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**8h Haifa Conference on the Mediterranean Sea Research – July 14th-15th, 2021**

The seas and oceans cover 70% of the planet and are critical resources for humanity. Responsibly harnessing the seas and oceans while conserving them for future generations requires a deep understanding of the oceans and, potentially, necessitates major changes in how we (as humanity) interact with them. How do we form a bond between people and the sea? What is the role of maritime education and outreach? Do we need to forge an emotional bond (“a love for the sea”), and what are the roles of scientists, artists and educators in forging this bond? How can we engage different communities, creatively overcoming cultural, technological and financial barriers? The conference will focus on the many ways in which the worlds of science, education and art can come together with respect to the seas and oceans.

A key concept throughout the conference is the MEeting of Scientists, Educators and Artists (ME-SEA). The idea is to bring together small groups of three individuals that include a researcher from (or affiliated with) the Charney School of Marine Sciences, educators and artists who deal with similar topics in their daily practice, but from very different perspectives. These meetings, or their subject matter, will form the core topical sessions of the 8th Haifa Conference on the Mediterranean Sea Research (see below). The meetings themselves will take place before the conference in non-standard venues, such as onboard a research vessel, the Scanning Electron Microscope, underwater, etc… The conversations will be filmed, edited and shown during the conference and at various venues. Each group will then be invited to present their findings (in whatever format they wish) during the first day and to hold a workshop during the second day, should they wish to do so. The final team will comprise an experimental filmmaker, a student with a passion for science communication and an expert on science communication, who will speak about how to communicate complex messages to diverse audiences.

**Session 1: Communication**

**Tal Luzzatto Knaan (microbial communication), Tamar Gorka Kleiner (National Maritime Museum) Lior Ben Gai (computational art)**

**Meeting place – SEM**

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| **E**  **A**  **S** | Tal Luzzatto Knaan – בית הספר למדעי הים ע"ש ליאון צ'רני**Tal Luzzatto Knaan** studies the tiny world of microbes in the marine environment, which have an immense effect on the wellbeing of virtually all living organisms. Microbes are highly social and exist in complex communities with thousands of other organisms, where they engage in a myriad of interactions, which are mediated by the exchange of molecules. This exchange of chemical molecules allows them to interact and communicate with each other. In her lab she explores the spatial and temporal patterns of small molecules using mass spectrometry-based techniques to better understand their role in communication of marine microbial systems and for the discovery of compounds and new biological functions.      **Tamar Gorka Kleiner** graduated from the Art Institute, Oranim Academic Collage of Education. In 2007 she joined the Education Department of the Haifa Museums and since 2010, she heads educational activities at the National Maritime Museum. She is a social and environmental activist, a member of the Maritime Community of Rosh Carmel and a board member of Robin Food - the first social restaurant in Israel dedicated to limiting food waste.  **.**    **soogbet (lior ben gai) · GitHub Lior Ben-Gai** is a computational artist, designer and lecturer specializing in custom interactive software for live performances, installations and web applications. He currently lectures at the Department of Visual Communication at Shenkar College of Design, Tel Aviv, while pursuing his PhD at the Department of Computing at Goldsmiths, University of London. His work in Artificial Life consists of software experiments that explore and interact with emergent virtual structures whose behavior is associated with living systems. Through his projects he tries to invoke a sense of exploration of the vast space of occurrences between living and non-living realms, ultimately raising questions on what exactly constitutes a living thing. |

