



ADMISSION TO DOCTORAL STUDIES  
September 2022

Session

Field of doctoral studies: Mechanical Engineering  
Doctoral supervisor: Scutaru Maria Luminița

TOPICS FOR THE ADMISSION TO DOCTORAL STUDIES

TOPIC 1: *Contributions to the study of mechanical energy dissipation in fiber-reinforced composites*

Recommended bibliography:

1. Lemaitre J. Handbook of Materials Behavior Models. Academic Press; Cambridge, MA, USA: 2001.
2. Talreja R., Singh C.V. Damage and Failure of Composite Materials. Cambridge University Press; Cambridge, UK: 2012.
3. Wang H.W., Zhou H.W., Gui L.L., Ji H.W., Zhang X.C. Analysis of effect of fiber orientation on Young's modulus for unidirectional fiber reinforced composites. Compos. Part B Eng. 2014

TOPIC 2: *On the stability of mechanical systems with two degrees of freedom*

Recommended bibliography:

1. Huston, R.L., - Multibody dynamics. Butterworth-Heinemann, 1990
2. Maria Luminita Scutaru - Mecanica -Dinamica. Teorie și aplicații, Editura Universității Transilvania Braşov, ISBN 978-606-19-0443-3.
3. Timoshenko, S.P., Gere, J.M., Theory of Elastic Stability, Dover Publication Inc., Mineola, New York, 2009.

TEMA 3: *Properties of phases of multiphases composite determined using overall measurements*

Bibliografie recomandată:

1. Lemaitre J. Handbook of Materials Behavior Models. Academic Press; Cambridge, MA, USA: 2001.
2. Talreja R., Singh C.V. Damage and Failure of Composite Materials. Cambridge University Press; Cambridge, UK: 2012.
3. Wang H.W., Zhou H.W., Gui L.L., Ji H.W., Zhang X.C. Analysis of effect of fiber orientation on Young's modulus for unidirectional fiber reinforced composites. Compos. Part B Eng. 2014

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Coordinator of the field  
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Signature

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