



Institute of Physics of the  
Czech Academy of Sciences

**SEMINAR**

**27. 07. 2021 at 10:00**

**Meeting Room 72C, Na Slovance 1999/2, Prague 8**

**and Online Meeting Room: <https://webmeeting.fzu.cz/b/iap-ez3-zty>**

## **Elizaveta Iaparova**

Department of Functional Materials, Division of Condensed Matter Physics

# **The effect of austenitic microstructure on reorientation, transformation and yield stress of NiTi wire in tensile test**

## **A Short Overview of my Research**

Shape memory alloys are materials that exhibit the unique ability to recover strain after heating, as well as fully cover strain after unloading when it is deformed at a high temperature. Shape memory alloys are widely used in applications ranging from the aerospace and naval engineering to microactuators, electronics and medical surgery. The behavior of these materials and their properties are determined by the microstructure, which is highly dependent on the annealing parameters.

In my presentation, I will show some of the results of my work on thin NiTi wires with different grain sizes, deformed under tensile stress to failure, and demonstrate how the reorientation, transformation and yield stress depend on the microstructure.

This event is supported by ESIF and MEYS

(Project FZU researchers, technical and administrative staff mobility – CZ.02.2.69/0.0/0.0/18\_053/0016627)



EUROPEAN UNION  
European Structural and Investment Funds  
Operational Programme Research,  
Development and Education



MINISTRY OF EDUCATION,  
YOUTH AND SPORTS