



## Europass Curriculum Vitae

### Personal information

First name and surname **Ionelia VOICULESCU**  
Office address 313, Splaiul Independentei, 060042, Bucharest, Romania  
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E-mail ioneliav@yahoo.co.uk  
Nationality Romanian  
Date of birth 11.09.1959

### Work experience

Date	September 2005 - present
Occupation or position held	Professor
Main activities and responsibilities	Didactic activities, Member in Academic Board of the Faculty IMST, member in Board Council of TMS Department, responsible with research activity in Department TMS, Director of Laboratory LAMET – Laboratory for Metallographic Testing, <a href="http://www.lamet.ro">www.lamet.ro</a> , accredited by National Accreditation Body RENAR – Certificate nr. LI 754 from 12/02/2009, coordination of diploma projects
Name and address of employer	University Politehnica of Bucharest, 313, Faculty of Engineering and Management of Technological Systems, Department of Materials Technology and Welding, Splaiul Independentei, sector 6, 060042, Bucharest, Romania
Type of business or sector	Higher education, Research and teaching activities
Date	1999 - 2005
Occupation or position held	Reader, PhD
Main activities and responsibilities	Didactic activities, member in Board Council of TMS Department, responsible with research activity in Department TMS, coordination of diploma projects
Name and address of employer	University Politehnica of Bucharest, Faculty of Engineering and Management of Technological Systems, Department of Materials Technology and Welding, 313, Splaiul Independentei, sector 6, 060042, Bucharest, Romania
Type of business or sector	Higher education, Research and teaching activities
Date	1990- 1999
Occupation or position held	Lecturer, PhD student
Main activities and responsibilities	Didactic activities, responsible with research activity in Department TMS, research activities
Name and address of employer	University POLITEHNICA of Bucharest, Faculty of Engineering and Management of Technological Systems, Department of Materials Technology and Welding, Splaiul Independentei, sector 6, 060042, Bucharest, Romania
Type of business or sector	Higher education, Research and teaching activities
Date	1987 - 1990
Occupation or position held	Assistant Professor
Main activities and responsibilities	Didactic activities, research activities
Name and address of employer	University Politehnica of Bucharest, Faculty of Engineering and Management of Technological Systems, Department of Materials Technology and Welding, 313, Splaiul Independentei, sector 6, 060042, Bucharest, Romania
Type of business or sector	Research and teaching activities

Date 1985 - 1987  
Occupation or position held Engineer  
Main activities and responsibilities Research, equipment design  
Name and address of employer University Politehnica of Bucharest, Faculty of Engineering and Management of Technological Systems , Department of Materials Technology and Welding, 313, Splaiul Independentei, sector 6, 060042, Bucharest, Romania  
Type of business or sector Research  
Date 1983 - 1985  
Occupation or position held Engineer  
Main activities and responsibilities Device designing, welding technology  
Name and address of employer SC ELECTROARGES SA , Curtea de Argeş, Argeş, Romania  
Type of business or sector Industrial production, equipment design

**Education and training**

Date 1992 - 1997  
Title of qualification awarded PhD  
Principal subjects/occupational skills covered Research regarding the hydrogen diffusion in steels for welded structures  
Name and type of organisation providing education and training University Politehnica of Bucharest, Faculty of Engineering and Management of Technological Systems , Department of Materials Technology and Welding  
Level in national or international classification Post-university  
Date 1978 - 1983  
Title of qualification awarded Mechanical engineer  
Principal subjects/occupational skills covered Welding Technologies, Fundamentals of welding processes, Destructive control, Materials science, Design of machinery, equipment and welded structures, Materials technology, Mechanization and automation of welding processes, Management of industrial activities, Pedagogical skills  
Name and type of organisation providing education and training University Politehnica of Bucharest, Faculty of Engineering and Management of Technological Systems, Department of Materials Technology and Welding  
Level in national or international classification University

**Personal skills and competences**

Mother tongue(s) **Romanian**

Other language(s)

Self-assessment

*European level* (\*)

**English**

**French**

Understanding		Speaking		Writing
Listening	Reading	Spoken interaction	Spoken production	
B2	B2	B1	B2	B2
C1	C2	C1	C2	C1

(\*) [Common European Framework of Reference for Languages](#)

