



Software **RBniCS**



Nonlinear numerical analysis
Von Kármán equations (VK)



- **Bifurcation**
- **Branching**
- **Loss of uniqueness of the solution of VK equations**



Vibroacoustic model based on VK equations and applications

Reduced Order Methods



- **A posteriori error bounds**
- **Generalized reduced eigenvalue problems**
- **Efficient nonlinear solvers**



- **Efficient geometrical parametrization**
- **Efficient coupling between different physics**



Timeline

September 2017

May 2018

January 2018

August 2018

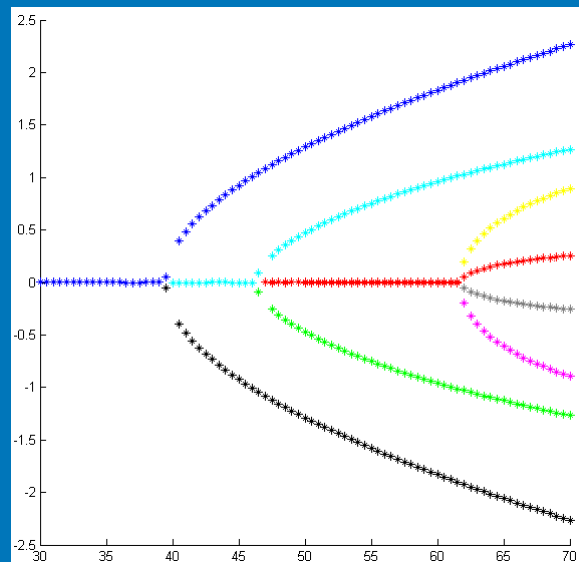
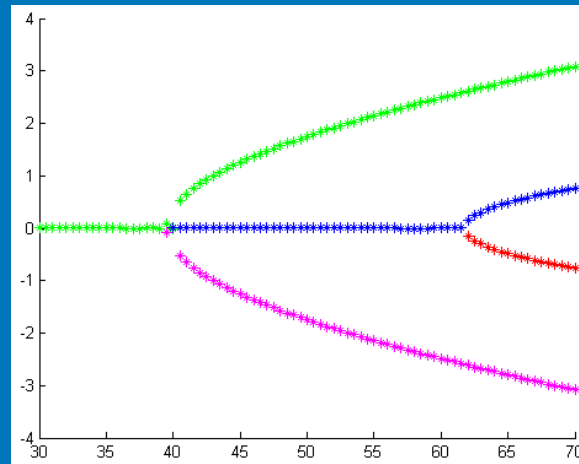
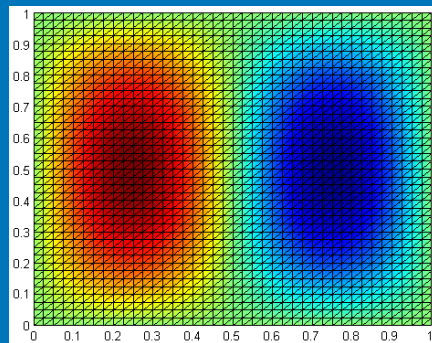
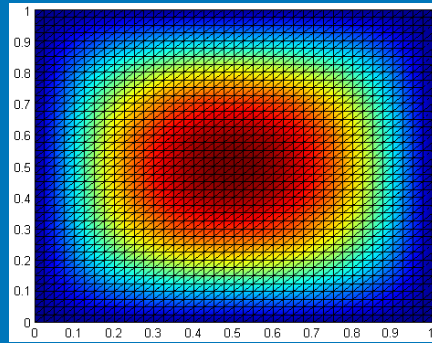
Related Projects on **Reduced Order Methods**



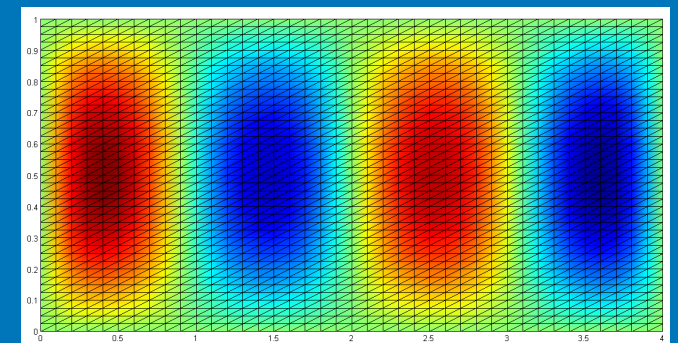
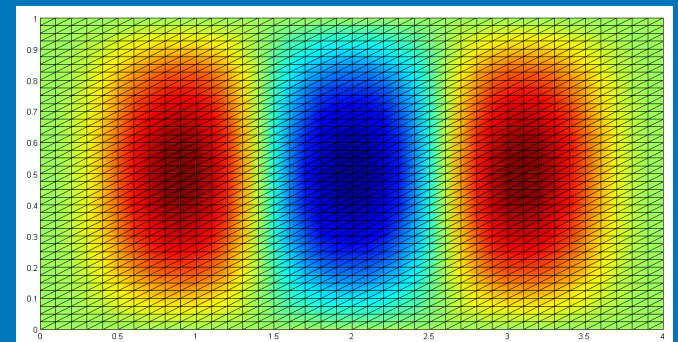
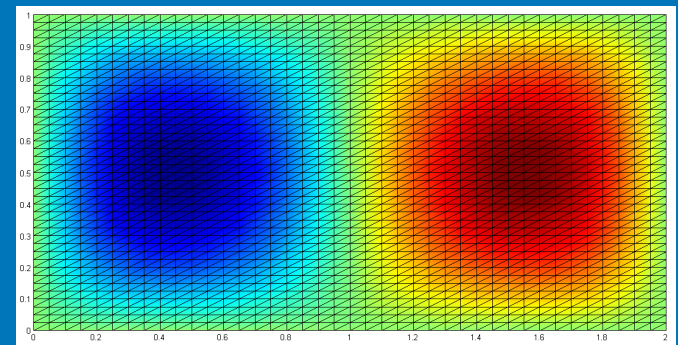
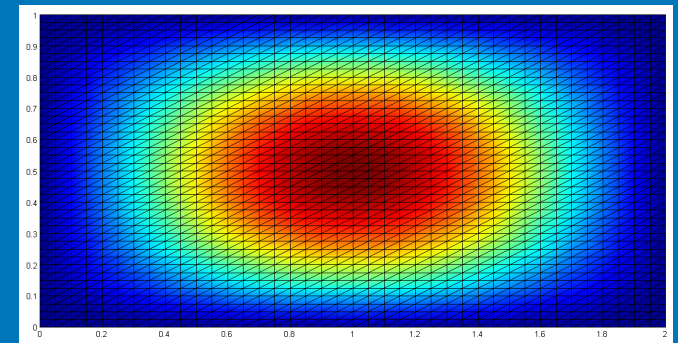
Potential Impact and Future Applications

- Noise mitigation in Naval/Nautical industry
- Frequency response analysis in Mechanics

Square plate



Rectangular plate



**Bifurcating phenomena
in Von Kármán equation**