

LISTA DE LUCRĂRI

Prof. Univ. Dr. Ing. Eugen TRANĂ

A. Listă de lucrări reprezentative

1. Waldemar A. Trzcinski, Qi-Long Yan, Stanislaw Cudzilo, **Eugen Trană**, Liviu Matache, Traian Rotariu, Robert Matyas, Svatopluk Zeman, Michael Gozin, „*Thermobaric effects formed by aluminium foils enveloping cylindrical charges*”, Combustion and Flame, ISSN 0010-2180, vol.166, pp. 148-157, 2016, DOI 10.1016/j.combustflame.2016.01.010
2. **Eugen TRANĂ**, Adrian N. ROTARIU, Traian ROTARIU, Bogdan Gh. PULPEA, Cristian E. MOLDOVEANU , Florina BUCUR , Liviu C. MATACHE, Michael GOZIN, *Experimental study on aluminum foils use in blast enhancement application*, Proceedings of the Romanian Academy, Series A, ISSN 1454-9069, vol.20, no.3, pp.275-282
3. **Eugen Trană**, Florina Bucur, Adrian-Nicolae Rotariu, *On the fragmentation of explosively-driven plastic/steel layered cylinders*, Materiale Plastice, ISSN 2668-8220, vol.55 (4), 2018, pp. 521-523
4. Rotariu Adrian, **Trană Eugen**, Dima Cornel, Enache Constantin, Timplaru Florin, Matache Liviu, “*Uninstrumented measurement method for granular porous media blast mitigation assessment*”, Experimental Techniques, ISSN 0732-8818 (Online ISSN: 1747-1567), vol.40, issue 3, pp. 993-1003, 2016, DOI 10.1007/s40799-016-0099-4
5. **Eugen TRANĂ**, Adrian-Nicolae Rotariu, Paul Lixandru, Liviu-Cristian Matache, Constantin Enache, Teodora Zecheru, „*Experimental and numerical investigation on 6082 O temper aluminium alloy cartridge tubes drawing*”, Journal of Materials Processing Technology, ISSN 0924-0136, vol.216, pp. 59-70, 2015, DOI 10.1016/j.jmatprotec.2014.08.32
6. Florina Bucur, **Eugen Trană**, Adrian Rotariu, Adinel Gavruş, Cristian Barbu, Dominique Guines, *Experimental and numerical analysis concerning the behaviour of OL50 steel grade specimens coated with polyurea layer under dynamics loadings*, THE EUROPEAN PHYSICAL JOURNAL CONFERENCES, ISSN 2100-014X, vol.94/ 2015, DOI: 10.1051/epjconf/20159404044
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8. Constantin Enache, **Eugen Trană**, Traian Rotariu, Adrian Rotariu, Viorel Tudor Țigănescu, Teodora Zecheru, “*Numerical simulation and experimental*

tests on explosively-induced water jets phenomena”, Propellants, Explosives, Pyrotechnics, ISSN 0721-3115 (Online ISSN: 1521-4087), vol.41(6), pp. 1020-1028, 2016, DOI 10.1002/prop.201500322

9. **Eugen Trană**, Adrian Rotariu, “*Aspects regarding mechanical properties of a triple base propellant and their influence on interior ballistic cycle*”, MTA review, vol. XXIV, no.2/2014, pp. 83-89, ISSN 1843-3391
10. Rotariu, A.-N., Matache, L., Bucur, F., Cirmaci-Matei, M.V., Mărmureanu, M., **Trană, E.**^{a,c}, *Implementation of a Gumbel distribution function in interior ballistic calculations for deterred propellants*, UPB Scientific Bulletin, Series B: Chemistry and Materials Science, ISSN 1454-2331, Volume 82, Issue 1, 2020, pp. 167-178

B. Teza de doctorat

Contribuții privind modele de materiale utilizate în descrierea fenomenului de impact la viteze mari, Academia Tehnică Militară, 2007

C. Cărți publicate în edituri naționale recunoscute

1. **Eugen Trană**, Adrian Rotariu, Bogdan Pulpea, „*Calculul și construcția munițiilor. Îndrumar de laborator*”, Editura Academiei Tehnice Militare, 2019, ISBN 978-973-640-302-6
2. **Eugen Trană**, „*Curs de construcția și exploatarea rachetelor*”, Editura Academiei Tehnice Militare, 2019, ISBN 978-973-640-303-3
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4. **Eugen TRANĂ**, Bogdan-Gheorghe PULPEA „*Muniții și focoase*”, Editura Academiei Tehnice Militare, 2017, ISBN 978-973-640-264-7
5. **Eugen TRANĂ**, „*Efectele și calculul efectelor munițiilor de artilerie cu destinație principală*”, Editura Academiei Tehnice Militare, 2015, ISBN 978-973-640-240-1
6. **Eugen TRANĂ**, Ctin. ENACHE, „*Focoase pentru muniții. Principii constructive și funcționale*”, Editura Academiei Tehnice Militare, 2008, ISBN 978-973-640-144-2
7. **TRANĂ Eugen**, „*Solicitarea materialelor metalice în regim dinamic. Legi constitutive*”, Editura Univers Științific, 2007, ISBN 978-973-8936-60-7