**Additional information**

**PAPERWORK LIST**

**ISI Knowledge-indexed paper works**

1. V.Miclosi, **I.Tonoiu**, Gh.Solomon, *Research regarding the hydrogen diffusion in steel*, 3<sup>rd</sup> European

- Conference on Advanced Materials and Processes, **Publisher:** EDITIONS PHYSIQUE, Z I DE COURTABOEUF AVE 7 AV DU HOGGAR, BP 112, 91944 LES ULIS CEDEX, FRANCE, Physics, Multidisciplinary, **IDS Number:** MT436, **ISSN:** 1155-4339. Le Journal de Physique IV, v03 nC7 (199311): C7-115-C7-118 ;
2. V.Miclosi, **I.Tonoiu**, Gh.Solomon, *Research regarding the influence of axial electromagnetic pulsation of the liquid metal bath upon the characteristics of the weld*, **Publisher:** EDITIONS PHYSIQUE, Z I DE COURTABOEUF AVE 7 AV DU HOGGAR, BP 112, 91944 LES ULIS CEDEX, FRANCE, Physics, Multidisciplinary, **IDS Number:** MT436, **ISSN:** 1155-4339, *J. Phys. IV France* **03** (1993) C7-119-C7-12 ;
  3. V.Miclosi, Gh.Solomon, **I.Tonoiu**, *Aspects of the transitory deformation correlated with the cracking at heat in welding*, Journal de Physique IV, *Colloque C7*, Publisher: EDITIONS PHYSIQUE, Z I DE COURTABOEUF AVE 7 AV DU HOGGAR, BP 112, 91944 LES ULIS CEDEX, FRANCE, Physics, Multidisciplinary, **IDS Number:** PF703, **ISSN:** 1155-4339.
  4. **Tonoiu I.**, Geanta V., Saban R, &coll, *SEM analysis of hydrogenated steels surfaces*, Materials, Functionality & Design, Vol.4-Characterization and Production/Design: 65-68, 1997, Publisher: NETHERLANDS SOC MATERIALS SCIENCE, PO BOX 390, N-3330 ZWIJNDRECHT, NETHERLANDS, Engineering, Mechanical; Materials Science, Multidisciplinary; Materials Science, Characterization & Testing, **IDS Number:** BJ43P, **ISBN:** 90-803513-4-2
  5. **Voiculescu, I.**, Donțu, O., Geantă, V., Ganatsios, S. *Effect of the Laser Beam Superficial Heat Treatment on the Gas Tungsten Arc Ti-6Al-V Welded Metal Microstructure*. Publisher: SPIE-INT SOC OPTICAL ENGINEERING, 1000 20TH ST, PO BOX 10, BELLINGHAM, WA 98227-0010 USA, Subject Category: Optics; Physics, Applied, **IDS Number:** BIF91.
  6. Dina, V., Geantă, V., Ștefănoiu, R., **Voiculescu, I.**, Ciocă, I. Studies and researches regarding the Obtaining of Self-Carburizing Flames by Burning of Gas Fuels. *Metalurgia International*, vol. XIII (2008), nr. 1, **ISSN** 1582-2214, **IDS Number:** 312SI, p.5-10.
  7. Ștefănoiu, R., Geantă, V., **Voiculescu, I.**, Suci, M.V. Experimental Researches Regarding the Stirring Energy and Mixing Time of the Metal Bath as Steel Refining with Inert Gas. *Metalurgia International*, vol. XIII (2008), no. 3 Special Issue, **ISSN** 1582-2214, **IDS Number:** 403YG, p. 53-57.
  8. C.Delavet, Gh.Gheorghe, O. Dontu, D.Besnea, **I. Voiculescu**, A. Prodan, *Aspects Concerning laser welding of stainless steels capsules*, The Romanian Review Precision Mechanics, Optics & Mechatronics, 2008 (18), No. 33, **ISSN** 1584-5982, pg. 51 – 54.
  9. **I.Voiculescu**, R.Iovanas, D.M.Iovanas, C.G.Ceorapin, I.C.Roata, H.Binchiciu, Performance Testing of Joints Brazed With Amorphous Filler material Type CuSn, *Metalurgia International*, Vol. XIV (2009) SPEC. ISS. No.2, **ISSN:** 1582-2214, **IDS Number:** 430PQ, p. 143-146.
  10. Ceorapin C-G, Iovanas R, **Voiculescu I**, Iovanas D. M., Pascu A., SPOT WELDING ELECTRODES WITH THE ACTIVE AREA ACHIEVED BY CLADDING WITH M.M.A. WELDING, *Annals of DAAAM for 2009 & Proceedings of the 20th International DAAAM Symposium*, Volume 20, No. 1, **ISSN** 1726-9679, **ISBN** 978-3-901509-70-4, Editor B. Katalinic, Published by DAAAM International, Vienna, Austria, EU, 2009, p. 1361-1362.
  11. A.C.Pavalache, I.M.Vasile, E.M.Stanciu, **I.Voiculescu**, Case Study about the Effect of Measurement Parameters Values on the Microhardness Results, 2009 IEEE International Workshop Advanced Methods for Uncertainty Estimation in Measurement Proceedings, UPB, 6-7 iulie, 2009, Bucuresti, Romania, **ISBN** 978-1-4244-3593-7, Publisher: IEEE, 345 E 47TH ST, NEW YORK, NY 10017 USA, **IDS Number:** BNF34, **ISBN:** 978-1-4244-3592-0, p. 54-58.
  12. **I., Voiculescu**, V., Geanta, E., Alexandrescu, C.A., Pavalache, E.M.Stanciu, Cooper Carbide Composite Layer Obtained by Laser Beam Remelting, *Annals of DAAAM for 2010& Proceedings of 21 st International DAAAM Symposium*, Volume 21, No. 1, **ISSN** 1726-9679, **ISBN** 978-3-901509-73-5, Editor B. Katalinic, Published by DAAAM International, Vienna, Austria, EU, 2010, p. 0801-0802.
  13. **I., Voiculescu**, E.M, Stanciu, I.M., Vasile, T., Laurian., G., Chisiu, Tribological Behaviour of Composite Electrodes for Spot Welding, 2010 1th International Conference on Mechanical Engineering, Robotics and Aerospace, ICMERA 2010, 2-4 Dec. 2010, p. 139-143, **ISBN:** 978-1-4244-8867-4;
  14. **I., Voiculescu**, O., Dontu, D., Besnea, V., Geanta, I., Avarvarei, R., Ciobanu, Laser Microwelding of Radioactive Microcapsules Made of High-Alloyed Steel, 2010 1th International Conference on Mechanical Engineering, Robotics and Aerospace, ICMERA 2010, 2010, p. 105-109, **ISBN:** 978-1-4244-8867-4 ;
  15. A. Banu, N. Spataru, V. S. Teodorescu, A. V. Maraloiu, **I. Voiculescu**, A. M. Marcu, T. Spataru, Structural and electrochemical characterization of TiO<sub>2</sub>/Pt hybrid catalyst system for direct bio-ethanol fuel cell, *JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS*, Vol. 12, No. 5, May 2010, p. 1189 – 1193, **ISSN** 1454-4164, **Impact Factor** 0.433.
  16. V.Popovici, A.C.Pavalache, I.M.Vasile, **I.Voiculescu**, E.M.Stanciu, D.Pausan, *Finite element method for simulating the Vickers Hardness Test*, 2010 1th International Conference on Mechanical Engineering, Robotics and Aerospace, ICMERA 2010, 2010, p. 382-385, **ISBN:** 978-1-4244-8867-4.
  17. Geantă, V., **Voiculescu, I.**, Ștefănoiu, R., Jianu, A., *Influence on chemical composition of FeCrAl*

- alloys on the microhardness*, Metalurgia International, vol. XVI (2011), SPECIAL ISSUE no. 5, ISSN 1582-2214, p.153-156 [ISI-Web of Science/Science Citation Index Expanded].
18. Pavalache, A.C., **Voiculescu, I.**, Iordăchescu, D., Vasile, G., Stanciu, E.M., Apostol, G., *On Obtaining Of Metal Matrix Composites Layers By Laser Cladding*, Metalurgia International, vol.XVI (2011), SPECIAL ISSUE no. 5, ISSN 1582-2214, p. 121-125.
  19. Geanta, V., **Voiculescu, I.**, Ștefănoiu, R. Daisa, D.D. The influence of the technological parameters on the efficiency of the metal melts alloying process by pulverulent material injection. Journal of Optoelectronics and Advanced Materials, vol. 13, No. 7, July 2011, p. 921 – 925.