**Team 2: Sound**

**Naama Charit-Yaari (physicist), Vered Shapiro (Davidson Institute), Maayan Tsadka (acoustics and sound art)**

**Meeting place: The R/V Mediterranean Explorer**

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| **S**  **A**  **E** | **C:\Users\mlazar\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\32CD648F.tmpNaama Charit-Yaari** earned her PhD in physics and earth sciences from the Hebrew University of Jerusalem, as well as a diploma in curatorial and museum studies from Tel Aviv University. Her research has included earthquake geodynamics and the use of isotopes as geodynamic tracers in the environment. In 2002, she became a certified on-site inspector for the UN Preparatory Commission for the Comprehensive Nuclear Test Ban Treaty (CTBTO) at the organization’s Vienna International Center, where, among other things, they focus on acoustic signals as a way of detecting nuclear blasts. She currently leads physics related initiatives in the Innovation unit of the Davidson Institute of Science, the educational arm of the Weizmann institute of Science.  **Vered Shapiro** is a member of the Teachers Professional Development Unit at the Davidson Institute of Science Education, the educational arm of the Weizmann Institute of Science. Vered received her B.Sc in Ecology and M.Sc. in Environmental engineering from Ben-Gurion University of the Negev, Israel. Following the completion of her M.Sc she continued her research in the Water Research lab at the Zuckerberg Institute for Water Research in Sde Boker, Israel. Vered joined the Davidson Institute of Science Education in 2012 as developer of biology content and science exhibitions in the Clore Garden of Science. Currently she works with the Shavit program for excellent students, where she develops learning materials and guides teachers in their implementation. In addition, she teaches courses in evolution, biomimicry, and history of science to gifted children.  Maayan Tsadka**Maayan Tsadaka** is a composer and sound artist interested in understanding the nature of sound, its behavior, acoustic ways of organization and its environmental and social roles. She strives to uncover and amplify layers and musical patterns—hidden, inherent structures— which occur acoustically, as well as explore the ways in which sonic phenomena meet the physiology of the ear and the psychology of listening. Her work often incorporates a dimension of imaginary and speculative sonic worlds, on the line between crypto-zoology, crypto-botany and futuristic folklore. She completed a DMA in music composition from UC Santa Cruz, and teaches at the School of the Arts at the University of Haifa, Musrara and in Sapir Colleges. She is a research fellow at the Morris-Kahn Marine Research Station, Charney School of Marine Sciences, University of Haifa. Co-artistic director/composer/performer at the Tel-Aviv based ensemble Musica Nova. Founder and member of noise A-cappella choir. |

**Team 3: Vision**

**Tali Treibitz (improving reality through computer vision), Tamar Tenenbaum (EcoOcean)**, **Michel Platnic (using art to distort reality)**

**Meeting place: underwater**

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| **E**  **A**  **S** | **Tali TreibitzTali Treibitz** heads the Viseaon Marine Imaging Lab at the University of Haifa’s Leon H. Charney School of Marine Sciences. She and her team focus on cutting edge research in underwater computer vision, scene, color and 3D reconstruction, automatic analysis of scenes, and autonomous decision making based on visual input. They develop technologies to enhance images acquired in underwater or fog/haze environments to ideally reconstruct the captured scene as though it was not acquired in a scattering environment, as well as design and build novel underwater imaging systems, such as underwater microscopes. Their methods are based on modeling the underwater image formation process and compensating for the water effects, to eventually receive a clear image. Based on their developments, they established a spin-off company, Seaerra-Vision ltd. that develops technologies for real-time underwater image enhancement.  **Tamar Tenenbaum** is Head of the Education Department at EcoOcean. Tamar has MSc in Environmental Chemistry from the Hebrew University and over 20 years experience in the field of education in Israel and abroad. Ecoocean is a non-profit organization dedicated to the protection of the marine environment by supporting research, education and community outreach. Ecoocean’s education team has over a decade experience of delivering to both the general public and school students a broad range of educational activities: marine exploration programs for schools, field tours, lectures about the man-made challenges the ocean face and workshops focused on blue innovation, climate change and sustainability. The activities invite the audiences not only to understand, but also to touch, smell and feel the ocean.    **The Unseen / PrintScreen Festival - Experience the finest moving image art.Michel Platnic** is a multidisciplinary artists who creates illusionary worlds that often involve the viewer becoming part of them. Originally trained as an electrical engineer, he later graduated with honors in Fine Arts from the Midrasha School of Art in Israel. His work is often a combination of painting, photography, video and performance. His work challenges the viewer’s notion of reality and illusion as well as the different values attributed to them. In 2019 he initiated ReGenesis, an international digital tool for communication, education and research, with a focus on environmental justice and sustainability through collective artistic practice. The platform encourages action to create a responsible society where citizens take an active part in politics and initiate art projects, mainly in the public space. |

