

## GHEORGHE HUȚIU

### Curriculum Vitae

<http://www.researcherid.com/rid/J-2934-2012>



#### EDUCATION

- **PhD in Science of Materials** (2003), *Politehnica* University of Timisoara, Romania; **PhD Thesis:** Studies and researches concerning the utilization of recycled materials for the manufacturing of Sn - base antifriction alloys without Cd and As, advisor Prof. Marin Trusculescu;
- **Diploma Engineer (M.Sc.) in Metallurgy**, major in Foundry (1982), Polytechnic University of Bucharest, Romania.

#### SOCIAL STATUS

Born: October 7, 1956 in Susag, Arad, Romania;  
Married; Nationality and citizenship: Romanian; Religion: Christian Orthodox.

#### LANGUAGES

- **English:** B2;
- **Romanian:** native.

**TEACHING & RESEARCH** (32 years of experience): Science of Materials, Technology of Materials, Heat Treatment, Composite Materials, Quality Engineering, Entreprise Organization.

#### POSITIONS

- **Senior Lecturer**, 1996 - Present, Dept. of Automation, Engineering, Textiles and Transport, Faculty of Engineering, Aurel Vlaicu University of Arad, Romania;
- **Chief Registrar** 1993-1996, Aurel Vlaicu University of Arad;
- **Chief of The Designing Department for Foundry Technologies**, 1991-1993, SC ARIS SA ARAD;
- **Foundry engineer**, 1982-1991, SC ARIS SA ARAD (Machine-Tools Factory).

#### SCIENTIFIC PAPERS <http://www.researcherid.com/rid/J-2934-2012>

36 published paper (17 as first author, 19 as co-author).

- **Papers published in Peer-reviewed Journals indexed in ISI Web of Science -5**
- **Conference Papers - indexed in ISI Web of Science-3**
- **Papers in other Peer-reviewed Journals -10**
- **Conference Papers - not indexed in Web of Science -18**

**BOOKS & BOOKS CHAPTERS:** 2 scientific books.

#### RESEARCH GRANTS & CONTRACTS

- 5. Researcher, PARTNERSHIP Grant** code PN-II-PT-PCCA-2011-3.2-1682 (contract 22/2012), Romanian National Authority for Scientific Research, CNDI-UEFISCDI: *Optical Coherence Tomography (OCT) systems with handheld and endoscope probes for real-time investigations in material studies and for in vivo medical imaging* (950k€), **2012- 2016**;
- 4. Project manager on behalf of UAV Arad - Researches concerning the implementation of a tight vaccum ecological system of toilets for passenger carriages-in Romanian (ECO-TOALETA)/AMTRANS X1C14 – Excellence research project, 2005-2008**;
- 3. Researcher, Researches concerning diagnosis methods for the increase of railway transport safety -in Romanian (DIAGNOZA)/AMTRANS, X1C13/2005 -Excellence research project 2005-2008**;

2. **Researcher**, *Researches concerning the development of high quality monitoring and control of the rolling parts with a view to the improvement of maintenance and safety in rail transport – in Romanian (MASPROF)/INFOSOC 32 CEEEX-1 03/2005 - Excellence research project, 2005-2008.*
1. **Project manager**, *Active measures for reducing unemployment, PHARE program, 1998.*

#### **AFFILIATIONS**

- Member of the Association for Interdisciplinary Research of Western Romania;
- Member of the Romanian Academic Managers Association, between 1993-1996;
- Member of **AGIR** (The General Association of Engineers in Romania), Vice-president between 1993-1995;
- Member of **SPIE**, since 2013.

#### **TEACHING ACTIVITY** (current topics are bolded)

- **Lectures: Science of Materials** (1996-present); Technology of Materials (1996-2010); **Heat Treatments** (1996-present); Composite Materials (1996-2005); Quality Engineering (1998-2010); Tribology (2012-present);
- **Laboratories: Science of Materials** (1996-present); Technology of Materials (1996-2010); **Heat Treatments** (1996-present).

