

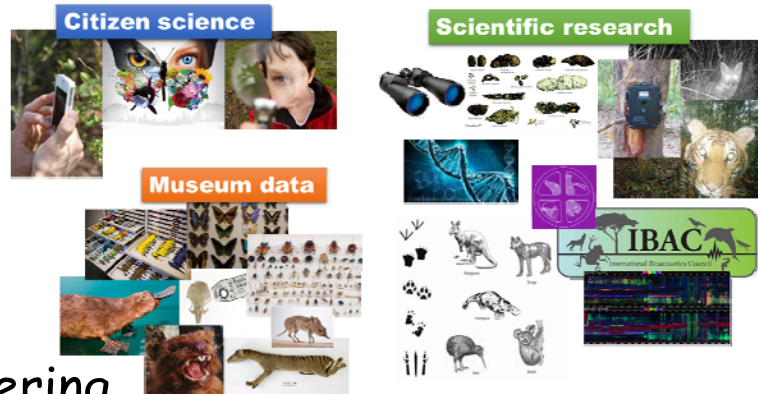


Ben-Gurion University of the Negev  
Jacob Blaustein Institutes for Desert Research  
The Swiss Institute for Dryland Environmental and Energy Research  
Mitrani Department of Desert Ecology

## Seminar

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Faculty of Civil and  
Environmental Engineering,  
Technion



Tuesday, December 18, 2018, 12:00

Seminar Room, Old Administration Building

Participants are invited to meet the seminar speaker at the MDDE meeting room immediately after the seminar (~ 13:00). Please bring your lunch; snacks will be provided.

## Ecological Research in the Era of Biodiversity Big-Data: Developing Tools and Methodology

The recent availability of species occurrence data from numerous sources (e.g., scientific research, citizen-science, and natural history collections), standardized and connected within a single portal has the potential to answer a staggering variety of research questions. Yet, biodiversity big-data (BBD) are prone to various data quality issues and biases, which may invalidate its usage in research. Furthermore, complex technical and analytical skills are increasingly required for handling BBD.

I develop a practical framework of tools and methodology to facilitate user-level data cleaning, using three channels: (i) pursuing scientific research — I used BBD to answer a major theoretical question in ecology; (ii) developing various methods for assessing the value of user-level data cleaning and its effect on data analysis, and (iii) developing [the bdverse](#) — a collection of R packages that promote data exploration, quality assessment, data cleaning, and standardization.

By adopting a more comprehensive approach for incorporating data cleaning as part of data analysis will not only improve the quality of biodiversity data, but will impose a more appropriate use of such data. This can greatly serve the scientific community and consequently our ability to address more accurately urgent conservation issues.