

VIZAT,

CONDUCĂTOR DOCTORAT,

Prof.univ.habildr.ing. Marius Gabriel Petrescu



## MEMORIU ȘTIINȚIFIC

### ***I Date biografice***

Nume: Burlacu

Prenume: Andrei-Ion

Data nașterii: 27.05.1987

Locul nașterii: Municipiul Targoviste, jud. Dambovita

Naționalitatea: română

Starea civilă: divortat

Domiciliu: comuna Blejoi, nr. 456C, jud. Prahova

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### ***II Studii medii***

Liceul Tehnologic Energetic Ploiesti

### ***III Studii universitare***

Universitatea Tehnica de Constructii Bucuresti – Facultatea de Utilaj Tehnologic pentru Constructii

### ***IV Activitatea științifică în timpul studiilor***

Proiecte de an specifice disciplinelor din planul de învățământ

### ***V Activitate profesională***

28.06.2022 - prezent

#### **Administrator**

S.C. ROAD INFRASTRUCTURE INDUSTRY S.R.L., Blejoi, jud. Prahova

lucrari de constructii, cai rutiere si industriale.

30.05.2014 – 14.01.2024

**Administrator**

S.C. STRABENBAU LOGISTIC S.R.L., Blejoi, jud. Prahova

lucrari de constructii, cai rutiere si industriale, productie de mixturi asfaltice.

11.08.2010 – 01.05.2014

**Inginer mecanic/Şef de şantier**

S.C. STAR T&D S.R.L., Blejoi, jud. Prahova

lucrari de constructii, cai rutiere si industriale, productie de mixturi asfaltice.

**VI Activitate didactică**

**VII Activitate profesională extradidactică**

**VIII Activitate științifică**

**Cărți publicate în edituri internaționale de prestigiu,**

1. Marius Gabriel Petrescu, Aristia-Ioana Popovici, **Andrei Burlacu**, Gheorghe Dan Isbășoiu, Eugen Laudacescu, Teodor Dumitru and Maria Tănase, Modeling of Flight-Specific Degradation Phenomena in Rotary Dryers Used in the Asphalt Industry, in Lubrication Science - Challenges and Emerging Technologies, 15 July 2025, DOI: 10.5772/intechopen.1011562, <https://www.intechopen.com/profiles/643065> , ISBN 978-1-83635-027-9

**Articole publicate în reviste cotate ISI,**

1. **Andrei Burlacu**, Marius Gabriel Petrescu, Teodor Dumitru, Adrian Niță, Maria Tănase, Eugen Laudacescu, Ibrahim Ramadan, Costin Ilinca, Numerical Approach Regarding the Effect of the Flight Shape on the Performance of Rotary Dryers from Asphalt Plants, Processes, 2022, 10, 2339, <https://doi.org/10.3390/pr10112339>
2. **A I BURLACU**, M TĂNASE\* , C ILINCĂ AND M G PETRESCU, Optimizing the trajectory of aggregates in drying units from the asphalt plants, IOP Conf. Series: Materials Science and Engineering, 1262 (2022) 012003, (ISI Proceedings) doi:10.1088/1757 899X/1262/1/012003, IOP Publishing, 2022
3. Adrian Niță, Marius Gabriel Petrescu \*, Teodor Dumitru, **Andrei Burlacu**, Maria Tănase, Eugen Laudacescu, Ibrahim Ramadan, Experimental Research on the Wear Behavior of Materials Used in the Manufacture of Components for Cement Concrete

- Mixers, Materials, 2023, Volume 16, Issue 6, 2326, <https://doi.org/10.3390/ma16062326>
4. Niță, A.; Laudacescu, E.; Petrescu, M.G.; Dumitru, T.; **Burlacu, A.**; Bădoiu, D.G.; Tănase, M. Experimental Research Regarding the Effect of Mineral Aggregates on the Wear of Mixing Blades of Concrete Mixers. *Materials* 2023, 16, 5047. doi: 10.3390/ma16145047
  5. Petrescu, M.G.; **Burlacu, A.**; Isbășoiu, G.D.; Dumitru, T.; Tănase, M. Estimating the Lifetime of Rotary Dryer Flights Based on Experimental Data, *Processes* 2024, 12, 993. <https://doi.org/10.3390/pr12050993>
  6. Petrescu, M.G.; Ripeanu, R.G.; Laudacescu, E.; Tanase, M.; Niță, A.; **Burlacu, A.** Characterization of Materials Used in the Concrete Industry, from the Point of View of Corrosion Behavior. *Coatings* 2024, 14, 800. <https://doi.org/10.3390/coatings14070800>

