

**Universitatea Tehnică din Cluj-Napoca**  
**Facultatea Construcții de Mașini**  
**Departamentul Ingineria Sistemelor Mecanice**  
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**LISTA**  
**Iucrărilor științifice în domeniul disciplinelor din postul didactic**

A – Teza de doctorat

**Titlul tezei: Cercetări și contribuții privind modelarea preciziei robotilor cu structură serială**

**Conducător științific: Prof. Dr. Ing. Iuliu NEGREAN**

**Universitatea Tehnică din Cluj-Napoca**

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B – Cărți și capitole în cărți

**Cărți**

1. Brad, S., Mocan, B., Duca, A., Brad, E., “Robotizarea asistată de calculator a fabricației”, Editura UTPress, Cluj – Napoca, 2008, ISBN 978-973-662-361-5.
2. Negrean, I., Duca, A., Negrean, C., Kacso, K., „Mecanică avansată în robotică”, Editura UT Press, 2008, ISBN 978-973-662-420-9, 431 p.
3. Negrean, I., Schonstein, C., Kacso, K., Duca, A., „Mecanică. Teorie și aplicații”, Editura UT PRESS, ISBN 978-973-662-523-7, Cluj-Napoca, 2013, 544 p.
4. Negrean, I., Kacso, K., Schonstein, C., Duca, A., „Mechanics. Theory and applications”, Editura UT PRESS, ISBN 978-606-737-061-4, Cluj-Napoca, 2015, 431 p.

**Capitole din cărți**

1. Crișan(Duca), A., Rusu, F., Morariu Gligor, R., Kacso, K., „Organe de masini. Metodologie de predare a disciplinei la diferite specializari”, Editura Risoprint, ISBN 978 - 973 - 53 - 1793 – 5, Cluj – Napoca, România, 2016, 44 p.

C – Lucrări indexate ISI/BDI

1. Negrean, I., Negrean, C., Kacso K., **Duca, A.**, *New Formulations about Dynamics of Robots*, Proceedings of AQTR 2008 IEEE-TTTC (THETA 16), International Conference on Automation, Quality and Testing, Robotics, Tome II , pp. 371-376, Cluj-Napoca, Romania, May 2008.
2. Brad, S., Fulea, M., Mocan, B., **Duca, A.**, Brad, E., *Software Platform for Supporting Open Innovation*, International Conference AQTR, 2008, ISBN 978-1-4244-2576-1, DOI: 10.1109/AQTR.2008.4588916, pp. 371 – 376, Cluj – Napoca, România.

