Universitatea Transilvania din Brașov

Interdisciplinary Doctoral School

ADMISSION TO DOCTORAL STUDIES Session September 2024

Field of doctoral studies: MECHANICAL ENGINEERING
Doctoral supervisor: Prof. Dr. Eng. Simona Lache

TOPICS FOR THE ADMISSION TO DOCTORAL STUDIES

TOPIC 1: Mechanical structures with variable stiffness
Recommended bibliography: 1. Daynes, S., Weaver, P.M., 2013, Stiffness tailoring using prestress in adaptive composite structures, Composite Structures Vol. 106, pp. 282–287; 2. Kuder, I.K., Arrieta, A.F., Raither, W.E., Ermanni, P., 2013, *Variable stiffness material and structural concepts for morphing applications, Progress in Aerospace Sciences*, Vo. 63, pp. 33-55; 3. Overvelde, J. T. B., Weaver, J. C., Hoberman, C., Bertoldi, K., 2017, *Rational design of reconfigurable prismatic architected materials*, Macmillan Publishers Limited, part of Springer Nature; 4. Santer, M., Pellegrino, S., 2008, Compliant multistable structural elements, International Journal of Solids and Structures Vol. 45, pp. 6190–6204. 5. Zenkert, D., 1997, The handbook of sandwich construction, EMAS Publ.
Prerequisites: good knowledge of Strength of Materials and Elasticity Theory; Finite Element Method.
☑ **Scientific Doctorate (full-time only)** ☐ **Professional Doctorate – in the fields of Music and Science of sport and physical education (full-time or part-time)**
☑ **without tuition fee (state budget funded)** ☐ **with tuition fee or with funding from other sources than the state budget**

Doctoral supervisor, **Coordinator of the field of doctoral studies,**

Prof. Dr. Eng. Simona Lache Prof. Dr. Eng. Sorin Vlase

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