#### Most relevant articles published in reviews

1. **Ionelia Voiculescu**, Corneliu Rontescu, Dumitru Cicic, *Dimensional analysis of robotized welds*, U.P.B. Sci. Bull. Series B, Vol.66, No.2-4 / (2004), p.105 -112;
2. G.Iacobescu, **Ionelia Voiculescu**, *A mathematical model for humidifying the electrodes coats*, U.P.B. Sci. Bull. Series D, Vol.68, No.4 /, p.51 -58, 2006, ISSN 1454-2358;
3. C.Rontescu, **I.Voiculescu**, G.Iacobescu, C.Dumitrascu, D.Cicic, *Analysis Of The Thermal Field For TIG Welding By Using Infrared Thermography*, U.P.B. Sci. Bull. Series D, Vol.70, No.3, p.55 -60, 2008, ISSN 1454-2358. UPB Scientific Bulletin, Series D: Mechanical Engineering, v70 n3 (2008 07 01): 55-60;
4. **I.Voiculescu**, O.Dontu, V.Geanta, S.Ganatsios, Effects of laser beam superficial heat treatment on the Gas tungsten Arc Ti-6Al-4V welded metal microstructure, Journal of Optoelectronics and Advanced Materials – Symposia, Vol. 1, No. 4, 2009, p.703-706.
5. O.Dontu, D.Besnea, Gh.Gheorghe, S.Ganatsios, N.Alexandrescu, **I.Voiculescu**, Some aspects of laser welding for stainless steel radioactive capsules, Journal of Optoelectronics and Advanced Materials – Symposia, Vol. 1, No. 4, 2009, p.709-711.
6. G. Charalampides, O. Dontu, D.Besnea, **I.Voiculescu**, Gh.I. Gheorghe, I. Avarvarei, *Manufacturing Parts and Mechatronics Systems by Laser Welding on CNC System*, The Romanian Review Precision Mechatronics, Optics & Mechatronics, 2009 (19), No.35, ISSN 1584-6982, p.55-58;
7. C. Delavet, G. Iacobescu, **I. Voiculescu**, O. Dontu, D. Besnea, E.M. Stanciu, A.C. Pavalache, *Cooper-Carbide Composite Layer Obtained By Laser Beam Remelting*, The Romanian Review Precision Mechanics, Optics & Mechatronics, 2009 (19), No.35, ISSN 1584-5982, p.73-76;
8. A.C., Pavalache, E.M., Stanciu, I., **Voiculescu**, G.M., Dumitru, O., Dontu, D., Besnea, I.M., Vasile, Effect of the Strengthening particles on the Characteristics of Hardfaced Layers by TIG Cladding, The Romanian Review Precision Mechanics, Optics & Mechatronics, 2010 (20), No.38, ISSN 1584-5982, p.117-122;
9. V., Geantă, **I., Voiculescu**, R., Ștefănoiu, A., Jianu, Influence On Chemical Composition Of FeCrAl Alloys On The Microhardness, METALURGIA INTERNATIONAL vol.XVI SPECIAL ISSUE no. 5 (2011), ISSN 1582-2214, p. 153-156.
10. Avarvarei I.; **Voiculescu I.**; Besnea D.; Ciobanu R.; Gerard A., The material's temperature influence on absorption degree of laser radiation in technological processes, UPB Scientific Bulletin, Series D: Mechanical Engineering, v73 n2 (2011 06 13): 151-160;
11. **I.Voiculescu**, V.Geanta, R.Stefanoiu, H.Binchiciu, Cercetari privind sudarea si incarcarea cu laser (Research Regarding on Laser Welding and Hardfacing), revista SUDURA, Vol. XXI -4/2011, p. 14-20;
12. L., Bratean, V., Miclosi, **I., Voiculescu**, G., Iacobescu, Research on Anticorrosion Characteristics of AlZn Pseudo-Alloy Obtained by Metal-Arc Process, U.P.B. Sci. Bull., Series D, Vol. 73, Iss. 4, (2011) ISSN 1454-2358, p. 150-164;

#### Most relevant articles conference participation

1. **Voiculescu, I.**, Geantă, V., *The electric field effect on the hydrogen diffusion in mild steel*. 7-th European Conference on Advanced Materials and Processes EUROMAT 2001, Rimini, Italy, June 10 – 14, 2001, p. 175;
2. **I. Voiculescu**, The behaviour of Aluminium matrix composites in welding processes, *plenary presentation, 6<sup>th</sup> European Conference on Welding, Cutting and Joining Technologies, 16<sup>as</sup> Jornadas Tecnicas de Soldadura, EUROJOIN 6 – 16 JTS, 26 – 29 June 2006, Spain, p. 375-379, Ed. Graficas Rogar, S.A., ISBN 84-934316-0-5;*
3. **Voiculescu, I.**, Geanta, V., Ștefănoiu, R., Aspects Regarding the Embrittlement of Steels Using the Electro-Charging Method, 6-a CONFERENCIA EUROPEA SOBRE TECNOLOGIAS DE SOLDEO, UNION Y CORTE, 16-as JORNADAS TEHNICAS DE SOLDADURA, EUROJOIN 6, Santiago de Compostela, June, 28 – 30, 2006, p. 651 – 656, Graficas Rogar, S.A., ISBN 84-934316-0-5;
4. **Voiculescu, I.**, Binchiciu, H., GEANTĂ, V., Binchiciu, A., Research Concerning the New Ecological Brazing Filler Metal Performances for Clean Application, 7-th International Conference on Technology and quality for Sustained Development, TQSD 06, May, 25 – 27, 2006, UPB-Bucharest, Romania, p.

