innovation & Sustainability, asked faculty to propose Social and Environmental Impact Research that includes cross-sectoral partnerships. One such Impact Project, by Prof. Roei Diamant, Prof. Shaul Horev, and team, seeks to communicate noise pollution methodologies to legislative authorities to [address marine noise pollution in the Mediterranean Sea](#). The team aims to develop technologies for evaluating and monitoring underwater noise pollution from ships, including proposing noise emission testing for

vessel registration, which will target policymakers and EU task groups for noise monitoring and standardization methodologies.

Kindergarteners study Microbiology

This month, [the Marine Microbiology lab](#) volunteered at the Hod HaCarmel Kindergarten, near the University. They taught the children about how bacteria are found in all places, even if they cannot see them. Then the kids did an activity on 'hand hygiene', they touched agar plates before and after washing their hands and saw how that influenced the number of bacteria that grew.

Conservation and sustainable utilization of the oceans

The university supports and organizes events aimed to promote conservation and sustainable utilization of the oceans, seas, lakes, rivers, and marine resources, such as [public seminars](#) under the y of the Society for the Protection of Nature in Israel, on the university's work on the deep Mediterranean.

LEARNING AND STUDENTS

'Diving for Research' Program

As part of the Master's Program at the Leon H. Charney School of Marine Sciences, students undergo an [intensive two-week course](#) where they acquire skills in planning and conducting scientific dives. The courser provides the opportunity for hands-on experience in operating scientific equipment underwater, with particular emphasis on dive safety

and environmental conservation. The course was conducted at the Morris Kahn Marine Research Station, led by Prof. Tali Mass and Dr. Beverly Goodman, with the assistance of diving safety officer Eran Rosen.

Deep Sea Conferences

Conferences hosted this year by the renowned Leon H. Charney School of Marine Sciences included the [2023 Ocean Day](#) conference entitled, 'The Deep Sea - Nature Conservation, Challenges, and Innovation', in partnership with the Israeli Society for the Protection of Nature (SPNI) during which SPNI announced its new strategic masterplan for deep-sea marine protected area network in the Israeli waters. This year, the school also hosted the 10th Haifa Conference on Marine Sciences, SeaAI: Artificial Intelligence and Sea, endorsed by the UN Decade of Ocean Science for Sustainable Development.

OPERATIONS

New Marine Lab

[Dr. Derya Akkaynak](#) from the Cherney School of Marine Sciences has joined the Inter-University Center (IUI), a marine research facility in Eilat, and recently [opened a new laboratory](#) titled COLOR Lab. Researchers affiliated with universities in Israel have a special status and receive a limited-term position to conduct research at the facility and offer focused courses on behalf of the institute that are open to all students nationwide.