

UNIVERSITATEA DIN PETROȘANI

Facultatea de Inginerie Mecanică și Electrică

Departamentul Inginerie Mecanică, Industrială și Transporturi

Examen pentru ocuparea postului de Conferențiar poz. 10

Disciplinele:

- Instalații mecanice miniere
- Utilaje de încărcare și transport minier I

Domeniul Inginerie Geologică, Inginerie Geodezică, Mine, Petrol și Gaze

LISTA DE LUCRARI

Candidat: BRÎNAȘ I. ILDIKO dr.ing.ec. șef lucrări din anul 2021

- A) Lucrări relevante pentru realizările profesionale proprii (maxim 10 lucrări)
- B) Teza(-ele) de doctorat

Kertesz (Brînaș) Ildiko, Contribuții la studiul echipamentelor miniere de excavare prin modelare și simulare în vederea îmbunătățirii performanțelor funcționale ale acestora, Universitatea din Petroșani, Conducător științific: Prof.univ.habil.dr.ing. Popescu Florin Dumitru, 2019, confirmat prin Ordinul M.E.N. nr. 4021/07.04.2020, Calificativul: Foarte bine.

C)

D)

E) Cărți și capitole din cărți:

E.1. Cărți /capitole din cărți (monografiile, tratate), publicate la edituri de prestigiu din străinătate

1. Stela Dinescu, Sorin Mihai Radu, **Ildiko Brînaș**, *Machinery and Equipment for Infrastructure Works*, LAP Lambert Academic Publishing (2020), ISBN: 978-620-2-66896-5,226 p.

2. Sorin Mihai Radu, Florin Dumitru Popescu, Andrei Andraş, **Ildiko Kertesz**, *Mining Transportation and Equipment*, LAP Lambert Academic Publishing (2019-02-25), ISBN: 978-3-330-34503-4, 292 p.

3. Florin Dumitru Popescu, Sorin Mihai Radu, **Ildiko Brînaş** - *SIMULATION AND MODELLING OF A STATICALLY BALANCED MULTI-ROPE HOISTING MACHINERY*, Monografia Problemy Transportu I Przerobki W Gornictwie Modelowanie Procesow, pag. 211 – 221, Akademia Gorniczo-Hutnicza. Krakow 2017. ISBN 978-83-930353-7-3.

E.2. Carti sau capitole din carti (monografii, tratate), publicate la edituri din tara, recunoscute de CNCS

1. Dinescu Stela, Radu Sorin Mihai, Brinas Ildiko, Maşini si utilaje pentru lucrări de infrastructura, 2019 de Editura Universitas, Petroşani, ISBN:978-973-741-621-6, 226 p.

2. Radu Sorin Mihai, Popescu Florin Dumitru, Andras Andrei, Kertesz Ildiko, Transport si instalații miniere – varianta electronica, Editura Universitas, Petroşani, 2018, ISBN 978-973-741-588-2, (442 p.)

3. Kertesz, I., Radu, S.M., Popescu, F. D., Andras, A., Modelarea si simularea procesului de dislocare utilizând excavatoare cu rotor, Editura Universitas, Petroşani, ISBN:978-973-741-686-5, 2020, 205p;

4. Kertesz, I., Radu, S.M., Popescu, F. D., Andras, A., Modelarea si simularea procesului de dislocare utilizând excavatoare cu rotor – format electronic, Editura Universitas, Petroşani, ISBN: 978-973-741-639.3, 2020, 275p;

5. Popescu, F. D., Radu, S.M., Andras, A., Kertesz, I., Infografică, modelare și simulare asistată de calculator, Editura Universitas, Petroşani, ISBN:978-973-741-714-5, 2020, 388p;

F) Articole /studii in extenso, publicate in reviste din fluxul științific internațional principal

G) Publicații in extenso, apărute in lucrări ale principalelor conferințe internaționale de specialitate

1. **Kertész (B.)**, I., Popescu, F.D., Radu, S.M., *THE ANALYSIS OF THE DEFORMATIONS AND STRESSES OF THE CUTTING-TEETH OF BUCKETWHEEL EXCAVATORS (BWEs) DURING OPERATION, USING FINITE ELEMENTS METHOD (FEM)*, Annals of the University of Petroşani, Mechanical Engineering, 19 (2017), pp.81-90, <https://www.upet.ro/annals/mechanical/pdf/Annals-Mechanical-Engineering-2017.pdf>

