



Ben-Gurion University of the Negev
The Jacob Blaustein Institutes for Desert Research

International Research Workshop of the Israel Science Foundation on

Advances in Pattern Formation: New Questions Motivated by Applications

Celebrating Ehud Meron's 65th birthday

February 18-21 (2019), Sede Boqer campus of
Ben-Gurion University of the Negev, Midreshet Ben-Gurion, Israel

The workshop aims to address cutting-edge advances and future prospects in a wide range of research fields where pattern formation phenomena play or are expected to play essential roles, such as:

- **Inanimate matter:** nematic elastomers, electrolytes, fluid dynamics, elasticity and buckling, granular media, wetting and thin films, spintronic nanowires
- **Systems biology:** Bacteria, cancer, hearing, cellular networks, actin oscillations and waves, somitogenesis, morphogenesis
- **Ecology:** Vegetation patterns and fronts, desertification, early-warning signals, restoration, biodiversity, vegetation-climate interactions
- **Analytical and numerical methods:** Bifurcation theory, localized states, nonlinear waves and fronts, dynamics near fast-slow manifolds, synchronization, gradient flow, stochasticity and fluctuations, numerical continuation

Organizing Committee:

Arik Yochelis, Ben-Gurion University of the Negev, chair
Erez Gilad, Ben-Gurion University of the Negev
Ehud Meron, Ben-Gurion University of the Negev
Yair Mau, Hebrew University
Hannes Uecker, University Oldenburg
Arjen Doelman, Leiden University

Workshop administrator:

Lilian Naaman, lilianna@bgu.ac.il

Confirmed invited speakers:

Alain Pumir, École Normale Supérieure Lyon
Alexander Nepomnyashchy, Technion
Arjen Doelman, Leiden University
Avraham Be'er, Ben-Gurion University of the Negev
Bernd Blasius, University of Oldenburg
Carsten Beta, Potsdam University
Damia Gomila, University of Balearic Islands
David Bensimon, École Normale Supérieure Paris
Dolores Bozovic, University of California Los Angeles
Eckehard Schöll, Technical University Berlin
Edgar Knobloch, University of California Berkeley
Emilio Hernandez-Garcia, University of Balearic Islands
Eran Sharon, Hebrew University
Gemunu Gunaratne, University of Houston
Hannes Uecker, University of Oldenburg
Herbert Levine, Rice University
Igor Aronson, Penn State University
Itamar Procaccia, Weizmann Institute of Science
Jens Rademacher, University of Bremen

Jost von Hardenberg, ISAC-CNR Torino
Katharina Krischer, Technical University Munich
Len Pismen, Technion
Mario Feingold, Ben-Gurion University of the Negev
Markus Bär, PTB and Technical University Berlin
Mary Silber, University of Chicago
Mogens Jensen, University of Copenhagen
Moshe Shachak, Ben-Gurion University of the Negev
Nadav Shnerb, Bar-Ilan University
Nir Gavish, Technion
Stanislav Shvartsman, Princeton University
Tasso Kaper, Boston University
Ulrike Feudel, University of Oldenburg
Uwe Thiele, University of Münster
Walter Zimmermann, University of Bayreuth
Yair Zarmi, Ben-Gurion University of the Negev
Yasumasa Nishiura, Tohoku University

Further information, registration & fellowships:

<https://ehudmeron.wixsite.com/patterns2019>

