

**Europass  
Curriculum Vitae**



**Personal information**

First name(s) / Surname(s) **Ioana CSÁKI, borne Apostolescu**  
 Address(es) **Materials science and Engineering Faculty, Room JK006, Splaiul Independentei 313 str, 060042, 6<sup>rd</sup> county, Bucharest, Romania**  
 Telephone(s) **Mobile:**  
 E-mail **ioana.apostolescu@upb.ro**  
 Nationality **Romanian**  
 Date of birth

**Desired employment / Occupational field** **Full professor – University “Politehnica” Bucharest, Materials Science and Engineering Faculty**

**Work experience**

Dates **July 2019 - present**  
 Occupation or position held **Full professor**  
 Main activities and responsibilities **Teaching activity:**  
 Coordinator for the courses and laboratory work for Introducing in materials engineering (IB), Nonferrous metallic powders (IVC), Producing nonferrous materials process engineering (IVA). Coordinating students work for graduation degree papers and students sessions papers. Laboratory work for Experimental research in materials industry (IIE, master degree).  
**Specific activity:**  
 Participation as a member in the graduation committee for first and second cycle and admission exam committee for the Materials Science and Engineering Faculty  
**Research activity:**  
 Project partner for an **international contract** and participation at **6 national contracts** at national level. The research directions approached were metallic powders processing for new multi-component materials. I worked for the improving the powder research laboratory. I processed through powder metallurgy advanced materials, composite materials, high entropy alloys with very good mechanical properties and multi-component materials for coating turbine blades for geothermal centers.  
 Name and address of employer **University “Politehnica” Bucharest, Materials Science and Engineering Faculty, Splaiul Independentei street, no. 313, 060042, county 6, Bucharest, Romania**  
 Type of business or sector **Teaching and research**  
 Dates **2000 – 2007, 2007 – 2015, 2015 – 2019 July**  
 Occupation or position held **Teaching assistant, lecturer, associate professor**

Main activities and responsibilities

**Teaching activity**

Conducting laboratory work in various fields as: for "Notions in materials engineering", "Mineralurgy", "Powder metallurgy", "Composite Materials", "High temperature processes", "Nanomaterials", "Engineering of nonferrous metals processes", "Nonferrous special materials", "Nonferrous alloys", "Strategic management". Teaching for the English and French stream in Engineering in Foreign Languages Faculty for Mineralurgy, Alliages nonferraux, Nonferrous metals and alloys, Ferrous alloys and High temperature processes. I coordinated the practical activities in different companies for the students in the third year for materials engineering as well as economical engineering and for students in Engineering in Foreign Languages Faculty in 2005 and 2006.

**Specific activity:**

Participation in the graduation committee for first and second cycle and admission exam committee for the Materials Science and Engineering Faculty

**Research activity:**

Project partner for an international contract and one national research contract and I participated in the research team for **42 national research contract** and **2 international research contracts** during 2000 – 2015. The research directions approached were metallic powders processing, aluminum composites, aluminum alloys grain refining, aluminum and magnesium alloys production

Name and address of employer

University "Politehnica" Bucharest, Materials Science and Engineering Faculty, Splaiul Independentei street, no. 313, 060042, county 6, Bucharest, Romania

Type of business or sector

Teaching and research

**Education and training**

Dates **2017**

**Habilitation thesis – Multicomponent metallic materials**

Dates **2000 – 2008**

Title of qualification awarded

PhD in Material Science and Engineering

Principal subjects/occupational skills covered

Thesis title: " *In situ* composite materials with aluminium matrix", research regarding various methods to obtain *in situ* **hybrid composite**, methods that should be easy to use, friendly to the environment and highly efficient.

Name and type of organisation providing education and training

University "Politehnica" Bucharest, Materials Science and Engineering Faculty

Dates **1999 – 2000**

Title of qualification awarded

Master degree

Principal subjects/occupational skills covered

Nonferrous material with special destination – research and learning about materials with special destination in various industry divisions.

Name and type of organisation providing education and training

University "Politehnica" Bucharest, Materials Science and Engineering Faculty

Dates **1994 – 1999**

Title of qualification awarded

Bachelor of Science

Principal subjects/occupational skills covered

Engineer in Materials Science and Engineering

Name and type of organisation providing education and training

University "Politehnica" Bucharest, Faculty of Engineering in Foreign Languages, English Stream, Materials Science division

**Personal skills and competences**

Mother tongue(s)

**Romanian**

Other language(s)

**English, French, German**

Self-assessment

European level (\*)

**English**

**French**

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user
B1	Independent user	B2	Independent user	B1	Independent user	B1	Independent user	B2	Independent user