#### **SYMPOSIA PARTICIPATION**

- Aurel Vlaicu Univ. of Arad Symposia (ISREIE), Arad (Romania) **2010, 2012**;
- Intl Symposium – Interdisciplinary Regional Research, Novi Sad (Serbia) **2007**;
- Researches concerning the implementation of a tight vacuum ecological system of toilets for passenger carriages - CEEEX research project), National Symposium, Bucharest (Romania) **2007**;
- 10<sup>th</sup> Intl Congress CONAT – Brasov (Romania) **2004**;
- 12<sup>th</sup> Symposium on Analytical and Environmental Problems (SZAB), Szeged (Hungary) **2005**;
- 9<sup>th</sup> Intl Symposium – Interdisciplinary Regional Research, Novi Sad (Serbia) **2007**.

## List of Relevant Publications

<http://www.researcherid.com/rid/J-2934-2012>

### Books

- B2. G. Hutiu**, *Antifriction Ecological Alloys*, Polytechnics Univ. of Timisoara Publishing House, 127 pages, ISBN 973- 625-282-5, **2005**.
- B1. M. Trusculescu, G. Hutiu**, *Metals and Non-ferrous Alloys* (in Romanian), Romanian Academy of Technical Sciences, Polytechnics Univ. of Timisoara Publishing House, ISBN 973-625-091-1, 382 pages, **2009**.

### Papers published in Peer-reviewed Journals indexed in ISI Web of Science

- 5. G. Hutiu**, Duma V. F.\*, Demian D., Bradu A., and Podoleanu A. Gh., Surface imaging of metallic material fractures using optical coherence tomography, *Applied Optics* **54** (2014), ISSN 0003-6935 (print), ISSN 1539-4522 (online); **ISI IF 1.649/2013** – in print.
- 4. Demian D., Duma V. F.\*, Sinescu C., Negrutiu M. L., Cernat R., Topala F. I., G.Hutiu**, Bradu A., and Podoleanu A. Gh., Design and testing of prototype handheld scanning probes for optical coherence tomography, *J of Engineering in Medicine* **228** (2014); ISSN 0954-4119; **ISI IF 1.144/2013**; <http://dx.doi.org/10.1177/0954411914543963>.
- 3. G. Huțiu**, D. Chambre, Studies concerning the elimination of Cd and As from retrievable Sn-Sb based antifriction alloys, *Journal of Chemistry* **5**, 550-554 (2008), ISSN 0034-7752, [http://www.revistadechimie.ro/arhiva\\_eng.asp](http://www.revistadechimie.ro/arhiva_eng.asp).
- 2. G. Hutiu**, A. Motica, G. Sima, A. Plesa, Optimization of the Ductile Cast Irons Elaboration through the Adaptable Thermal Analysis System, *Metalurgia International* **8**, (2009), ISSN 1582-2274.
- 1. G. Sima, G. Hutiu**, L. Bocii, Technological Aspects of Assembling and Processing Narrow Tubes, *Revista Facultad de Ingenieria* **64**, Universidad de Antioquia Columbia, ISSN 01206230.

### Papers in other Peer-reviewed Journals

- J10. E. Murguț, G. Sima, G. Huțiu**, Methods of choose the way for transferwelding tandem, *Annals of the Oradea University Fascicle of Management and Technological Engineering*, Vol. VII (XVII), code 564, 486-493 (2008).
- J9. G. Hutiu**, A. Plesa, The Use of Thermal Analysis for the Manufacturing of Ductile Cast Irons, *Scientific Bulletin of Politehnica University of Timisoara – Transactions on Mechanics*, 147-152 (2007), ISSN 1224607.
- J8. G. Sima, G. Hutiu**, G. Meszar, *A study regarding the use of the arc sensors in the robot welding*, *Scientific and Technical Bulletin of the Aurel Vlaicu University of Arad - Series Mechanical Engineering* 1(2), 53-58 (2005).
- J7. G. Sima, G. Hutiu**, G. Meszar, *A study regarding the use of arc sensors in robot welding*, *Scientific and Technical Bulletin of the Aurel Vlaicu University of Arad, Series Mechanical Engineering* 1(2), 53-58 (2005).
- J6. G. Sima, G. Huțiu**, E. Muncuț, *Resistance Welding of Gas Pipelines -in Romanian - Sudarea cu element încălzitor a conductelor magistrale pentru gaz*, *Revista Sudura* Nr.1 vol. XIV, 40-42, ISSN 1453-0384, **2004**.
- J5. G. Huțiu, I. Copaci**, *Equipment for the treatment of melts via mechanical vibrations*, *Revista Facultad de Ingenieria Universidad de Antioquia, Columbia*, 82- 88, ISSN 0120-6230, **2004**.
- J4. G. Huțiu, G. Gherman**, *Studies concerning int behaviour in service of fork-draw bar assembly of contact line* , Simpozionul Univ. “A.Vlaicu”, ISSN 1582-3431, 3-4 Nov. **2004**.
- J3. G. Huțiu, G. Gherman**, *Studies on the behaviour in service of OL37 and OL37K railway switchgear bar*, Simpozionul Univ. “A.Vlaicu”, ISSN 1582-3431, 3-4 Nov. **2004**;

