## 10<sup>th</sup> Conference on Dynamical Systems - Theory and Applications

DSTA-2009, December 7-10, Łódź, Poland

## Roman Starosta, Grażyna Sypniewska – Kamińska

Poznan University of Technology, Institute of Applied Mechanics, POLAND

## Jan Awrejcewicz

Department of Automatics and Biomechanics, Technical University of Łódź, POLAND

## Resonances in Kinematically Driven Nonlinear Spring Pendulum

*Abstract*: The weakly non-linear 2-DOF mechanical system parametrically and externally excited is studied. Multiple scales method application allows recognizing resonances occurring in the system. The amplitude response functions for chosen cases are studied and illustrated.