

**Seminar of the Chair of Optimization and Control  
under prof. Denkowski & prof. Migórski  
winter semester 2014-2015, Thursday  
10:15 - 11:45, room 1177**

- **16 października 2014**

dr Marcin Ciecholewski: Shape segmentation in digital images and object tracking in video streams using edge-based active contour model.

- **23 października 2014**

dr hab. Leszek Gasinski: Hemivariational approach in modeling contact problems with multivalued constitutive law, I.

- **30 października 2014**

dr hab. Leszek Gasinski: Hemivariational approach in modeling contact problems with multivalued constitutive law, II.

- **6 listopada 2014**

dr Piotr Kalita: A Class of Subdifferential Inclusions for Elastic Unilateral Contact Problems, I.

- **13 listopada 2014**

Krzysztof Hajto: Elements of Classical Control Theory.

- **20 listopada 2014**

dr Piotr Kalita: A Class of Subdifferential Inclusions for Elastic Unilateral Contact Problems, II.

- **27 listopada 2014**

Paweł Szafraniec: Nonlinear evolution equations with nonmonotonic perturbations, I.

- **4 grudnia 2014**

Paweł Szafraniec: Nonlinear evolution equations with nonmonotonic perturbations, II.

- **11 grudnia 2014**

Prof. Mikaël Barboteu, University of Perpignan Via Domitia: A Hyperelastic Dynamic Frictional Contact Model with Energy-Consistent Properties. Abstract: In

this work, we present an energy-consistent numerical model for the dynamic frictional contact between a hyperelastic body and a foundation. Our contribution has two traits of novelty. The first one arises from the specific frictional contact model we consider, which provides intrinsic energy-consistent properties. The contact is modeled with a normal compliance condition of such a type that the penetration is limited with unilateral constraint and friction is described with a version of Coulomb's law of dry friction. The second trait of novelty consists in the construction and the analysis of an energy-consistent scheme, based on recent energy-controlling time integration methods for nonlinear elastodynamics. Some numerical results for representative impact problems are provided. They illustrate both the specific properties of the contact model and the energy-consistent properties of the numerical scheme.

- **18 grudnia 2014**

Andrzej Piotrkowski: Useful tools to create a modern website.

- **8 stycznia 2015**

Krzysztof Byrski: Algorytmy klasteryzacji oparte na teorii Cross Entropy Clustering'u. Omówienie, przykłady działania oraz efektywna implementacja, I.

- **15 stycznia 2015**

Renata Wieteska, Instytut Matematyki Politechniki Łódzkiej: Multiple solutions for periodic problem.

- **22 stycznia 2015**

Krzysztof Byrski: Algorytmy klasteryzacji oparte na teorii Cross Entropy Clustering'u. Omówienie, przykłady działania oraz efektywna implementacja, II.