2. **Kertész (B.)**, I., Andraş, A., Popescu, F.D., *IMPROVING THE FUNCTIONAL PERFORMANCES OF THE BUCKET WHEEL EXCAVATORS (BWEs) CUTTING-TEETH*, Annals of the University of Petroşani, Mechanical Engineering, 19 (2017), pp.71-80, <https://www.upet.ro/annals/mechanical/pdf/Annals-Mechanical-Engineering-2017.pdf>

3. Popescu F, Andraş A, **Kertesz I**, *The method of minimizing the calculated power of vertical transport installations*, 17th International Multidisciplinary Scientific GeoConference SGEM 2017, www.sgem.org, SGEM2017 Conference Proceedings, ISBN 978-619-7105-00-1 / ISSN 1314-2704, 29 June - 5 July, 2017, Vol. 17, Issue 13, 901-908 pp DOI: 10.5593/sgem2017/13/S03.114, <http://toc.proceedings.com/36219webtoc.pdf>

4. F.D. Popescu, B. O. Tomuş, **I. Kertesz** - *New Trends To Optimize The Operating Parameters Of Vertical Transport Installations*. 17th International Multidisciplinary Scientific GeoConference SGEM 2017, www.sgem.org, SGEM2017 Conference Proceedings, ISBN 978-619-7105-00-1 / ISSN 1314-2704, 29 June - 5 July, 2017, Vol. 17, Issue 13, 581-590 pp, DOI: 10.5593/sgem2017/13/S03.074, <http://toc.proceedings.com/36219webtoc.pdf>

5. Sorin Mihai Radu, Florin Dumitru Popescu, Andrei Andraş , **Ildiko Kertesz Brînaş**, Ovidiu – Bogdan Tomuş, *Increasing the quality of the well drilling process by finite element analysis of the drilling fluid flow parameters*, 8th International Multidisciplinary Symposium, „Challenges and opportunities for sustainable development through quality and innovation in engineering and research management”, <https://www.upet.ro/simpro/2018/downloads/Proceedings%20SIMPRO%202018.pdf>

6. Sorin Mihai Radu, Florin Dumitru Popescu, Andrei Andraş , **Ildiko Kertesz Brînaş**, Ovidiu – Bogdan Tomuş, *Simulation and modelling of the forces acting on the rotor shaft of BWEs, in order to improve the quality of the cutting process*, 8th International Multidisciplinary Symposium, „Challenges and opportunities for sustainable development through quality and innovation in engineering and research management”, <https://www.upet.ro/simpro/2018/downloads/Proceedings%20SIMPRO%202018.pdf>

7. Florin Dumitru Popescu, Sorin Mihai Radu, Krzysztof Kotwica, Andrei Andraş and **Ildiko Kertesz (Brînaş)**, *Simulation of the Time Response of the ERc 1400-30/7 Bucket Wheel Excavator's Boom during the Excavation Process*,

Sustainability, Volume 11, Issue 16 (August-2 2019), <https://www.mdpi.com/2071-1050/11/16/4357>

8. Florin Dumitru Popescu, Sorin Mihai Radu, Andrei Andraş, and **Ildiko Kertész (Brînaş)**, *A grafo-numeric method of determination of the operation power of the rotor of EsRc-1400 bucket wheel excavator using computersimulation in SolidWorks*, MATEC Web of Conferences 290, MSE 2019, https://www.matec-conferences.org/articles/mateconf/pdf/2019/39/mateconf_mse2019_04007.pdf

9. Andraş, A., Popescu, F.D., **Brînaş, I.**, *Computerised Analysis of the Air Resistance for a Forward Moving Vehicle*, Annals of Petrosani University – Mechanical Engineering , Vol. 24, 2022, ISSN 2247-8604, ISSN-L 1454-9166, (EBSCO, Google Scholar, DOAJ, Copernicus), <https://www.upet.ro/annals/mechanical/>

10. Popescu, F.D., Andraş, A., **Brînaş, I.**, *Determination Using FEA of the Static Stress of a Mine Hoist Drum After Safety Braking*, Annals of Petrosani University – Mechanical Engineering , Vol. 24, 2022, ISSN 2247-8604, ISSN-L 1454-9166, (EBSCO, Google Scholar, DOAJ, Copernicus), <https://www.upet.ro/annals/mechanical/>

11. Popescu, F.D., Andraş, A., Danciu, C., **Brînaş, I.**, *Uniaxial Compressive Strength (UCS) simulations of Romanian carbonate rocks using the Finite-Discrete Element Method (FDEM)*, XI International Conference “Mining Techniques” TUR 2022 Krynica Zdrój, 20 ÷ 23 September 2022, <http://www.tur.agh.edu.pl/index.php/en/general-informations/>