	A2	Basic user	A2	Basic user	A2	Basic user	A2	Basic user	A2	Basic user
<b>German</b>										
Social skills and competences	My experience as a professor grew during the years and I gained the following competences: responsibility, dynamic, creativity and innovation, ability to work with students from all social/cultural environment, various situation adjustment, the ability to work individually as well as in a team; multicultural communication ability achieved after solving the tasks imposed by participation in an international contract with partners from 7 countries.									
Organisational skills and competences	Workshop " <b>Materials performances, energy and new opportunities</b> ", 19 – 20 January 2017 I was involved in organizing the RoMat" International Conference on Advanced Materials and Technologies" 8-11 nov. 2016, 2004 and 2005 in Bucharest and TPRSM conference in Bucharest in 2002, 2003.									
Computer skills and competences	Microsoft office, HSC 5.2									
Other skills and competences	I enjoy hiking mountains, trekking, swimming, travelling and experiencing different cultures									
Driving licence	I am a holder of Romanian driving licence category B vehicles									
<b>Additional information</b>	1997 – May – august – Scholarship in Darlington, United Kingdom, Noel Whessoe company 2006 – June – EPMA summer school (Powder metallurgy field) in Grenoble, France									
<b>Annexes</b>	Publications and research contracts list – selections									
Publications	<ul style="list-style-type: none"> <li>• <b>6 books</b> (1 being chapters published in treated of metallic materials science and engineering)</li> <li>• <b>28 papers</b> published in <b>ISI journals</b></li> <li>• <b>21 papers published in internationals reviews and proceedings for international conferences indexed IDB (international data base)</b></li> <li>• <b>2 gold medals in EUROINVENT 2015 and 2019 (for presenting GEOTUR 16SEE/2014 project and for High entropy alloys for geothermal environment)</b></li> <li>• <b>2 silver medals in EUROINVENT 2016 and 2019</b></li> <li>• <b>1 bronze medal in EURINVENT 2016</b></li> <li>• <b>Best oral presentation prize for BIOREMED 2017 and ROMAT 2016</b></li> <li>• <b>3 prices for excellence in research for 6 articles published in Q1 (4) and Q2 (2) (see the publication list).</b></li> <li>• <b>50 research contracts, at 6 international, 1 as project investigator, 5 as project manager from the partner</b></li> </ul> <p>References are available on request</p>									
Presentations										
Projects										
Conferences										
Seminars										
Honours and awards										
Memberships										

## PUBLICATIONS AND RESEARCH CONTRACTS – SELECTIONS

### Relevant papers

Francesco Fanicchia, **Ioana Csaki**\*, Laura E. Geambazu, Henry Begg and Shiladitya Paul Effect of Microstructural Modifications on the Corrosion Resistance of CoCrFeMo0.85Ni Compositionally Complex Alloy Coatings, **Coatings** 2019, 9, 695, pp 1-16;

Karlsdottir, S.N, Csaki, I.\*, Antoniac, I.V., Manea, C.A., Stefanoiu, R., Magnus, F., Miculescu, F. Corrosion behavior of AlCrFeNiMn high entropy alloy in a geothermal environment, **Geothermics** Volume 81, September 2019, ISSN: 03756505, DOI: 10.1016/j.geothermics.2019.04.006, Pages 32-38, Document Type: Article, WOS:000472689800003

Sigrun N. Karlsdottir, Laura E. Geambazu, **Ioana Csaki**, Andri I. Thorhallsson, Radu Stefanoiu, Fridrik Magnus, Cosmin Cotrut, Phase Evolution and Microstructure Analysis of CoCrFeNiMo High-Entropy Alloy for Electro-Spark-Deposited Coatings for Geothermal Environment, **Coatings** 2019, 9, 406; 1-15, doi:10.3390/coatings9060406

**Csaki I**, Ragnasdottir, K.R, Buzaianu, A, Leosson, K, Motoiu, V, Guðlaugsson, S, Lungu, M.V, Haraldsdottir, H.O, Karlsdottir, S.N, Nickel based coatings used for erosion-corrosion protection in a geothermal enviro+C23:C50+C23:C34nment, **Surface and Coatings Technology** Volume 350, 25 September 2018, Pages 531-541, doi: 10.1016/j.surfcoat.2018.07.029

Maidaniuc, A., Miculescu, F., Voicu, S.I., Andronescu, C., Miculescu, M., Matei, E., Mocanu, A.C., Pencea, I., **Csaki, I.**, Machedon-Pisu, T., Ciocan, L.T., Induced wettability and surface-volume correlation of composition for bovine bone derived hydroxyapatite particles, **Applied Surface Science** 438 (2018) 158–166

A Soare , **I Csaki**\* , M Sohaciuc, C Oprea , S Soare , I Costina and M I Petrescu, New Bond Coat Materials for Thermal Barrier Coating Systems Processed Via Different Routes, IOP Conf. Series: Materials Science and Engineering 209 (2017) 012045 doi:10.1088/1757-899X/209/1/012045,p. 1 - 5, WOS:000423732100045, ISSN: 1757-8981

**Ioana Csaki**, Sigrun Nanna Karlsdottir, Ciprian Alexandru Manea, Radu Stefanoiu, Victor Geanta, Roxana Trusca, Microstructural Study of the Corrosion Effect on AlCrFeNiMn Multicomponent Alloy Tested in Geothermal Environment, NACE Corrosion 25 – 31 March 2017, New Orleans

