

## Shai Asher

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### Employment and Research

Marine engineering Researcher. The Israeli Coastal and Marine Engineering Institute. Feb 2021 - currently

- Designed and ran large-scale numerical simulations of coastal flows, sediment and constituent transport
- Designed and ran high-resolution numerical simulations for aerodynamic force-analyses on solar panel arrays

Teaching (Assistance) Faculty of civil and environmental engineering, Technion

- Environmental fluid mechanics, Fluid mechanics, Irrigation Engineering, Sediment transport

Academic research (M.Sc. - Ph.D, Technion, Israel, 2013-2021).

- Conducted laboratory measurements as part of an international collaboration team of engineers and scientists at Wasserbau Institute, Braunschweig, Germany.
- Developed and fabricated novel measurement devices
- Designed and ran high-fidelity numerical simulations of flow through a fully resolved coral reef
- Developed a reduced mathematical model for flow in coral reefs

### Awards

- 'Coastal and marine engineering and applied oceanography' scholarship, The Israel Ports Development & Assets Company Ltd, Israel.
- Mediterranean Sea Research Center of Israel (MERC) scholarship, University of Haifa, Israel.
- Ph.D. research scholarship Inter-University Institute for Marine Sciences in Eilat, Israel.
- The Center For Life In the Flow (Clif) scholarship, the Inter-University Institute for Marine Sciences in Eilat, Israel.
- Shraga Irmay award for porous media flow research, Technion, Israel.

### Publications

Journal papers:

- Vertical variations of coral reef drag forces. Asher, Shai; Niewerth, Stephan; Koll, Katinka; Shavit, Uri (2016) Journal of Geophysical Research: Oceans.
- The effect of water depth and internal geometry on the turbulent flow inside a coral reef. Asher, S., & Shavit, U. (2019). Journal of Geophysical Research: Oceans.

Presentations:

- APS-DFD Annual Meeting of the APS Division of Fluid Dynamics, Denver, Colorado. (Nov 2018)
- ASLO aquatic sciences meeting, Honolulu, Hawai'i. (Mar 2017)

- The program of physical-biological interactions workshop, Inter-University Institute, Eilat, Israel. (Oct 2016)
- Experimental engineering conference. AEAI - Association of Engineers, Architects and Graduates in Technological Sciences in Israel. (Apr 2016)
- Water sciences students conference. Technion Institute of Technology, Israel. (Dec 2014)
- The program of physical-biological interactions workshop. Inter-University Institute, Eilat, Israel. (Oct 2013.)

## Education

May 2016. May 2021. Ph.D.  
Environmental Sciences  
(Hydrodynamics)  
Technion Institute of technology.

Mar 2013 – April 2016. M.Sc.  
Environmental Sciences  
(Hydrodynamics)  
Technion Institute of technology.

Oct 2009 – Aug 2012. B.Sc.  
Soil and water sciences.  
Hebrew University.

## Skills

- CFD: OpenFOAM / Open TELEMAC MASCARET / SWASH / DHI MIKE
- Programming: Matlab / Python / FORTRAN
- Computing platforms: Amazon Web Services (AWS), PBS

## Languages

English - mother tongue