**Session 4: Time**

**Nimrod Marom (archaeologist) meets Assi Meshullam (sculptor)**

**Meeting place: Hecht Museum**

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| **A**  **E**  **S** | **Heights, University of Haifa Magazine - Ancient Food Webs Shed Light on  Human-Environment Interactions and Challenges Nimrod Marom** studied Prehistoric Archaeology at the Hebrew University of Jerusalem and completed his PhD in Archaeology at the University of Haifa where he teaches today at the Department of Maritime Civilizations and the Department of Archaeology. His research employs traditional paleontological methods (taxonomy, taphonomy, and biometry), archaeology, and anthropology to study the interactions between animals, humans, and the environment in the Mediterranean, its coastal settings and its boundary zones with the desert belt. His main interest lies in the Holocene and Late Pleistocene geological periods.    **Assi Meshullam** holds a BA in Art and Archaeology, and an MA in Biblical Studies from the University of Haifa. His work deals with his Jewish and Israeli identity, as well as the connection between art, religion and worship. During the last few years he has focused his research on polytheistic worship, and human sacrifice. He strives to combine local ancient aesthetics with modern artistic interpretations. In 2014 he was awarded the Ministry of Culture Prize in Art from the Ministry of Culture and Sport. |

**Session 5: Communicating science and art**

**Hadar Elyashiv (marine geoscientist with a passion for science communication), Erez Garty (science communicator) Dani Williamson (experimental filmmaker)**

**Meeting place: To be announced**

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| **A**  **E**  **S** | **Hadar ELYASHIV | PhD Student | Ph.D. candidate | MARUM / Moses Strauss  department of Marine GeosciencesHadar Elyashiv** is a PhD student in marine geology working on submarine landslides as part of a collaboration between the University of Haifa and the University of Bremen, Germany. In addition, she is part of an international team of scientists “Once Upon a Time…. Scientific Fairy Tales” who have made it their mission to convey knowledge of the oceans and climate change and to promote the dialog between scientists and the general public. The group initiates collaborations between scientists who write stories based on their research and artists that illustrate them, with the intention of making the ideas behind the stories accessible. Based on the ideology that science should be available to everyone, these stories have been translated to many languages and are free to the public.  **erez garty (@erezgarty) | TwitterErez Garty** holds a PhD in immunology from the Weizmann Institute of Science and is Head of science communications at the Davidson Institute of Science Education at the same institute. He specializes in communicating science via digital platforms and the media and has contributed to hundreds of TV and radio science items, as well as original TV productions. He is head of Israel’s leading science communications media, reaching millions of viewers in five languages. As a self-proclaimed “crusader in the war against ignorance and science denial” he established a fact-checking Facebook group that debunks myths and misinformation, which was particularly active during the COVID-19 pandemic. He is also a founding member of the Schwartz/Reisman Science Education Center - a state-of-the-art scientific hub for outstanding high-school science students, and is a science teacher    **ABOUT - Dani Williamson** is a Haifa-based American film/video artist and occasional noise maker creating digital and celluloid experimental works, which explore the tensions between virtual and physical space and how those places are experienced by others. Her work investigates the phenomenon of simultaneously experiencing multiple places and spaces through a screen: while one is physically in one place in front of their computer, they can, at the same time, virtually exist elsewhere. These investigations extend beyond the social and continue into the landscape, the environmental, and the spatio-political. She routinely collaborates with musicians, composers, and other digital artists in the US and Israel to make films, small art exhibitions and other happenings. Dani graduated with an MFA in Digital Arts and New Media from UC Santa Cruz and a BA in film from SIU, Carbondale. |