

FINITE ELEMENT ANALYSIS II

Modelization of hyperelastic behavior of the brain

Mathieu Simon

MSc - Biomedical Engineering
University of Bern, Faculty of Medicine

May 26, 2020

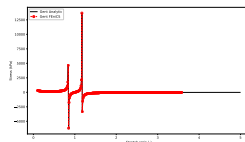
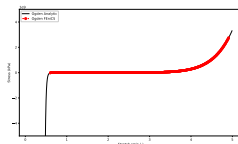
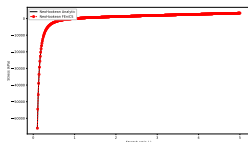
Overview

1. FE vs Analytic - Comparative Plots

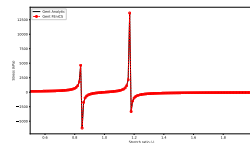
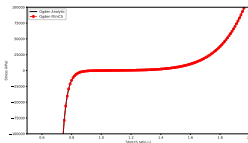
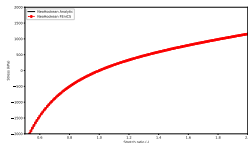
- Incompressible Models
- Compressible Models

Incompressible Models

General



Zoom



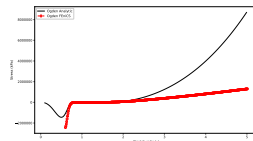
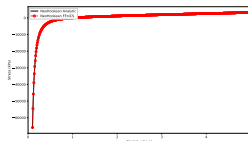
Neo-Hookean

Ogden

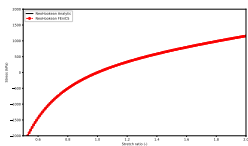
Gent

Compressible Models

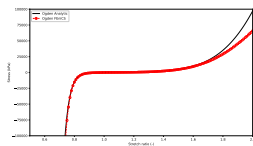
General



Zoom



Neo-Hookean



Ogden

Compressible Ogden Sensitivity