- 331 - 335, AGIR Publishing House, ISBN 973-720-035-7;
5. **Voiculescu, I.**, Geanta, V., Binchiciu, H., Vida-Simiti, I., Jumate, N., VasIU, R., Study on Tin Bronze Alloy Weld Deposit Using Composite Core Electrode, 60-th Annual Assembly and International Conference „Welding and Materials – Technical, Economical and ecological Aspects”, International Institute of Welding and Croatian Welding Society, 01 – 08 July 2007, Dubrovnik & Cavtat, Croatia, p. 741 – 748, ISBN 978-953-7518-00-4;
  6. **Voiculescu, I.**, Geanta, V., Dontu, O., Ganatsios, S., The Heat Treatment Influence on the Welded OT4 Titanium Alloy. 3-rd JOIN Conference „INTERNATIONAL CONFERENCE ON TOTAL WELDING MANAGEMENT IN INDUSTRIAL APPLICATION”, Lappeenranta University of Technology, Lappeenranta, Finland, August 21 – 24, 2007, p. 303 – 309, ISBN 978-952-214-413-3;
  7. **Voiculescu, I.**, Geanta, V., Binchiciu, H., VasIU, R., Effect of Buffer Layers Composition on the Controlling Weld Metal Dilution and Distortion. European Congress on Advanced Materials and Processes, EUROMAT 2007, 10 – 13 September 2007, Nurnberg, Germany, p. 69;
  8. **Voiculescu, I.**, Geanta, V., Stefanoiu, R., Binchiciu, H., I.Vida-Simiti, N.Jumate, VasIU, R., Study on Hardfaced Wear Resistant Bronze Alloy, Friction, Wear and Wear Protection, International Symposium, 2008, Ed. Wiley-VCH, ISBN 978-3-527-32366-1, Aachen, Germany, DOI: 10.1002/9783527628513.ch79, p.610- 617;
  9. **I.Voiculescu**, O.Dontu, V.Geanta, D.Besnea, E.Stanciu, *Effects of the laser welding parameters on the weld geometry and evaporation*, Proc. Of International Conference on Technology and Quality for Sustained Development – TQSD 08, Bucuresti, Oct. 30 -31 2008, Published by Academy of Technical Sciences of Romania Publishing House, ISSN 1844-9158, pg. 376 – 378;
  10. **I.Voiculescu**, D.Iovanas, G.Stovpchenko, V.Geanta, H.Binchiciu, C.A.Pavalache, *Study on Hard Deposition Obtained by GTAW Welding Process*, Proc. of International Conference on Technology and Quality for Sustained Development – TQSD 08, Bucuresti, Oct. 30 -31 2008, Published by Academy of Technical Sciences of Romania Publishing House, ISSN 1844-9158, pg. 371 – 376;
  11. V., Geantă, **I. Voiculescu**, R., Ștefănoiu, A., Jianu, Influence On Chemical Composition Of FeCrAl Alloys On The Microhardness, CONFERINTA INTERNATIONALA BRAMAT, 2011, BRASOV, publication in METALURGIA INTERNATIONAL vol.XVI SPECIAL ISSUE no. 5 (2011), ISSN 1582-2214, p. 153-156;
  12. **I. Voiculescu**, V.Geanta , H. Binchiciu, Research regarding the reconditioning of active components of agricultural equipment, The 5th International Conference – Innovative technologies for joining advanced materials, TIMA 11 Timisoara, 2011, p. 1-4;
  13. **I. Voiculescu**, V., Geantă, R., Ștefănoiu, I., M., Vasile, Contributions Regarding the Obtainment of Copper Matrix Reinforced with Carbide, The ACADEMY OF TECHNICAL SCIENCES IN ROMANIA INTERNATIONAL CONFERENCE “ ASTR DAYS – 2011” , the VI<sup>th</sup> Edition, Timisoara, 22 – 23 September 2011, ISSN 2066-6586;
  14. **I.Voiculescu**, V.Geanta, R. Stefanoiu, H.Binchiciu, *Research on laser welding and hardfacing, International Conference ASR, Chisinau, Moldavia, 2011, Ed. Sudura, Timisoara, ISSN 1843-4738;*
  15. **Voiculescu, I.**, Geanta, V., Vasile, I.M., Stefanoiu, R., Iacob, M. Researches Regarding the Obtaining of the Electrode for Spot Welding. Proceedings of the 4-th INTERNATIONAL CONFERENCE ON MATERIALS SCIENCE AND TECHNOLOGIES – ROMAT 2012, Bucuresti, Romania, 17-19 October, 2012, ISSN 2285-7133, ISSN-L 2285-7133. Editura Printech, 2012, p.22;
  16. **Voiculescu, I.**, Geanta, V., Stefanoiu, R., Binchiciu, H., Daisa, D.D. Alumina Ceramics Brazed Using Metallic Alloys, International Conference on Innovative Technologies, IN-TECH 2012, Rijeka, Croatia, 26 - 29.09.2012, ISBN 978-953-6326-77-8, p.523-527;

### Books

1. Gh. Zgură, I.Severin I.Tonoiu (**Voiculescu**), Composite materials with metallic matrix – Processing technologies (*Materiale compozite cu matrice metalică, tehnologii de prelucrare*), Ed. Romania Academy, 2000, Bucharest, ISBN: 973-27-0729-1;
2. **Ionelia Voiculescu**, Welding of aluminium and aluminium alloys (*Sudarea aluminiului și a aliajelor sale*), Ed. PRINTECH, 2003, Bucharest, ISBN 973-652-933-9;
3. **Ionelia Voiculescu**, *The hydrogen in steels for welded structures (Hidrogenul în oțeluri pentru construcții sudate)*, Ed. PRINTECH, 2005, Bucharest, ISBN 973-718-181-6;
4. **Ionelia Voiculescu**, Corneliu Rontescu, Ileana Liliana Dondea, Metallography of Welded Structures (*Metalografia Îmbinărilor Sudate*), Ed. SUDURA, Timisoara, 2010, ISBN 978-973-8359-58-1.