D. Articole publicate în reviste din fluxul științific internațional principal

1. Florina Bucur, Adrian Rotariu, Liviu Matache, Florin Baci, Gabriel Jiga, **Eugen Trană**^{a,c}, *Experimental and Numerical Study on the Behavior of HB26 Dyneema Composite in Compression*, Materiale Plastice, ISSN 2668-8220, vol.57 (2), 2020, pp. 113-122
2. Florina Bucur, Adrian Rotariu, **Eugen Trană**^{a,c}, Amado Ștefan, *Experimental and numerical study on the mitigation capability of some special design*

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3. Rotariu, A.-N., Matache, L., Bucur, F., Cirmaci-Matei, M.V., Mărmureanu, M., **Trană, E.^{a,c}**, *Implementation of a Gumbel distribution function in interior ballistic calculations for deterred propellants*, UPB Scientific Bulletin, Series B: Chemistry and Materials Science, ISSN 1454-2331, Volume 82, Issue 1, 2020, pp 167-178
 4. F. Bucur, A.N. Rotariu, **E. Trană**, *Numerical and Experimental Study on the Locally Blast Loaded Polyurea Coated Steel Plates*, Materiale Plastice, ISSN 2668-8220, vol.56 (3), 2019, pp 492-499
 5. **Eugen TRANĂ**, Adrian N. ROTARIU, Traian ROTARIU, Bogdan Gh. PULPEA, Cristian E. MOLDOVEANU , Florina BUCUR , Liviu C. MATACHE, Michael GOZIN, *Experimental study on aluminum foils use in blast enhancement application*, Proceedings of the Romanian Academy, Series A, ISSN 1454-9069, vol.20, no.3, pp.275-282
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 16. **Eugen Trană**, Adrian Rotariu, Florina Bucur, *Numerical Simulation Study on the ring fragmentation*, MTA review, vol. XXV, no.2/2015, pp 179-188, ISSN 1843-3391
 17. Florina Bucur, Cristian Barbu, Vasile Năstăsescu, Adrian Rotariu, **Eugen TRANĂ**, *Numerical Analysis Concerning the Behavior of Metallic Plates Subjected to Blast Load*, MTA review, vol. XXIV, no.4/2014, pp 159-176, ISSN 1843-3391
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 19. Marius Russu, **Eugen TRANĂ**, Ctin. Enache, *Experimental research on optical shaped fiber manufacturing by drawing*, Revista Academiei Forțelor Terestre, vol. XV, nr.3 (59)/2010, pp 91-96, ISSN 2247-840X
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 21. Constatin Enache, **Eugen TRANA**, *Translation embarked system in channel of barrel: Simplified model to motion in channel*, MTA Review, nr.4/2008, pp 369-377, ISSN 1843-3391
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25. **Eugen Trană**, Tudor Cherecheș, Adrian Rotariu, Florin Militaru, *Considerations regarding material dynamic testing equipment*, Buletinul Institutului Politehnic din Iași 2004, Tomul L (LIV), Fasc. V b, 2004, pp 665-668, ISSN 1011-2855
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 27. **Trană Eugen**, *Considerații generale privind glonțul tunel*, Revista ATM nr. 2/2002, pp 43-53, ISSN 1453-259X

E. Publicații în extenso, apărute în lucrări ale principalelor conferințe internaționale de specialitate

1. A.N. Rotariu, F. Bucur, M.V. Cirmaci-Matei, L.C. Matache and E. Trana^{a.c.}, *Development of the analytic relations for the propellant grain geometrical characteristics required for a maximum pressure plateau feature*, IOP Conference Series Journal of Physics 1507:022025, 2020, doi:10.1088/1742-6596/1507/2/022025
2. Rotariu Adrian- Nicolae, Matache Liviu, Bucur Florina, Marius Cirmaci, Marmureanu Marius, **Trana Eugen**, *Implementation of a gumbel distribution function in interior ballistic calculations for deterred propellants*, Proceedings of the 31st International Symposium on Ballistics, Hyderabad, India, 2019
3. Liviu-Cristian Matache, P. Lixandru, T. Cherecheș, A. Mazuru, D. Cherecheș, V. Geantă, I. Voiculescu, **E. Trană**, A.N. Rotariu, *Determination of material constants for high strain rate constitutive model of high entropy alloys*, IOP Conference Series Materials Science and Engineering 591:012057, 2019, DOI: 10.1088/1757-899X/591/1/012057
4. Liviu-Cristian Matache, T. Cherecheș, P. Lixandru, A. Mazuru, D. Mitrică, P. Șomoiaș, **E. Trană**, A.N. Rotariu, *Determination of a methodology for formulating constituent models of high entropy alloys*, IOP Conference Series Materials Science and Engineering 591:012058, 2019, DOI: 10.1088/1757-899X/591/1/012058
5. Ovidiu Iorga, Teodora Zecheru, Tanguy Lamache, Andreea Voicu, Liviu-Cristian Matache, **Eugen Trana**, Cristiana Epure, Laurentiu Anghel, Traian Rotariu, *Simulations of the parameters influencing the underwater cutting systems availability and performance*, New trends in research of energetic materials, Pardubice, Czech Republic, 2018
6. Laurențiu Anghel, Teodora Zecheru, Liviu-Cristian Matache, Gabriel Epure, Gabriel Iosif, **Eugen Trană**, Traian Rotariu, Edina Rusen, *Flexible liner shaped*

