

# Supplementary Material

## (Radially Evolving Spiral Wave Patterns in the Gierer-Meinhardt Reaction-Diffusion Model)

Tarpan Maiti, Achal Jadhav, and Pushpita Ghosh\*

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### Data availability

Data for this article, including the codes and data sets are available at <https://github.com/MaitiT6/SpiralWave>.

### Videos

#### 1 Video

**Movie1:** The temporal profile for the activator concentration ( $u$ ) for the Gierer-Meinhardt reaction-diffusion model shows the possibility of obtaining a spiral wave-like pattern. The parameter values are  $D = 0.25$ ,  $\mu = 0.37$ , and  $\sigma = 0.2$ . Total box length ( $L_x = L_y$ ) = 200. Grid spacing ( $\delta x = \delta y$ ) = 1 and time step ( $dt$ ) = 0.001. Boundary condition is zero-flux. The observed spiral is rotating inwardly in an anticlockwise manner with respect to time while spatially it is clockwise.

#### 2 Video

**Movie2:** The temporal profile for the activator concentration ( $u$ ) for the Gierer-Meinhardt reaction-diffusion model. The parameter values are  $D = 0.25$ ,  $\mu = 0.37$ , and  $\sigma = 0.2$ . Total box length ( $L_x = L_y$ ) = 300. Grid spacing ( $\delta x = \delta y$ ) = 1 and time step ( $dt$ ) = 0.001. Boundary condition is zero-flux. There are four spiral sources. Interestingly, all of them are rotating in an anticlockwise manner.

#### 3 Video

**Movie3:** The temporal profile for the activator concentration ( $u$ ) for the Gierer-Meinhardt reaction-diffusion model. The parameter values are  $D = 0.25$ ,  $\mu = 0.37$ , and  $\sigma = 0.2$ . Total box length ( $L_x = L_y$ ) = 400. Grid spacing ( $\delta x = \delta y$ ) = 1 and time step ( $dt$ ) = 0.001. Boundary condition is zero-flux. There are several spiral sources, some of which rotate in an anticlockwise direction and others in a clockwise one.

#### 4 Video

**Movie4:** The temporal profile for the activator concentration ( $u$ ) for the Gierer-Meinhardt reaction-diffusion model. The parameter values are  $D = 0.25$ ,  $\mu = 0.37$ , and  $\sigma = 0.2$ . Total box length ( $L_x = L_y$ ) = 800. Grid spacing ( $\delta x = \delta y$ ) = 1 and time step ( $dt$ ) = 0.001. Boundary condition is zero-flux. There are several spiral sources, some of which rotate in an anticlockwise direction and others in a clockwise one.