### Patents

1. Binchiciu, H., Iovănaș, R., Geantă, V., **Voiculescu, I.**, Binchiciu, A., Iovănaș, D., Ștefănoiu, R., Binchiciu, E, Irremovable modular composite element, comprises rectangular pipe made of carbon or slightly alloyed steel, (Element compozit modulat inamovibil și procedeu de fabricație) Patent Number: **RO125759-A0** (Nr. OSIM – A- 00249/18.03.2010),[Derwent Innovation Index ISI-Web of

- Science/Science Citation Index Expanded].
2. Binchiciu, A., **Voiculescu, I.**, Geantă, V., Binchiciu, H., Ștefănoiu, R., Binchiciu, E., Coated silver alloy rods of reduced hygroscopicity for brazing, comprises silver and tin deposited by extrusion deoxidizing flux made of synthetic vitreous precursors and metal powder additions. (Vergele învelite din aliaje de argint pentru brazare cu higroscopicitate redusă) Patent Number: **RO125836-A0** (Nr. OSIM – A-00248/18.03.2010), [Derwent Innovation Index ISI-Web of Science/Science Citation Index Expanded].
  3. Binchiciu, A., **Voiculescu, I.**, Geantă, V., Binchiciu, H., Ștefănoiu, R., Iovănaș, D., Binchiciu, E., Negriu, R.M., Wear preventing shield with self-protection and process for making the same, (Blindaj antiuzură cu autoprotecție și procedeu de fabricație) Patent Number: **RO125760-A0** (Nr. OSIM – A-00138/15.02.2010), [Derwent Innovation Index ISI-Web of Science/Science Citation Index Expanded].
  4. **Voiculescu, I.**, Binchiciu, A., Geantă, V., Binchiciu, H., Ștefănoiu, R., Iovănaș, D., Negriu, R.M., Binchiciu, E., Electrode coating for build-up welding with abrasion wear-resistant alloys contains marble, fluorine, rutile, iron, metallic chromium, colloidal graphite, rare earths, aluminium, carboxymethyl cellulose and liquid sodium silicate. (Înveliș de electrozi pentru încărcarea prin sudare cu aliaje rezistente la uzare de abraziune) Patent Number: **RO125761-A0** (Nr. OSIM–A-00137/15.02.2010), [Derwent Innovation Index ISI-Web of Science/Science Citation Index Expanded].
  5. Binchiciu, H., Geantă, V., **Voiculescu, I.**, Ștefănoiu, R., Negriu, R.M., Binchiciu, E., Binchiciu, A., Coating for electrodes for build-up welding, comprises basic coating of the fluoro-calcic type with addition of metallic powders (Înveliș de electrozi pentru încărcare prin sudare), Patent Number: **RO125834-A0** (Nr. OSIM–A-00136/15.02.2010), [Derwent Innovation Index ISI-Web of Science/Science Citation Index Expanded].
  6. Binchiciu, A., **Voiculescu, I.**, Geantă, V., Constantin, E., Binchiciu, H., Ștefănoiu, R., Binchiciu, E., Negriu, R.M., Electrodes with composite coating of alloy, comprises electrodes meant to deposit by manual electric welding alloys of the type copper, aluminium, nickel, iron and manganese (Electrozi cu înveliș compozit din aliaj CuNiAl), Patent Number: **RO125856-A0** (Nr. OSIM – A-00102/04.02.2010), [Derwent Innovation Index ISI-Web of Science/Science Citation Index Expanded].
  7. Caporniță, L., **Voiculescu, I.**, Geantă, V., Ștefănoiu, R., Binchiciu, A., Câmpurean, A.M., Iovănaș, D., Binchiciu, E., Negriu, R.M., Binchiciu, H., Coating for electrodes employed in welding heterogeneous duplex stainless steel-carbon steel joints (Înveliș de electrozi pentru sudarea îmbinărilor eterogene oțel inoxidabil duplex–oțel carbon) Patent Number: **RO125859-A0** (Nr. OSIM– A-00101/04.02.2010), [Derwent Innovation Index ISI-Web of Science/Science Citation Index Expanded].
  8. Binchiciu, A., **Voiculescu, I.**, Geantă, V., Binchiciu, H., Ștefănoiu, R., Negriu, R.M., Binchiciu, E. Ecological coated core wires of silver alloys for brazing, is made by extrusion coating with deoxidizing flux with metal powder addition (Vergele ecologice învelite din aliaje de argint pentru brazare Patent Number: **RO125835-A0** (Nr. OSIM–A-00087/01.02.2010), [Derwent Innovation Index ISI-Web of Science/Science Citation Index Expanded].
  9. Binchiciu, H., Geantă, V., **Voiculescu, I.**, Binchiciu, A., Vida-Simiti, I., Ștefănoiu, R., Binchiciu, E., Negriu, R.M., Electrodes with composite bronze and tin coating, comprises alloy wire rods made of copper and tin (Electrozi cu înveliș compozit din bronzuri cu staniu) Patent Number: **RO125855-A0** (Nr. OSIM–A-00086/01.02.2010), [Derwent Innovation Index ISI-Web of Science/Science Citation Index Expanded].
  10. Binchiciu, H., Geantă, V., **Voiculescu, I.**, Binchiciu, A., Ștefănoiu, R., Binchiciu, E., Negriu, R.M. Process and installation for producing powders of binary aluminium-magnesium alloys meant for making metal pieces of thixotropic structure (Procedeu și instalație de obținere a unor pulberi din aliaje binare de aluminiu-magneziu destinate producerii unor piese metalice cu structură thixotropă) Patent Number: **RO125770-A0** (Nr. OSIM–A-00085/01.02.2010), [Derwent Innovation Index ISI-Web of Science/Science Citation Index Expanded].
  11. Geantă, V., **Voiculescu, I.**, Ștefănoiu, R., Binchiciu, H., Negriu, R.M., Process and composite material for producing the retention aprons in centrifugal crushers (Procedeu și material compozit pentru obținerea pragurilor de retenție ale concasoarelor centrifugale) Patent Number: **RO12587-A0** (Nr. OSIM–A-00012/11.01.2010), [Derwent Innovation Index ISI-Web of Science/Science Citation Index Expanded].

#### MEMBER OF PROFESSIONAL ASSOCIATIONS

1990 – present, President of ASR-Bucharest Filiation (Romanian Welding Association);  
 1993 - member AWS and SF2M;  
 1995 - 2001 member AIM,  
 1996 - ASM International

## OTHER COMPETENCES/SKILLS

European expert Leonardo da Vinci: 1999-2001

Expert Romanian Research Program CNCSIS 2004 – 2005

Expert Romanian Research Program RELANSIN 2002 – 2004

Invited professor – Socrates Program 2006 – 2007, Universidad Nova de Lisboa, Portugal;

Invited professor – 2010, Universidad Politehnica de Madrid, Spain

Member of the Editorial Board of THE ANNALS OF "DUNAREA DE JOS" UNIVERSITY OF GALATI, FASCICLE XII, WELDING EQUIPMENT AND TECHNOLOGY, ISSN 1221– 4639, from 2010

Member of the Editorial Board of U.P.B. Sci. Bull., Series D, 2010 , ISSN 1454-2358

## EXPERIENCE IN NATIONAL/INTERNATIONAL PROJECTS

Researcher (**26**) or coordinator (**28**) in **54 national projects** (Programs: RELANSIN, CEEEX, PNCD I, PNCD II), participant (**7**) or coordinator/responsible (**4**) in **11 international projects**.

