

Universitatea Transilvania din Braşov

Facultatea de Inginerie mecanică

Departamentul de Inginerie mecanică

Tematica propusă pentru admiterea la doctorat Septembrie 2019

Domeniul de doctorat: Inginerie mecanică

Conducător de doctorat: Prof. dr. ing. Simona Lache

Tema: **Structuri mecanice cu rigiditate variabilă**

Bibliografie*:

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, Vol. 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.

* Bibliografia se poate furniza, la cerere, de către conducătorul științific al temei.

Precondiții - cunoștințe de Rezistența materialelor și teoria elasticității; Metoda elementelor finite.

Prof. dr. ing. Simona Lache



Transilvania University of Braşov

Faculty of Mechanical Engineering

Department of Mechanical Engineering

Proposed topic for doctoral studies admission contest – September 2019

Doctoral field: Mechanical Engineering

Doctoral coordinator: Prof. dr. ing. Simona Lache

Topic: **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.

* The bibliography can be provided on request by the scientific supervisor.

Prerequisites - good knowledge of Strength of Materials and Elasticity Theory; Finite Element Method.

Prof. dr. ing. Simona Lache