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7. Tudor V. Țigănescu, **Eugen Trană**, Adrian Rotariu, Marin Lupoae, Ovidiu G. Iorga, Andreea E. Voicu, *Experimental testing setup for study of Ti/steel foam/Ti sandwich plate behavior*, New trends in research of energetic materials, Pardubice, Czech Republic, 2017
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 9. Matache L., Rotariu A., **Trana E.**, Paschia L., Timplaru F., Badea S., Safta I., *A dimensional analysis of transducer mounts used in measurements of impulsive loads of structures*, Proceedings of the 17th International Scientific Conference Knowledge-Based Organization, Sibiu, 2011
 10. Adrian Rotariu, **Eugen TRANĂ**, Florin Tîmplaru, Liviu Matache, Simona Badea, Tudor Cherecheș, *On attenuation Properties of blast wave through perlite*, Proceedings of the International Conference ModTech 2010 (ISSN 2066-3919, pp 499-502)
 11. Constantin Enache, **Eugen Trană**, Tudor Cherecheș, *Dynamics of Fine Mechanical Embarked Systems in Channel of (RHSO) Launcher*, Proceedings of 8th WSEAS International Conference on SIMULATION, MODELLING and OPTIMIZATION, Santander, Spain, 2008 (ISSN 1790-2769, ISBN 978-960-474-007-9, pp 43-46)
 12. **Trană Eugen**, Cherecheș Tudor, Bugaru Mihai, Zecheru Teodora, *Johnson-Cook Constitutive Model for OL 37 Steel*, Proceedings of 6th WSEAS Int.Conf. on System Science and Simulation in Engineering, Veneția, Italia, 2007 (ISSN 1790-5117, ISBN 978-960-6766-14-5, pp 269-274)
 13. Mihai Bugaru, Tudor Chereches, **Eugen Trana**, Adrian Rotariu, *Non-linear dynamics of geared systems using the asymptotic method. Part 1: Computation of the amplitude*, Proceedings of the 9th WSEAS International Conference on Applied Mathematics, Istanbul, Turcia, 2006 (pp 84-89, ISSN 1109-2769)
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 16. Mihai Bugaru, Sorin Gheorghian, **Eugen Trana**, Adrian Rotariu, *Non-Linear Dynamic Behavior of Thin Rectangular Plates Parametrically Excited Using the*

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17. Mihai Bugaru, Tudor Chereches, **Eugen Trana**, Sorin Gheorghian, Tiberiu Nicolae Homotescu, *Theoretical Model of the Dynamic Interaction between Wagon Train and Continuous Rail*, Proceedings of the 2006 IASME/WSEAS International Conference on Continuum Mechanics, Chalkida, Grecia, 2006 (pp 6-10, ISSN 1109-2769)
18. Mihai Bugaru, **Eugen Trana**, Adrian Rotariu, Gheorghe Ichimoaie, Sorin Cărtuță, Marius Bănică, *The Damping and the Dynamic Stability of Thin P Plates Parametrically Excited*, Proceedings of the 2006 IASME/WSEAS International Conference on Continuum Mechanics, Chalkida, Grecia, 2006 (pp 34-37, ISSN 1109-2769)
19. Mihai Bugaru, Tudor Chereches, **Eugen Trana**, Sorin Gheorghian, *Noise Radiated by Vibrating Rectangular Plate*, Proceedings of the 2006 IASME/WSEAS International Conference on Continuum Mechanics, Chalkida, Grecia, 2006 (pp 11-16, ISSN 1109-2769)
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21. **Trană E.**, Balog P., Rotariu A., Cherecheș T., *Considerații privind particularitățile glonțului tunel*, Universitatea Tehnică a Moldovei din Chișinău, Vol. 2/2003, "Tehnologii moderne, calitate, restructurare", (pp 287-291, ISBN 9975-9748-2-1)
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F. Alte lucrări

1. Tiganescu Tudor Viorel, Costache Victor , Matache Liviu, **Trană Eugen**, Ciobanu Emanuela, Leatu Cristina, Florea Catalin, Vitalaru Alexandru, *Numerical simulation of fluid flow in CoCr multilayer modulators and the impact of flow lamination on the blood vessel wall affected by aneurism*, Journal of Biotechnology, vol.208 supplement, pp.S25, 2015 (European Biotechnology Congress, 2015, Bucharest), dx.doi.org/10.1016/j.jbiotec.2015.06.065