12. Florin Dumitru Popescu, Sorin Mihai Radu, Krzysztof Kotwica, Andrei Andraş, **Ildiko Kertész Brînaş** and Stela Dinescu, *Vibration analysis of a bucket wheel excavator boom using rayleigh’s damping model*, New Trends in Production Engineering, Volume & Issue: Volume 2 (2019) - Issue 1 (October 2019), Page range: 233 – 241, DOI: <https://doi.org/10.2478/ntpe-2019-0024>

13. **Brînaş, I.**, *The Study of the Buckling Phenomenon of Industrial Railways in the Jiul Valley*, Annals of Petrosani University – Mechanical Engineering , Vol. 24, 2022, ISSN 2247-8604, ISSN-L 1454-9166., <https://www.upet.ro/annals/mechanical/> (EBSCO, Google Scholar, DOAJ, Copernicus)

14. **Brînaş, I.**, *Simulation of the Cracking of Marble Samples Resulting From the Coring Process Using Irazu Software*, Annals of Petrosani University – Mechanical Engineering , Vol. 24, 2022, ISSN 2247-8604, ISSN-L 1454-9166., <https://www.upet.ro/annals/mechanical/> (EBSCO, Google Scholar, DOAJ, Copernicus)

15. Marița, M.O., Ciocan, V., **Brînaș, I.**, *An Interactive Method for Calculating the Maximum Efficiency (Organic Yield) in the Processing of the Tailing Dumps in Jiu Valley*, THE ANNALS OF “DUNAREA DE JOS” UNIVERSITY OF GALATI, FASCICLE IX. METALLURGY AND MATERIALS SCIENCE

No. 2 - 2022, ISSN 2668-4748; e-ISSN 2668-4756

Article DOI: <https://doi.org/10.35219/mms.2022.2.02> ,
<https://gup.ugal.ro/ugaljournals/index.php/mms/article/view/5380/4708>

16. **Brînaș, I.**, *SIMULATION OF THE VIBRATIONS PRODUCED TO THE HUMAN BODY DURING OPERATION OF THE BUCKET WHEEL EXCAVATORS. A CASE STUDY OF ERc 1400/30/7 TYPE EXCAVATOR*, Revista Minelor – Mining Revue, Vol. 27, Issue 4/2021, pp. 33-49,

<https://sciendo.com/article/10.2478/minrv-2021-0033>

17. **Brinas, I. K.**, Rebedea, N. I., & Oltean, I. L., *Bucket wheel excavator cutting tooth stress and deformation analysis during operation using Finite Elements Method (FEM)*, Mining – Informatics, Automation and Electrical Engineering, 536 (4) pp. 9-13; (2018). DOI: 10.7494/miag.2018.4.536.9. [Index Copernicus, Google Scholar].
<https://journals.indexcopernicus.com/api/file/viewByFileId/488413.pdf>

18. Florin-Dumitru Popescu, József Kovács, Sorin Mihai Radu, Andrei Andraș, **Ildikó Kertész (Brînaș)**, *A Method Of Continuous Tilt Control Of The Bucket Wheel Excavators Using Inclinometers*, MultiScience - XXXII. microCAD International Multidisciplinary Scientific Conference, University of Miskolc, 5-6 September, 2018, ISBN 978-963-358-162-9. (Indexat în CrossRef, Google Scholar, Researchgate, Ebsco, SemanticScholar),
http://www.uni-miskolc.hu/~microcad/publikaciok/2018/c2/C2_Popescu%20Florin%20Dumitru.pdf ;

19. Florin D. Popescu, Sorin M. Radu, **Ildiko (Brînaș) Kertesz**, Marioara (Benea)Vesa, *New methods for process reliability analysis*, MultiScience - XXXI. microCAD International Multidisciplinary Scientific Conference University of Miskolc, Hungary, 20-21 April 2017 ISBN 978-963-358-132-2, DOI: 10.26649/musci.2017.072. [Crossref, Google Scholar].
http://www.uni-miskolc.hu/~microcad/publikaciok/2017/d1/D1_11_Popescu_Florin.pdf

20. Stela Dinescu, **Ildikó Kertész (Brînaș)**, Marioara Vesa (Benea), *STUDY ON THE STRESS AND STRAIN OF THE DRILL BITS USING THE FINITE ELEMENT METHOD*, MultiScience - XXXI. microCAD International Multidisciplinary Scientific Conference University of Miskolc, Hungary, 20-21 April 2017 ISBN 978-963-358-132-2, https://www.academia.edu/89904119/Study_on_the_stress_and_strain_of_the_drill_bits_using_the_finite_element_method

