

# Systemy CAD/CAE

## Zadanie 5

Krzysztof Solecki

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### Zmiany w kodzie:

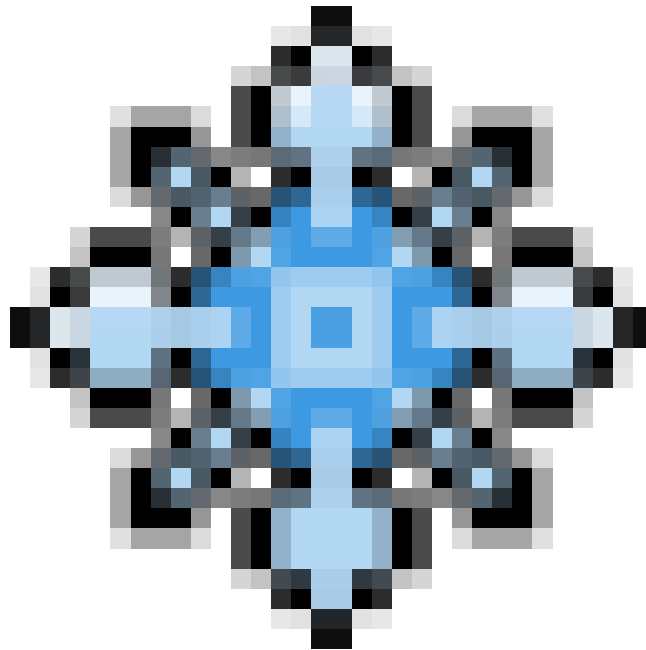
```
img = imread("snowflake.png");
img = padarray(img, [1, 1], 0, 'both');
isize = size(img,1);
knot_vectorx=0:isize-1;
knot_vectorx(1:3) = 0;
for i = 4:isize
    knot_vectorx(i) = i-3;
end
knot_vectorx(end-2 : end) = isize-5;
knot_vectorx = knot_vectorx;
```

```
% Put the initial state into u
% u = project2d(init_state, bx, by);
u = im2double(rgb2gray(img));
```

```
outputGif = 'output.gif';
for i = 0:1:100
    filename = sprintf('out_%d.png', i);
    img = imread(filename);
    [A, map] = rgb2ind(img, 256);

    if i == 0
        imwrite(A, map, outputGif, 'GIF', 'LoopCount', inf, 'DelayTime', 0.1);
    else
        imwrite(A, map, outputGif, 'GIF', 'WriteMode', 'append', 'DelayTime',
0.1);
    end
end
end
```

Użyta bitmapa:



Użyte parametry symulacji:

```
% Input data
knot = knot_vectorx;
dt = 0.0001;           % time step size
theta = 0;             % scheme parameter (0 - explicit Euler, 1 -
implicit Euler, 1/2 - Crank-Nicolson)
K = 100;               % number of time steps
```

Kilka bitmap rysunków z przebiegu symulacji:

