***List and description of all the files***

**Initializing**

- setup creates the food web, sets all the parameters values (static and dynamic ones) and the initial conditions for biomasses and efforts.

- NicheModel function called by “setup.m” that takes the number of species and the connectance as inputs and calculates a “nicheweb” matrix of feeding links (rows eat columns).

- metabolic\_scaling function called by “setup.m” that calculates the trophic levels of every species, then their body-size and finally their metabolic rates.

- func\_resp\_scaling function called by “setup.m” that calculates the parameters values for the functional response: half saturation density and predator interference.

**Dynamics**

- dynamic\_fn function that takes all the web parameters as inputs and solves the differential equations using the “ode45” function. It takes into account the extinction threshold.

- biomass function called by the “ode45” function that calculates the derivatives of the biomasses and the efforts as a unique array dx/dt.

- gr\_func function called by “biomass.m” to calculate the growth vector for the biomasses, using the ATN equations.

**Analysis**

- isConnected function that takes the food web matrix as input and determines whether the graph is connected (no isolated species, no partitioning into several isolated sub-webs).

- web properties function that takes the food web matrix as input and calculates the 17 structural properties of a web.

- local properties function that tales the food web matrix and some selected species and calculates the structural properties of the web around those species (vulnerability, generality, of their prey, of their predators…)

**Simulations**

- webdriver creates a web, solves the ODEs, calculates the final equilibrium and plots the biomasses and efforts. Launch this one for a first try…

- webdriver\_Efix\_halfdensity protocol for the study of harvesting complex webs with a fixed effort over time (calculates the effort that is required to divide by two the harvested species abundance).