**J2. G. Huțiu**, *Studies concerning the elimination of As and Cd from Sn-Sb based alloys through vacuum melting*, Analele Universității "A.Vlaicu", 301-308, ISSN 1582-3393, **2000**;

**J1. G. Huțiu**, *Production technology of Sn-Sb based antifriction alloys without Cd and As using recycled materials*, Analele Universității "A.Vlaicu", 309-316, ISSN 1582-3393, **2000**;

#### Conference Papers - indexed in ISI Web of Science

**C21.** Duma V.F.\*, Schitea A., Tuef M., Cira O., **G. Hutiu**, Demian D., Mnerie C., Kaposta I., Optomechatronics applications of the theory of mechanisms with active student involvement in research, *New Trends in Educational Activity in the Field of Mechanism and Machine Theory (ISEMMS, Madrid 2013)*, Mechanisms and Machine Science (Book Series), vol. 19, 111-119, García-Prada J. C., Castejon C., Eds., Springer, **2014**, ISSN 2211-0984; ISBN 978-3-319-01835-5; [http://dx.doi.org/10.1007/978-3-319-01836-2\\_12](http://dx.doi.org/10.1007/978-3-319-01836-2_12).

**C20.** Duma V.F.\*, **G. Hutiu**, Cira O., Demian D., Mnerie C., Kaposta I., Building an Optomechatronics Group in a young university in Western Romania, *Proc. SPIE*, Vol. 9289, 928913, Manuel Filipe P. C. Martins Costa, Mourad Zghal, Eds., *12<sup>th</sup> Education and Training in Optics and Photonics (ETOP July 22-26, 2013)*, Porto (Portugal), **2014**; <http://dx.doi.org/10.1117/12.2070774>.

**C19.** Duma V.F.\*, M. L. Negrutiu\*, C. Sinescu, E. Miutescu\*, A. Burlea, M. Vlascici\*, C. Negru, N. Gheorghiu\*, D. Demian, **G. Hutiu**, C. Mnerie, C. Marcauteanu, F. Topala, I. Voiculescu, A. Gh. Podoleanu\*, Towards a Research Pole in Photonics in Western Romania, *Proc. SPIE*, Vol., Eds., *Education and Training in Optics and Photonics (ETOP)*, Porto, July 22-26, **2013**, ISSN 0277-786X.

#### Conference Papers - not indexed in Web of Science

**C18.** D. Demian, **G. Hutiu**, V.F. Duma, Development of handheld scanning probes for optical coherence tomography, *Proc. 4<sup>th</sup> ISREIE (Aurel Vlaicu Univ. of Arad Symposium)*, Series: Engineering, Nov. 8-9, **2012**, ISSN 2065-2569.

**C17.** **G. Hutiu**, C. Dragos, M. Balas, *Controlling the Cooling Rate of the Bronze Bell Casting by Adjustable Coating*, *Proc. 3<sup>rd</sup> ISREIE (Aurel Vlaicu Univ. of Arad Symposium)*, Series: Engineering, 10-12, 127-135, ISSN 2065-2569, Oct. **2010**.

**C16.** A. Vladasel, S. Roman, A. Padurean, **G. Hutiu**, *Researches concerning the implementation of a tight vacuum ecological system of toilets for passenger carriages* (CEEX research project), National Symposium Bucharest, 39-42, ISBN 978-973-0-0528, Nov. **2007**.

