

GFD days 2019 (VI)

Alexandre Yersin Department of Solar Energy
And Environmental Physics (YDSEEP)

Program

Tuesday, Jan. 22, 2019

- 10:20-10:25 Opening remarks
- 10:25-11:15** The ocean's general circulation and the oceanic thermocline,
Keynote Lecture I **Joe Pedlosky**, WHOI

Session 1: Ocean dynamics I

- 11:15-11:30 Ageostrophic turbulence and ageostrophic frontogenesis.
Roy Barkan (TAU)
- 11:30-11:45 A novel approach to understanding the effects of turbulence on frontogenesis. **Abigail Bodner** (Brown)
- 11:45-12:00 Leakiness of the deep western boundary current near Flemish cap.
Aviv Solodoch (UCLA)
- 12:00-12:15 Tracking the Mediterranean outflow water in the North Atlantic with a simple model, and possible implications on the AMOC.
Ori Katz (WIS)
- 12:15-12:30 Geostrophic adjustment on the f-plane: Beyond discontinuous initial condition in an infinitely long channel. **Itamar Yacoby** (HUJI)

12:30-13:30 Lunch break

Session 2: Extratropical atmospheric dynamics

- 13:30-13:45 The dynamical link between North Atlantic cyclones and Mediterranean cyclones. **Shira Raveh-Rubin** (WIS)
- 13:45-14:00 The asymmetry of vertical velocity in current and future climate.
Or Hadas (WIS)
- 14:00-14:15 The effect of moisture on the Ferrel circulation. **Orli Lachmy** (OU)
- 14:15-14:30 The downward influence of sudden stratospheric warmings.
Ian White (HUJI)

Session 3: Planetary atmospheres and Ice

- 14:30-14:45 An axisymmetric limit for the width of the Hadley cell on planets with large obliquity and long seasonality. **Itai Guendelman** (WIS)
- 14:45-15:00 Lubricated gravity currents of power-law fluids.
Ayala Gyllenberg (BGU)
- 15:00-15:15 The deep atmospheric dynamics of Jupiter and Saturn in light of the Juno and Cassini gravity measurements. **Eli Galanti** (WIS)
- 15:15-15:30 Analysis of Jupiter's deep jets combining Juno gravity and time varying magnetic field measurements. **Keren Duer** (WIS)
- 15:30-15:50 **Poster session** one minute introductions

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Session 4: Poster session

16:00-17:30 Poster session, coffee and beer

- P1 The salience of nonlinearities in the boreal winter response to ENSO: Arctic stratosphere and Europe. **Israel Weinberger** (HUJI)
- P2 Understanding vertical shear instability in protoplanetary accretion disks as a symmetric slantwise convection. **Ron Yelin** (TAU)
- P3 Rifting of spherical ice shells. **Roiy Sayag** (BGU)
- P4 Entrainment Effects: from cloud's core to the clouds' twilight zone. **Eshkol Eytan** (WIS)
- P5 Is the Speed of Ocean Surface Currents Weibull Distributed? **Kaushal Gianchandani** (HUJI)
- P6 Lagrangian experimental investigation of canopy flow turbulence. **Ron Schnapp** (TAU)
- P7 The relation between the Pacific jet spatial structure and the storm track: a clustering analysis perspective. **Janni Yuval** (WIS)
- P8 The dynamical environment of dry intrusion initiation. **Stav Nahum** (WIS)
- P9 A synoptic view of the mid-latitude QBO effect. **Vered Silverman** (WIS)
- P10 Precipitation-generated dynamic patterns: the self-organization of open cellular cells in deep clouds and their oscillations during winter Mediterranean cyclones. **Huan Liu** (WIS)
- P11 Is WRF-LES a good tool for studying the real clouds and their transition from shallow to deep convection in a Cyprus Cyclone? **Xiaoran Ouyang** (WIS)
- P12 Troposphere-Stratosphere coupling in S2S models and Its Importance for the European response to the MJO teleconnection. **Chen Schwartz** (HUJI)
- P13 Numerical study of low-frequency waves resonance on the Northern Israeli continental shelf. **Nir Haim** (TAU)
- P14 Impact of air-sea forcing on Southern Ocean sea ice variability around Indian- Antarctic stations. **Anurag Kumar** (BGU)
- P15 The surface temperature of Europa. **Yossi Ashkenazy** (BGU)
- P16 How deep is Jupiter's Great Red Spot? **Yohai Kaspi** (WIS)

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17:30-18:20 The equatorial undercurrent and pathways of flow in the abyss,
Keynote Lecture II **Joe Pedlosky**, WHOI

19:00-20:30 Dinner and music show by Yossi & his ensemble!

20:30-23:00 **Night activity** - Unofficial traditional night hike

Wednesday, Jan. 23, 2019

08:00-12:00 Visit to the solar field/tower in Ashalim and a short hike
(about 3km)

12:00-13:00 Lunch

13:10-14:00 Chaotic shocks: Instabilities developing in space and time,
Keynote Lecture III **Joe Pedlosky**, WHOI

Session 5: Ocean dynamics II

14:00-14:15 Infragravity wave generation by wind gusts. **Yaron Toledo** (TAU)

14:15-14:30 West versus East Mediterranean climate over the last millennium from
vermetid SST proxies and CMIP5/PMIP3 models.
Yael Amitai (WIS)

14:30-14:45 Odyssey of satellite-tracked drifters in the Levantine basin.
Hezi Gildor (HUJI)

14:45-15:15 Coffee break

15:15-15:30 Analytic test cases for global-scale shallow water models.
Nathan Paldor (HUJI)

15:30-15:45 Large-scale ocean circulation with a closed Drake passage: a laboratory
experiment. **Miklos Vincze** (MTA-ELTE Theoretical Physics Research
Group)

15:45-16:00 Manifestation of dissipative-centrifugal instability in mesoscale
cyclonical and anti-cyclonical currents in Lake Kinneret.
Ernst Uzhansky (Haifa)

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Session 6: Tropical atmospheric dynamics

- 16:00-16:15 Bifurcated ITCZ pattern. **Ori Adam** (HUJI)
- 16:15-16:30 The longitudinally localized Hadley circulation and its connection to the atmospheric instantaneous air motion. **Dana Raiter** (WIS)
- 16:30-16:45 Sensitivity of monsoon depression characteristics to the PBL parameterizations over the Indian subcontinent. **Deepika Rai** (WIS)
- 16:45-17:00 Changes in aerosols' size distribution and their effect on warm clouds. **Tom Dror** (WIS)
- 17:00-17:15 More frequent Sudden Stratospheric Warming events due to an expected stronger equatorial MJO in a future warmer climate. **Eli Tziperman** (Harvard)

17:35 BUS DEPARTURE