#### **Articole în reviste indexate în alte baze de date internaționale de referință pentru domeniu, care fac un proces de selecție a revistelor pe baza unor criterii de performanță,**

1. **A. Burlacu**, M.G. Petrescu, R.G. Rîpeanu, T. Dumitru, E.V. Laudacescu, I.N. Ramadan, A. Niță, Experimental investigations on wear phenomena specific to rotary dryer flights (blades), 18 th International Conference on Tribology, SERBIATRIB '23, Kragujevac, Serbia, 17 19 May 2023, pag. 475-484, Proceedings, ISBN: 978-86-6335-103-5,
2. **Andrei Burlacu** , Marius Gabriel Petrescu , Răzvan George Rîpeanu, Teodor Dumitru, Eugen Victor Laudacescu , Ibrahim Naim Ramadan , Adrian Niță, Experimental Investigations on Wear Phenomena Specific to Rotary Dryer Flights (Blades), in *Tribology in Industry*, Vol. 46, No. 1 (2024) 56-65, DOI: 10.24874/ti.1549.08.23.10

#### **Brevete de invenție (cereri depuse),**

1. Petrescu Marius Gabriel, Burlacu Andrei, Laudacescu Eugen, Tănase Maria, Stand pentru studiul fenomenului de uzare a palelor (zborurilor) din componența uscătoarelor cu tambur rotativ, utilizate pentru uscarea materialelor pulverulente de diferite dimensiuni și configurații , Brevet de invenție, RO-BOPI 2/2025 din 28.02.2025/ G01L 5/28

#### **IX Participare la conferințe științifice**

1. **Burlacu, A. I.**; Tănase M.; Ilincă, C.; Petrescu M. G, Optimizing the trajectory of aggregates in drying units from the asphalt plants, The 10th International Conference on Advanced Concepts in Mechanical Engineering – ACME 2022, Mechanical Engineering Faculty, in the „Gheorghe Asachi” Technical University of Iasi, Romania, 09-10 June 2022
2. Adrian Niță, Marius Gabriel Petrescu, Teodor Dumitru, **Andrei Burlacu** , Maria Tănase, Eugen Laudacescu, Ibrahim Ramadan, Correlating the Wear Resistance of Mixer Blade Materials with Chemical Composition under Accelerated Conditions: An Experimental Study on Cement Concrete Mixer Component Durability, International Virtual Conference on Materials Science and Engineering, Materials Science Meeting 2023 (Recent Research, Cutting-edge technologies and innovations in materials science and engineering), june 16-17,2023

3. Maria TANASE, Marius Gabriel PETRESCU, **Andrei BURLACU**, Enhancing rotary dryer efficiency in asphalt mixture production through flight shape optimization: a dem-based investigation, 1st INTERNATIONAL CONGRESS OF SOCIAL SCIENCES October 20-21, 2023/ KONYA, Turcia, extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.intelliserve.com.tr/wp-content/uploads/2023/12/doc.pdf chrome
4. T. Dumitru, A. Niță, **A. Burlacu**, M.G. Petrescu, M. Tănase, E. Laudacescu, I. Ramadan, C. Ilincă, Studies on the effect of the working environment on tool wear in the concrete industry, International Conference of Emerging Trends and Technologies in Mechanical and Electrical Engineering, ETTMEE 2025, Ploiești, 2025

**X Premii și distincții –**

**XI Limbi străine cunoscute**

Engleza, spaniola

**DOCTORAND,**

*Ing. Burlacu Andrei-Ion*



*Data*

23.02.2026