21. **Ildiko Brînaș**, Andrei Andraș, *The study of building of a Barrel cam mechanism*, MultiScience - XXXI. microCAD International Multidisciplinary Scientific Conference University of Miskolc, Hungary, 20-21 April 2017 ISBN 978-963-358-132-2, DOI: 10.26649/musci.2017.012. [Crossref, Google Scholar]. https://www.unimiskolc.hu/~microcad/publikaciok/2017/a2/A2_3_Brinas_Ildiko.pdf

22. ANDREI ANDRAȘ, FLORIN DUMITRU POPESCU, IONELA CRISTINA MĂCEȘARU (LĂPĂDUȘI), **ILDIKO BRÎNAȘ**, *THE STUDY OF THE KINEMATICS OF THE LIFTING-LOWERING MECHANISM OF THE SMA-2 POWERED ROOF SUPPORT USING COMPUTER SOFTWARE*, Annals of the University of Petroșani, Mechanical Engineering, 25 (2023), 17-32, (ISSN 2247-8604), (ISSN-L 1454-9166), https://www.upet.ro/annals/mechanical/pdf/2023/02_Andras.pdf

23. MANUEL-IONUȚ DRAICA, FLORIN DUMITRU POPESCU, **ILDIKO BRÎNAȘ**, VALENTIN POPESCU, *DETERMINATION OF THE TENSILE STRESS IN MINE HOISTING CABLES USING NUMERICAL METHODS*, Annals of the University of Petroșani, Mechanical Engineering, 25 (2023), 17-32, (ISSN 2247-8604), (ISSN-L 1454-9166), https://www.upet.ro/annals/mechanical/pdf/2023/06_Draica.pdf

24. FLORIN DUMITRU POPESCU, ANDREI ANDRAȘ, MANUEL-IONUT DRAICA, **ILDIKO BRÎNAȘ**, MARC BOGDAN IOAN, *COMPUTER MODELING OF THE CA-1 LONGWALL SHEARER HELICAL VANE DRUM WITH VARIABLE AXIAL-RADIAL PITCH*, Annals of the University of Petroșani, Mechanical Engineering, 25 (2023), 17-32, (ISSN 2247-8604), (ISSN-L 1454-9166), https://www.upet.ro/annals/mechanical/pdf/2023/18_Popescu.pdf

H) Proiecte de cercetare-dezvoltare-inovare:

1. CONTRACTUL DE CERCETARE ȘTIINȚIFICĂ UNIVERSITARĂ Nr. 6446 din 07.10.2021, Director proiect, (35000 lei): Modelarea și simularea componentelor

echipamentelor industriale utilizând tehnologii CAD/CAM/CAE, Acronim: MSCEIT, Valoare 35.000 lei

2. CONTRACTUL DE CERCETARE ȘTIINȚIFICĂ UNIVERSITARĂ Nr. 4281 din 31.05.2023, Director proiect (100.000 lei): Verificarea și optimizarea geometriei taluzurilor prin analiză FDEM utilizând Geomechanica IRAZU. Studiu de caz: carierele de lignit din Bazinul Oltenia, Acronim: VETAF-Geo, Valoare 100.000 lei

3. Grant de cercetare nr. RFCR-CT-2015-00003 Membru Colectiv, Bucket wheel excavators operating under difficult mining conditions including unmineable inclusions and geological structures with excessive mining resistance (BEWEXMIN), European Commission - CORDIS - Research Fund for Coal and Steel (RFCS)

4. Grant „STUDIUL TĂIERII ASISTATE CU MICROUNDURI A ROCILOR CARBONATICE“, Membru Colectiv, cod depunere ERANET-ERAMIN-MIWACUT, acronim MIWACUT, nr.contract 116 / 01.10.2019, proiect internațional în care Universitatea din Petroșani are calitatea de partener, finanțat de UEFISCDI prin ERA-MIN 2 / HORIZON 2020

5. STUDIUL GEOTEHNIC PRIVIND DETERMINAREA PARAMETRILOR FIZICO-MECANICI ȘI REOLOGICI ÎN ORIZONTUL XIV AL MINEI CANTACUZINO ÎN VEDEREA ESTIMĂRII GRADULUI DE STABILITATE A ACESTUIA, LA SUCURSALA SALINA SLĂNIC PRAHOVA Membru Colectiv, nr. contract 89 / 13.07.2022, încheiat cu SNS București, Sucursala Salina Slănic Prahova.

6. Plan de mobilitate urbană a Orașului Petrița - Contract de cercetare științifică Nr. 78/11366 din 04.04.2018, Membru Colectiv, Valoare contract: 15.589 lei;

Candidat,

Șef lucr.dr.ing.ec BRÎNAȘ Ildiko

Data

07.08.2024

Semnătura