## INTERNATIONAL PROJECTS

1. "Amelioration des techniques de fabrication et developpement des procedes de recyclage de materiaux metallique poliphase et composites pour applications dans les industries des transports", Research project **COPERNICUS 94** – ERBCIPACT 940192, , Participant;
2. Trainers formation for promotion of quality spirit in educational process, Mobility Project „Leonardo Da Vinci” Nr.RO/98/PL 83521/I.I.2.c - De Montfort University – UK, Economical responsible;
3. Promotion of quality spirit in educational process of initial and continuing vocational training, Pilot Project „Leonardo Da Vinci” RO/98/83554/PI/I.I.b./CONT. 1999 – 2000 - De Montfort University - UK, Universite de Rennes - F, Universidade do Porto – Portugal, **Economical responsible**;
4. Training for Improving of Managerial Skills of University Teachers, Mobility Project „Leonardo da Vinci”, RO/2001/PL87069/EX, Aveiro, Portugal 2004, participant;
5. Centre Professionnel pour Formation Continue en Productique Moderne, Pilot project Leonardo da Vinci, RO/2000/B/F/PP141037, 2001, Univ. Catholique de Liege, Belge ; MAZAK EUROPE, Germany ; AB SANDVIK COROMAT, Sweden ; IUT Rennes, France ; University of Patras, Grece, **Technical and Economical responsible**;
6. Training and Certification of Assessors in Welding and Non-Destructive Testing Field RO/2003/91111/EX – Porto Salvo, Portugal 2004, **Project coordinator**;
7. Certification des competences dans le management de l'environnement , Mobility project “Leonardo da Vinci” RO / 2003 / PL91110/EX – Marche-en-Famenne, Belge, 2004, participant;
8. Training for Biomaterials Integration in Computer-aided paradigm, Mobility project “Leonardo da Vinci” RO / 2004 / 93006 / EX. 1.05.2006 – 12.05.2006, Universidade NOVA de Lisboa, Portugal, **Project coordinator**;
9. **SOCRATES RO BUCHAREST 11, 2004 – 2007, Universidade NOVA de Lisboa, Portugal, 28.04.2006 – 14.05. 2006, participant**;
10. **Metallurgie des materiaux nucleaire** – research project **TEMPUS JEP 9863** - 1997, CEA Saclay, France, participant ;
11. Quality Assurance in NDT (Non-Destructive Testing)– research project **TEMPUS S-JEP 11351-96**, Italy, 1998, participant.

## NATIONAL PROJECTS

1. Cercetări privind sudarea materialelor compozite cu matrice metalică și a materialelor amorse, Nr.836/1996, Tema A2, **Project Director**, Ministerul Cercetării și Tehnologiei, 1995-1997.
2. Modificarea proprietăților și structurii aliajelor prin prelucrare superficială cu flux de electroni, Nr.711/1996, Act adițional nr. 843/1998/IV, **Project Director**, Ministerul Cercetării și Tehnologiei, 1995-1998.
3. Cercetări privind dehidrogenarea termică și în câmp electric a oțelurilor, Nr.711/96, Act adițional nr. 2/96, **Project Director**, Ministerul Cercetării și Tehnologiei, 1996-1997.
4. Cercetări privind îmbinarea materialelor ceramice, Nr.836/1996, Tema B19, **Project Director**, Ministerul Cercetării și Tehnologiei, 1996-1998
5. Tehnologie de sudare cu arc electric (SMAW și GMAW) a șinelor cap la cap (CF 49B – CF 49B, CF 49B – RI60, RI60-RI60), **Project Director**, Programul RELANSIN, 2000, Contract Nr. 906/2000.
6. Tehnologie și dispozitiv pentru recondiționarea șinelor în curbă, **Project Director**, Programul