**C15.** **G. Hutiu**, A. Motica, *The Use of Thermal Analysis for the Manufacturing of Ductile Cast Irons – 9<sup>th</sup> International Symposium – Interdisciplinary Regional Research*, Novi Sad, ISBN 978-86-7892-042-4, June **2007**.

**C14.** L. S. Bocîi, I. Copaci, **G. Huțiu**, *Dispositivos para medir la capacidad de frenada de los vehiculos ferroviarios equipados con el freno de disco*, Zaragoza, 5 May **2006**.

**C13.** **G. Hutiu**, G. Sima, E. Muncut, *The relevance of the thermal cycle by using PCs*, 12<sup>th</sup> Symposium on Analytical and Environmental Problems, SZAB, 68-72, Szeged, **2005**.

**C12.** I. Copaci, L.S. Bocii, I. Bele, **G. Hutiu**, *Assessment and adjustment of pressure distribution on disk brakes*, Scientific Session of C-tin Brâncuși University, Târgu-Jiu, 27-30, ISBN 973-7637-25-9, 4-5 Nov. **2005**.

**C11.** G. Sima, **G. Hutiu**, *Considerations about the process of cold welding MPW (welding magnetic pulses)*, Scientific Session of C-tin Brâncuși, University Târgu-Jiu, 107-109, ISBN 973-7637-25-9, 4-5 Nov. **2005**.

**C10.** **G. Huțiu**, G. Sima, E. Muncuț, *Relevance of the thermal cycle by using PCs*, 12<sup>th</sup> Symposium on Analytical and Environmental Problems, SZAB, 68-72, Szeged, **2005**.

- C9.** I. Copaci, L. Bocii, I. Bele, **G. Huțiu**, *Assessment and adjustment of pressure distribution on disk brakes*, Sesiunea de comunicări științifice, Univ. C-tin Brâncuși, Târgu – Jiu, 27-30, ISBN 973- 7637-25-9, 4-5 Nov. **2005**.
- C8.** G. Sima, **G. Huțiu**, *Considerations about the process of cold welding MPW (welding magnetic pulses)*; Sesiunea de comunicări științifice Universitatea C-tin Brâncuși, Târgu-Jiu, pp. 107-109, ISBN 973-7637-25-9, 4-5 Nov. **2005**.
- C7.** I. Hălăciugă, **G. Huțiu**, *Experiments concerning the improvement of the quality of parts reconditioned by build-up surfacing with metallic material*, CONAT - 10<sup>th</sup> Intl Congress – Brasov, ISBN 973-635-394-X, **2004**.
- C6.** **G. Huțiu**, I. Hălăciugă, *Experiments concerning the ecological alloys with a Sn-Sb base used for the manufacturing of bearings*, CONAT - 10<sup>th</sup> Intl Congress – Brasov, ISBN 973-635-394-X, **2004**.
- C5.** I. Hălăciugă, **G. Huțiu**, *Modeling and mathematical simulations for the testing of specific parameters of parts reconditioned via build-up surfacing*, CONAT - 10<sup>th</sup> Intl Congress – Brasov, ISBN 973-635-394-X, **2004**.
- C4.** **G. Huțiu**, I. Hălăciugă, *Elements concerning the elimination of Cd and As through vacuum evaporation from antifriction alloys with a Sn-Sb base used for the manufacturing of bearings*, CONAT - 10<sup>th</sup> Intl Congress – Brasov, ISBN 973-635-394-X, **2004**.
- C3.** Z. Tanacs, **G. Huțiu**, *Calculus for t8/5*, Simpozionul "Tehnologii moderne de sudare și procedee conexe", Zilele Academice Timișene, May **1999**.
- C2.** **G. Huțiu**, F. Popa, *Experiments carried out in Arad Machine-Tools Factory with a view to minimize resins consumption in laboratory and in industrial applications*, Sesiunea de comunicări tehnico-științifice, Arad, 48-53, **1988**.
- C1.** **G. Huțiu**, M. Stoiciu, *Researches concerning the control of solidification of alloys cast in vacuum moulds*, Sesiunea de comunicări științifice Sibiu, 33-36, **1982**.