

Ribes Networks School 3 Keynote
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The high-throughput revolution in movement ecology

Prof. Ran Nathan

The Hebrew University of Jerusalem, Department of Ecology, Behavior and Evolution,
ran.nathan@mail.huji.ac.il

Abstract

Movement shapes how animals interact, survive and thrive in a dynamic world. Technological advances are now transforming movement ecology into a big-data discipline, enabling rapid, cost-effective generation of large amounts of data on movements of animals in the wild. High-throughput systems provide new research opportunities beyond simply enlarging datasets and sample sizes, allowing thorough investigations of fine-scale variation among individuals, the true nature of biological interactions, behavioral decisions in response to the physical and anthropogenic environment, and behavioral shifts across spatiotemporal scales. In this talk, I will overview the emerging high-throughput technologies in movement ecology research, and present examples for biological insights uniquely gained from big high-resolution datasets, focusing on studies of birds and bats (and some fish) in particular.

Registration

This keynote speech is **an open and free event**, but you need to **register by sending an email to Daniel Nyqvist (daniel.nyqvist@polito.it) with subject: Participation RIBES NS Keynote**. Soon afterwards you receive the zoom link of the event. The presentation is about 45 minutes with 10-15 minutes discussion.

Feel free to share with your colleagues!

Organised by

Peter Goethals, Stijn Bruneel, Marie Anne Forio, Jelger Elings, Rachel Mawer, Ine Pauwels, Pieterjan Verhelst, Johan Coeck, Matthias Schneider, Ianina Kopecki, Daniel Nyqvist and Claudio Commoglio



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Ran Nathan

Department of Ecology, Evolution and Behavior, Alexander Silberman Institute of Life Sciences, the Hebrew University of Jerusalem, Jerusalem, Israel.



Bio-sketch

Prof. Ran Nathan is a full professor at the department of Ecology, Evolution and Behavior, the Hebrew University of Jerusalem. He studies various topics of movement ecology, ranging from dispersal of plants, through foraging and navigation of ants, fish and mostly birds and bats, to trans-continental migration and long-range forays of birds. Nathan initiated and led an international research group to develop *movement ecology* as a new integration of organismal movement research, and edited a highly-cited Special Feature introducing this new paradigm ([PNAS 2008](#)). He also founded the [Minerva Center of Movement Ecology](#) as the open access journal [Movement Ecology](#), and chaired the [2019 Movement Ecology of Animals Gordon Research Conference](#). His studies apply cutting-edge biotelemetry technologies to track movements and behaviors of thousands of free-ranging individuals of mostly bird and bat species, yielding exceptionally rich datasets and some groundbreaking results presented in >160 publications, including many highly-cited papers in top-ranked scientific journals.