**Ioana Csaki**, Radu Stefanoiu, Victor Geanta, Ionelia Voiculescu, Mirela Gabriela Sohaciuc, Amalia Soare, Gabriela Popescu, Steluta Serghiuta, Researches Regarding the Processing Technique Impact on the Chemical Composition, Microstructure and Hardness of AlCrFeNiCo High Entropy Alloy, **REV.Chim.** (Bucharest), 67, No. 7, 1373 - 1377

**Csaki I**, Karlsdottir S.N., Buzaianu A., Ragnasdottir K, Guolaugsson S., Morphological characterisation of complex powder used for protective coatings for geothermal plant components IOP Conference Series Materials Science and Engineering 133 (1), 012008, 2016

Buzaianu A, **Csaki I**, Motoiu P, Popescu G, et all. Some analysis od major impact of geothermal fluid components in power plant equipment IOP Conference Series Materials Science and Engineering 133 (1), 012008, 2016

Aurelian Buzăianu, Petra Moțoiu, **Ioana Csaki**\*, Gabriela Popescu, Kolbrun Ragnarstottir, Sæmundur Guðlaugsson, Daniel Guðmundsson, Adalsteinn Arnbjörnsson, Experiments on Life Cycle Extensions of Geothermal Turbines By Multi Composite Technology, **Geothermics**, 57(2015), pp. 1 - 7, 10.1016/j.geothermics.2015.05.001 (*article receiving and excellence in research price*)

P. Moldovan, **Ioana CSAKI**\*, G. Popescu, M. Lucaci, M.V. Lungu, M. Butu, Microstructure evolution and tribological properties for new AlSi9Cu3/5%GrCu composite, **Composite Part B**, 81, 141 - 148, 2015 (*article receiving and excellence in research price*)

M. A. Matara, **I. Csaki**\*, G. Popescu, M. Lucaci, M. Lungu, Investigation of Microstructure and Tribological Properties of Al/Al<sub>2</sub>O<sub>3</sub>+Gr Hybrid Composite, **JOAM**, Vol. 17, No. 11-12, November – December 2015, p. 1849 -1854

Vasile Soare, Dumitru Mitrica, Ionut Constantin, Gabriela Popescu, **Ioana Csaki**, Mihai Tarcolea, Ioan Carcea, The Mechanical and Corrosion Behaviors of As-cast and Re-melted AlCrCuFeMnNi Multi-Component High-Entropy Alloy, **Metallurgical and Materials Transactions A**, ISSN 1073-5623, DOI 10.1007/s11661-014-2523-7, FI 1,73, pag.1468-1473(*article receiving and excellence in research price*)

M.A. Matara, **Ioana CSAKI**\*, G. Popescu, C.A. Popescu, V. Soare, A. Soare, D. Mitrica, AlCrCuFeNiMn high entropy alloy obtained by a powder metallurgy route, **UPB Sci. Bull, Series B**, Vol 77, Iss.4, 2015

Amalia SOARE\*, **Ioana CSÁKI**, Cristina OPREA, Sorin SOARE, Cristian PREDESCU, Mirela SOHACIU, Ru-based Bond Coats used for high temperature applications, **Advanced Materials Research** Vol 1114 (2015) pp 229-232 , Trans Tech Publications, Switzerland, doi:10.4028 / www.scientific.net / AMR.1114.229

Soare V., Mitrica D., Constantin I., Popescu G., **Csaki I**\*, Tarcolea M., Carcea I., AlMnCrCuFeNi multicomponent alloy with superior hardness and corrosion resistance TMS Annual Meeting 2014, ISBN: 978-111888972-5 Pages 1079-1086, WOS:000354941300128,

Ștefănoiu, R., Geantă, V., Voiculescu, I., **Csaki, I**\*, Ghiban, N., Researches regarding the influence of

\* - *corresponding author*

**Research contracts - selections:**

**Research contracts as project manager:**

- Development of novel and cost effective corrosion resistant coatings for high temperature geothermal applications, H2020, GEOCOAT 764086, 2018 - 2021, coordonator TWI - United Kindom, UPB partener P5, responsabil loana CSAKI,parteneri University of Iceland, Inovation Center of Iceland, ON, Wier group, Technovative Solution, Flowphys, METAV, Tehnoid <http://www.geo-coat.eu/>
- Advanced material for cost-efficient and enhanced heat exchange performance for geothermal application GEOHEX 851917 / 2019
- Exploring advanced materials structure when interacting with geothermal steam to produce renewable energy, SEE 6/2016 (PI)
- Upgrading and Life Cycle Extensions of Geothermal Energetic Pumps and Turbines by Thermal Spray Process and Multi Composite Technology, SEE Mechanism 2014, 16SEE/2014

**National research contracts:**

- HEADURCOR – “New alloys/composites with high entropy with superior mechanical and anticorrosive properties for application at high temperatures”, 270/2014
- Multilayer Systems for cryogenic and high temperature applications, UPB 2011 – 2015, „Method for aluminium alloys primary porosity measurement” 2004 – 2006, „New composite materials for tribological applications” – 2004 – 2006,
- HEATEETH – Component for an excavation device reinforced with high entropy alloys 25 DPST/20.08.2013 HEATEETH