- Relansin, 2000, Contract Nr. 907/2000.
7. Analiza compatibilitatii metalurgice a aliajelor utilizate pentru imbinarea tevilor zincate prin lipire tare , ca subcontract la contractul Relansin Nr. 1166/2001 cu tema « Tehnologie novativa de realizare a procedului de imbinare a tevilor zincate prin lipire tare », **Project Director**, Programul Relansin, 2001, Contract colaborare Nr.1500/29.06.2001.
  8. Linie tehnologică pentru obținerea plaselor metalice, Project Director, Programul Relansin, Contract Nr. 1479/2003.
  9. Contract Auto Chassis International, La détermination de la qualité des cordons de soudure procède MAG, Essieu, B- plateformes – Pitesti, 01.12.2003- 31.01.2004, **Project Director**.
  10. Cercetari privind obținerea prin turnare a aliajelor pe bază de cobalt utilizate la fabricarea și recondiționarea utilajelor petrochimice, Faza 5, Etapa a III-a, - Program experimental de recondiționare și confecționare utilaje petrochimice folosind aliaje de tip stellite produse cu instalația pilot, UPB – CEMS, București, 2003 – **Responsabil faza**, Contract RELANSIN 1383/2001.
  11. Realizarea unei familii de vergele învelite, ecologice, pentru brazarea cu aliaje de argint - VERAG, Contract RELANSIN 2023/2004, **Project Director**.
  12. Laborator pentru încercări construcții sudate – SUDOTEST - Contract INFRAS nr. 238/2004 - 2006, Director laborator, **UPB Responsible**.
  13. Cercetări fundamentale și aplicative privind realizarea bronzurilor cu 12-15 % staniu destinate obținerii unor straturi antifricțiune – Bronzinu - Contract CEEX nr. 98 / 2005 – 2007, UPB **Responsible-CEMS**.
  14. Cercetări inovative privind realizarea unor noi materiale pentru sudare și procese de producție – MATAVSUD - Contract CEEX nr. 99 / 2005 – 2007, UPB **Responsible-CEMS**.
  15. Cercetari inovative privind valorificarea complexa a materialelor si rezidurilor organice pentru obtinerea resurselor alternative regenerabile de energie in instalatii adaptate pentru mediul rural - RARENERG - Contract CEEX nr. 114 / 2005 - UPB **Responsible-CEMS**.
  16. Electrozi multistrat pentru sudarea prin rezistență electrica în puncte și linie – ELSUD - Contract PNCD 2 PARTENERIATE - 71-066 / 2007 – 2009, UPB Responsible-CEMS.
  17. Materiale și tehnologii inovative pentru creșterea durabilității elementelor active din componența echipamentelor tehnice utilizate în agricultură - DURAG – Contract CEEX nr. 298 /2006 – **Project Director**.
  18. Cercetări fundamentale și aplicative privind realizarea bronzurilor CuNiAl destinate reconditionarii elicelor navale – ELNAV - Contract CEEX nr. 322/2006 - UPB **Responsible-CEMS**.
  19. Tehnologii inovative de crestere a disponibilitatii utilajelor pentru reabilitarea drumurilor (terasiere) prin utilizarea elementelor modulate, incarcate cu straturi dure prin sudare – **DURASTRADE** - Contract CEEX nr. 116 / 2005 – **Project Director**.
  20. Laborator pentru incercari metalografice - **LAMET** – Contract RENAR nr. 122/2006 – **Director laborator, Project Director**.
  21. Tehnologii inovative de obtinere din materiale compozite cu proprietati dirijate a lagarelor de alunecare pentru industria auto – TOMCD - Contract PNCD 2 PARTENERIATE 71-048 / 2007 – **UPB Responsible - CEMS**.
  22. Sudarea cu laser a capsulelor pentru surse radioactive – LASERCAP - Contract PNCD 2 PARTENERIATE 71-132 / 2007 - **UPB Responsible**.
  23. Formarea prin pulverizare a electrozilor compoziti, utilizati pentru depuneri dure si sudare in puncte – **PULVER** – Contract PNCD 2 INOVARE 57/2007 - **UPB Responsible**.
  24. Nanomateriale de adaos microaliante pentru imbinarea materialelor ceramice – **NANOCERAD**, Contract PNCD 2 PARTENERIATE 71-118 / 2007 - **UPB Responsible**.
  25. Instalatie ecologica pentru prelucrarea deseurilor menajere – **ECOMAG** - Contract PNCD 2 INOVARE 112/2007 – **Project Director UPB-CEMS**.
  26. Ciocane ranforsate cu deseuri recuperabile de carburi pentru mori de macinare – **MILHAM**, Contract PNCD 2 PARTENERIATE nr. 72-218/01.10.2008, **UPB Responsible**;
  27. Tehnologie de depunere prin sudare hibrida Laser-MIG cu pulberi – **LASERDEP**, Contract PNCD 2/PARTENERIATE, nr. 72-216/2008, **Project Director**;
  28. Tehnologie inovativa pentru reconditionare sine si aparate de cale (AC) tramvai - RECST , Contract Nr. 1439, progrmul IMPACT, Competitia 2008, **Project Director**;
  29. Tehnologie de sudare cu arc electric sub apa in mediu de gaze protectoare, UPB – CAMIS, Programul RELANSIN, Contract 1772/2003- 2005, **Colaborator**;
  30. Sistem expozițional pentru prezentarea realizărilor din cadrul programului Relansin, UPB – CEMS, București, 2003, Programul Relansin, Contract Nr. 1479/2001, **Colaborator**.
  31. Realizarea coliviilor de rulmenți din materiale compozite Al/Grafit, UPB – CEMS, București, 2002, Programul Relansin, Contract Nr. 857/2000, **Colaborator**
  32. Studiu documentar privind locul de inițiere a impurificării oțelului pe fluxul de fabricație a bramelor turnate continuu, partener UZINSIDER Engineering S.A. Galați, Contract CEMS – 2001, **Colaborator**.



33. Realizarea și implementarea lăncilor răcite cu apă în vederea modificării procesului tehnologic de obținere a cuprului și optimizării randamentelor metalurgice, UPB – CEMS, 2003, Programul Relansin, Contract Nr. 1700/2003, **Colaborator**.
34. Cercetari privind obținerea prin turnare a aliajelor pe bază de cobalt utilizate la fabricarea și recondiționarea utilajelor petrochimice, UPB – CEMS, București , 2003, Programul RELANSIN , Contract 1383/2001, **Colaborator**.
35. Cercetari teoretice si experimentale privind fisurarea elementelor de alimentare cu apa ale reactorului MR101B de la sectia ACN2 a Combinatului S.N.P. ARPECHIM Pitesti, Contract Nr. 53/14.11.2003, **Colaborator**.
36. Sistem calibru 60mm pentru difuzarea materialelor tiparite, Academia Tehnica Militara, Contract Relansin Nr.1635/2002, **Colaborator**.
37. Realizarea si implementarea cuptoarelor de incalzire pentru produse mici, de serie mare, supuse operatiilor de matritare – CUPTINC Contract RELANSIN 2101/2004, **Colaborator**;
38. Cercetari inovative privind valorificarea complexa a materialelor si rezidurilor organice pentru obtinerea resurselor alternative regenerabile de energie in instalatii adaptate pentru mediul rural - RARENERG , Contract CEEEX 114/2005, **Colaborator**.
39. Cercetări fundamentale și aplicative privind creșterea eficienței energetice și reducerea poluării prin realizarea sistemelor de ardere autocarburante la cazanele de mare putere – AUTOCARB. Contract CEEEX nr. 077/2005 – 2007, **Colaborator**.
40. Cercetari fundamentale si aplicative privind transferul intensiv al energiei termice in cuptoare destinate obtinerii produselor ceramice de inalta refractaritate – CUPCERAM. Contract CEEEX nr. 299/2006 – 2008, **Colaborator**.
41. Cercetari fundamentale si aplicative privind obtinerea produselor tubulare din oteluri de calitate superioara in vederea reducerii costurilor si ecologizarii productiei – TUBOTEL. Contract CEEEX nr. X2C22/2006 – 2008, **Colaborator**.
42. Cercetari privind elaborarea unei tehnologii romanesti de co-combustie: biomasa-carbune – BIOCARB - Contract CEEEX nr. 158/2006, **Colaborator**.
43. Tehnologii inovative pentru realizarea de elemente modulate destinate fabricării sculelor pentru deformări plastice – ELMOD - Contract PNCD 2 PARTENERIATE 71-039 / 2007, **Colaborator**.
44. Cercetari inovative privind realizarea și implementarea în agregatele termice industriale a unor noi atenuatoare de zgomot in vederea reducerii poluării sonore generate de esaparea in atmosferă de gaze sau abur – POLSON - Contract CEEEX nr. 77 / 2005 – 2007, **Colaborator**.
45. Material și tehnologie pentru fabricarea sculelor încărcate prin sudare intens solicitate la temperaturi ridicate – INCASUD. Contract INVENT nr. 196/2005, **Colaborator**.
46. Materiale novative cu structură amorfă pentru brazare destinate aplicațiilor industriale speciale – NOVABRAZ - Contract CEEEX nr. 221/2006, **Colaborator**.
47. Materiale noi biocompatibile pentru implantologie ortopedica - BIOCOB – Contract CEEEX nr. 223/2006, **Colaborator**.
48. Cercetari fundamentale si aplicative privind prelucrarea cu jet de apa si particule abrazive orientate electromagnetic – ELMAJET - Contract CEEEX nr. 256/2006, **Colaborator**.
49. Solutii novative privind depoluarea termica, separarea si captarea co2 din gazele arse rezultate din procesele termice industriale – depolterchim - Contract PNCD 2 PARTENERIATE 21-016 / 2007, **Colaborator**.
50. Realizarea in sistem modular a snecurilor utilajelor de extruziune din industriile prelucratoare – SENMELC - Contract PNCD 2 PARTENERIATE 71-014 / 2007, **Colaborator**.
51. Tehnologii si materiale inovative pentru fabricarea pieselor de uzura destinate productiei de automobile – TEMIPUPA - Contract: PNCD 2 PARTENERIATE 71-061 / 2007, **Colaborator**.
52. Realizarea prin thixotropizare si injectare directa in matrita a pieselor complexe destinate echipamentelor electronice si de comunicatii – THIXINJECT - Contract PNCD 2 INOVARE 72/2007, **Colaborator**.
53. Materiale noi si tehnologii inovative pentru cresterea rezistentei la oboseala si coroziune a pieselor de uzura – MICROPUPA - Contract PNCD 2 INOVARE 95/2007, **Colaborator**.
54. Nou material compozit Al-Bazalt utilizat la producerea de piese rezistente la uzura - MATCOMALBAZ, Contract INOVARE, nr. 145/2008, **Colaborator**;

