

# cdem for macOS

## What programs are in this distribution?

This distribution of cdem for macOS contains two programs:

1. cdem by Nestor Cardozo and Stuart Hardy: A macOS application for discrete element modeling of geological structures and their associated deformation. This is a fully functional program for setting up, running, and visualizing DEM simulations. Check [Cardozo and Hardy \(2023\)](#) to find out how the program works. Also, the program has a good documentation (Help -> Documentation menu).
2. cdem2D by Stuart Hardy: A terminal, command-based program to run DEM simulations. This program is not as intuitive to use as cdem by it is more powerful. Instructions are provided (instructions.pdf), as well as a list of the parameters that go into the input file (runtime\_parameters.pdf). Examples are included in the examples folder. The best way to get familiar with the program is to run one (or several) of these examples. Before running an example, look at its readMe.pdf file to get an idea about the simulation and the output you should expect.

## How do I visualize the results from cdem2D?

When you run a cdem2D simulation, it will produce a group of modelresults text files, 1 per output increment. You can visualize and analyze these results using cdem:

1. Use the File -> Import cdem2D simulation menu
2. Navigate to the folder where the increments are
3. Click Open
4. The increments will be imported and displayed in cdem.

Once the increments are imported, you can explore and play the model as if it were a native cdem simulation.

## Be kind and tell us you are using these programs

Developing programs takes thousands of hours. As much as we like this activity and want to make our work available to the community, we don't like people taking our work for granted. Please let us know by [email](#) you are using the software and how you are using it. This is not only rewarding for us, but it can help us showing others (our bosses, family, etc.) how meaningful our work is.

## Do these programs work in Windows?

This distribution does not work in Windows. However, Stuart Hardy has written a fully functional DEM program for Windows called cdem2DDesktop. Contact [Stuart](#) to find more about this program.