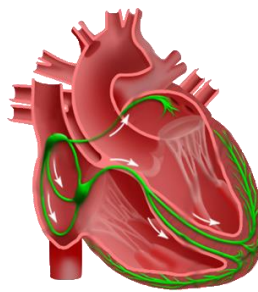


Theme 1

Heart



**Implantable
Cardiac
Device**



Model Checking

Non-
deterministic



UPPAAL
Model

Theme 2

Refinement



UPP2SF
Model Translation



Simulation

Deterministic



Stateflow
Chart

Theme 3

HDL Coder



Simulink Coder



**in-silico Pre-clinical
Trials**

FPGA
implementation



C Code
implementation

Theme 4