3. Negrean, I., **Duca A.**, Negrean, D.C., Kacso K., New Formulations on Acceleration Energy in the Robot Dynamics, Proceedings of the 10<sup>th</sup> IFToMM International Symposium on Mechanisms and Machines, SYROM 2009, Brașov, Romania, pages 351-364, Editor Springer Science + Business Media, Brasov, 2010, DOI 10.1007/978-90-481-3522-6\_28.
4. Negrean, I., Schonstein, C., Negrean, D.C., Negrean, A.S., **Duca, A.**, Formulations in Robotics based on Variational Principles, Proceedings of AQTR 2010, IEEE-TTTC (THETA 17), Tome 1, pp. 281 – 286.
5. Negrean, I., Vușcan, I., Schonstein, C., Kacso, K., **Duca, A.**, Negrean, C., „*Dynamics of Hybrid Robot Structures Using Variational Principles*”, The 5-th International Conference, Robotics 2010, Cluj-Napoca, Romania, 23-25 September 2010 Published in the Robotics and Automation Systems, Volumes 166-167 of Solid State Phenomena, ISSN 1012-0394, pp. 303-308.
6. Negrean, I., Schonstein, C., Kacso, K., Negrean, C., **Duca, A.**, „*Formulations about Dynamics of Mobile Robots*”, The 5-th International Conference, Robotics 2010, Cluj-Napoca, Romania, 23-25 September 2010 Published in the Robotics and Automation Systems, Volumes 166-167 of Solid State Phenomena, ISSN 1012-0394, pp. 309-314.
7. Negrean, I., Schonstein, C., Kacso, K., **Duca, A.**, „*Kinematical Control Functions for a 2TR Type Robot,*” Acta Technica Napocensis, Series: Applied Mathematics and Mechanics, Nr. 53, Vol. III, 2010, ISSN 1221-5872, pp. 433-438, Cluj-Napoca, Romania.
8. Negrean, I., Schonstein C., Kacso, K., Negrean, C., **Duca, A.**, *Matrix Exponentials and Differential Principles in the Dynamics of Robots*, 13th World Congress in Mechanism and Machine Science, Guanajuato, México, 19-25 June, 2011.
9. Negrean, I., Schonstein, C., Kacso, K., **Duca, A.**, Formulations in Advanced Dynamics of Mechanical Systems, Springer International Publishing, DOI: 10.1007/978-3-319-01845-419, 2012, pp. 185 – 195.
10. Negrean, I., Schonstein, C., Z. Szoke, Kacso, K., **Duca, A.**, Dynamic Modeling of the Hybrid Robots Structures, Proceedings of AQTR 2012 IEEE-TTTC (THETA 18), ISBN: 978-1-4673-0703-1.
11. Negrean, I., Schonstein, C., **Duca, A.**, Dynamic Model for the Mobile Robot RmITA, Acta Technica Napocensis, Series: Applied Mathematics, Mechanics and Engineering, ISSN 1221-5872, Vol.57, Issue II, 2014, pp. 159 – 164
12. Negrean, I., Kacso, K., Schonstein, C., **Duca, A.**, Energies of Accelerations in Advanced Robotics Dynamics, The VI-th International Conference on Robotics (ROBOTICS 2014), Applied Mechanics and Materials, ISSN: 1662-7482, 2014.
13. Negrean, I., Kacso, K., Schonstein, C., **Duca, A.**, Rusu, F., Cristea, F., Haragâş, *New Formulations on Motion Equations in Analytical Dynamics / The third International Conference of Mechanical Engineering, ICOME 2015*, ISI journal, Volume 823 of Applied Mechanics and Materials (Trans Tech Publishing House,

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15. Merie V.V., Şerdean M.F., Burnete N.V., **Crişan A.V.**, Crăciun S.I., *Deposition Temperature Influence on the Mechanical Properties of Niobium Nitride Thin Films*, Acta Technica Napocensis Series: Applied Mathematics and Mechanics, Vol. 60, Issue IV, 2017, pp. 585-590, Cluj-Napoca.
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17. Morariu – Gligor R., **Crişan A.V.**, Şerdean M.F, *Optimal Design of an One Way Plate Compactor*, Acta Technica Napocensis Series: Applied Mathematics and Mechanics, Vol. 60, Issue IV, 2017, pp. 557-564, Cluj-Napoca.
18. Şerdean M.F, Morariu – Gligor R., **Crişan A.V.**, *Enhanced KGCS for Engineering Design*, Acta Technica Napocensis Series: Applied Mathematics and Mechanics, Vol. 60, Issue IV, 2017, pp. 621-626, Cluj-Napoca.
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21. Negrean I., **Crişan A.V.**, *Matrix Exponentials in Robot Elastokinematics*, Acta Technica Napocensis Series: Applied Mathematics and Mechanics, Vol. 62, Issue I, 2019, ISSN 1221-5872, pp. 33-40 Cluj-Napoca.
22. Deteşan, O.A., **Crişan A.V.**, *Geometric Model Of FANUC LR Mate 100IB Considering The Dimensional And Generalized Coordinates Errors*, Acta Technica Napocensis Series: Applied Mathematics and Mechanics Vol. 62, Issue I, 2019, ISSN 1221-5872, pp. 57 - 62, Cluj-Napoca.
23. Deteşan, O.A., **Crişan A.V.**, *A Theoretical Approach On Determining The Geometrical Errors In Case Of Articulated Robot Structures*, Acta Technica Napocensis Series: Applied Mathematics and Mechanics Vol. 62, Issue I, 2019, ISSN 1221-5872, pp. 63-70, Cluj-Napoca.
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