# Instructions and links for MatCont Modelling challenges in a changing climate and environment

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## 1 MATLAB online

- Users without MATLAB access can use the free online version at MATLAB Online.
- Download MatCont from SourceForge
- Copy the downloaded MatCont folder (MatCont7p6) to the MATLAB drive at MathWorks Drive (sign-in required; create an account if needed).
- To add the folder and its subfolders to the MATLAB path, right-click the folder → Add to Path → Selected Folder(s) and Subfolders.

# 2 MatCont Setup

- For Mac users: Install Xcode from Apple to enable MEX file execution in MatCont.
- Open the MatCont folder (MatCont7p6) to ensure MATLAB operates within this directory.
- Once everything is set up, type matcont in the Command Window. If the installation is successful, the MatCont GUI window should appear.

#### 3 Exercise

- Three MatCont tutorials are available online from the creators, covering:
  - 1. Numerical Integration,
  - 2. One-parameter Bifurcation Analysis,
  - 3. Bifurcation of Limit Cycles.
- For discrete-time systems, MatContM is required. Additional tutorials are available online for MatContM: Tutorial 1 and Tutorial 2.