### **AWARDS, FAIRS AND EXPOSITIONS PARTICIPATION**

1. Geantă, V., **Voiculescu, I.**, Ștefănoiu, R., Binchiciu, H., Negriu, RM. Group of Inventions, **Gold Medal** to European Exhibition of creativity and Innovation, EUROINVENT, Iași, Romania, 2011.
2. Binchiciu, A., **Voiculescu, I.**, Geantă, V., Binchiciu, A., Ștefănoiu, R., Iovănaș, D., Binchiciu, E., Negriu, R.M. Group of invention, **Diploma of Excellence and Gold Medal**, International Fair of inventions "PROINVENT", Edition IX, Cluj-Napoca, Romania, 2011.

3. Binchiciu, H., Geantă, V., **Voiculescu, I.**, Binchiciu, H., Vida-Simiti, I., Ștefănoiu, R., Binchiciu, E., Negriu, R.M., Electrozi cu înveliș compozit din bronzuri cu staniu., **Diploma of Excellence and Gold Medal**, Salonul internațional de inventică PROINVENT, Ediția a IX-a, International Fair of inventions "PROINVENT", Edition IX, Cluj-Napoca, Romania, 2011.
4. Geantă, V., Binchiciu, H., **Voiculescu, I.**, Binchiciu, A., SELF- PROTECTION WEAR RESISTANT COATINGS AND MANUFACTURING PROCESS, (Blindaj antiuzură cu autoprotecție și procedeu de fabricație), International Hannover Fair (Hannover Messe), Germany, 2010.
5. **I.Voiculescu**, C.Rontescu, I.L.Dondea, *Metalografia Îmbinărilor Sodate*, Editura SUDURA, Timisoara, 2010, ISBN 978-973-8359-58-1, **Diploma and gold medal**, NATIONAL SALON of TECHNICAL and SCIENTIFIC BOOKS (Salonul National de Carte Tehnica si Stiintifica), Iasi, 2012.
6. **I.Voiculescu**, **Special award** of Korea INVENTION NEWS, Group of inventions, 4th Edition of European Exhibition of Creativity and Innovation, EUROINVENT 2012, Iasi, Romania.
7. **Voiculescu, I.**, Binchiciu, A., Geantă, V., Binchiciu, H., Ștefănoiu, R., Iovănaș, D., Negriu, R.M., Binchiciu, E. Electrodes coating for welding deposition using hard resistant wear alloys. **Bronze Medal**. European Exhibition of Creativity and Innovation, EUROINVENT, Iași, România, may 10 – 12 2012.
8. Geantă, V., **Voiculescu, I.**, Ștefănoiu, R., Binchiciu, H., Negriu, R.M. Prag de retenție pentru concasoare centrifugale. **Diploma de excelență PRO INVENT**, Salonul internațional de inventică PROINVENT, Ediția a X-a, Cluj-Napoca, 27 – 30 martie 2012.
9. Binchiciu, H., Geantă, V., **Voiculescu, I.**, Binchiciu, A., Ștefănoiu, R., Binchiciu, E., Negriu, R.M. Procedeu și instalație de obținere a unor pulberi din aliaje binare de aluminiu-magneziu destinate producerii unor piese metalice cu structură thixotropică. **Diploma de excelență PRO INVENT**, Salonul internațional de inventică PROINVENT, Ediția a X-a, Cluj-Napoca, 27 – 30 martie 2012.
10. Binchiciu, A., **Voiculescu, I.**, Geantă, V., Binchiciu, H., Ștefănoiu, R., Iovănaș, D., Binchiciu, E., Negriu, R.M. Wear preventing shield and manufacturing process. **Gold Medal**. European Exhibition of Creativity and Innovation, EUROINVENT, Iași, România, may 10 – 12, 2012.

#### Expertise

- Materials characterization through: Optical microscopy, SEM, microhardness, wear, etc.;
- Elaboration of welding technologies for different type of materials;
- Elaboration of brazing technologies;
- Elaboration of heat treatment technologies for metallic materials;
- Development and management of research-development activities.

25.01.2013