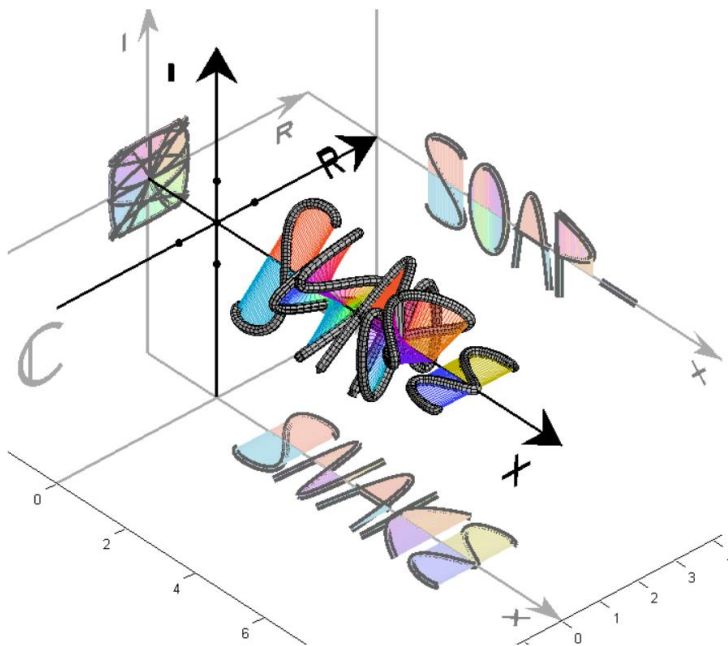


# SNAKE

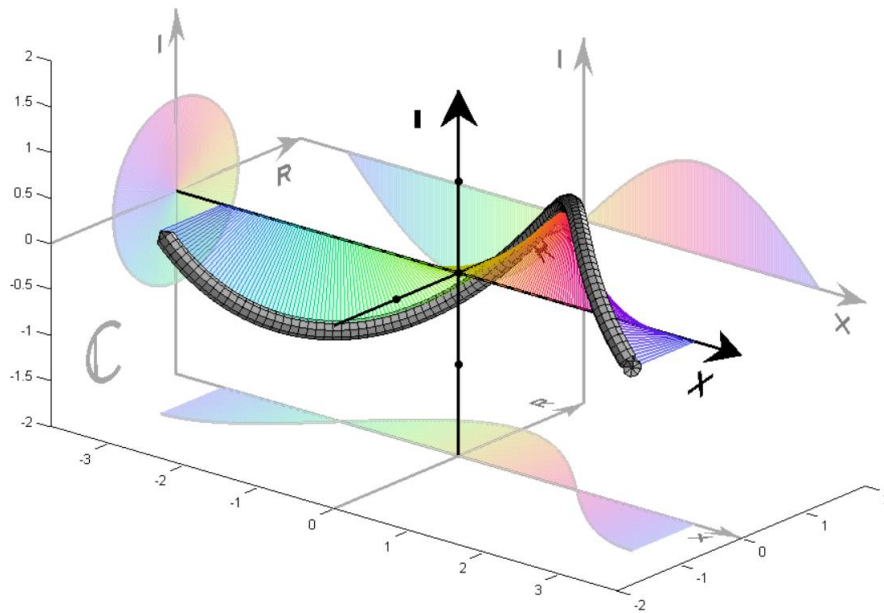
## Visualizing complex-valued 1D functions

Sometimes two separate plots of the real and the imaginary part of a complex-valued function, may not quite reveal the actual complex dynamics, such as visualized below:

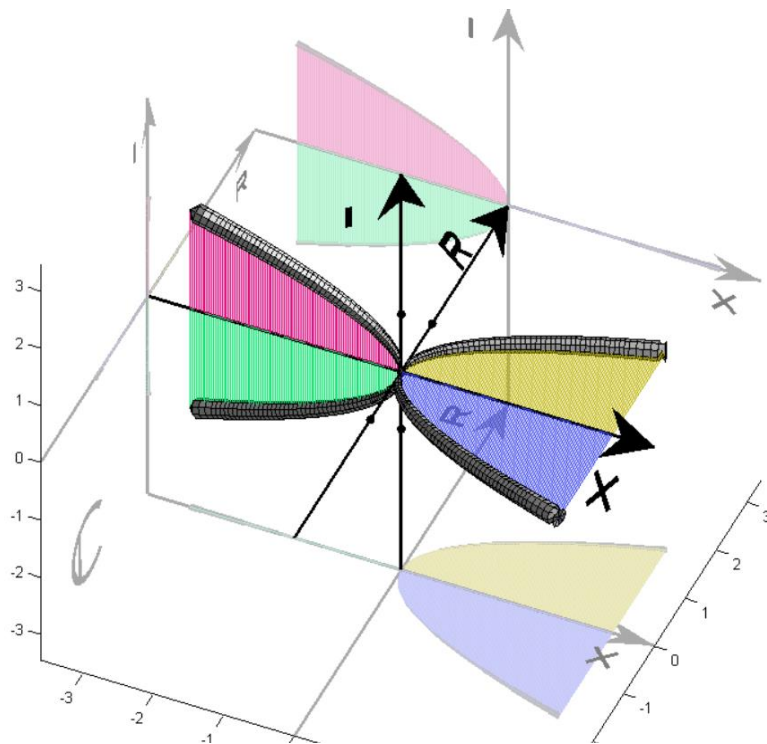


The script **soapSnake.m** visualizes a complex valued function in 3D, in combination with the real projection, the imaginary projection, and the projection in the complex plane.

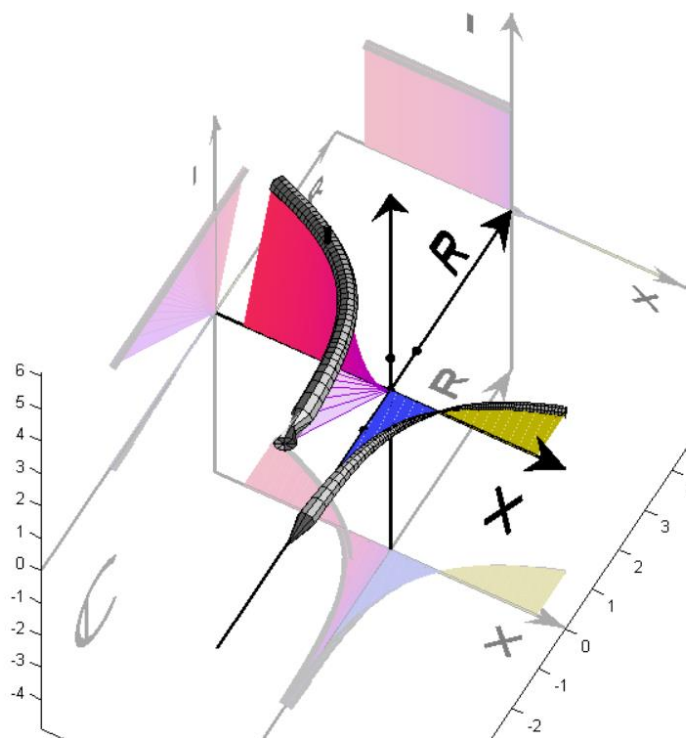
**Example 1: Euler's formula**  $f(x) = \exp(ix) = \cos(x) + i \sin(x)$



**Example 2:  $f(x) = \pm\sqrt{x}$**



**Example 3:**  $f(x) = \log(x)$



**Example 4:**  $f(x) = x^x$

