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## GHEORGHE HUȚIU

### Curriculum Vitae

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

h-index-4



#### 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 Bucharest, Romania.

#### SOCIAL STATUS

Born: October 8, 1956 in Susag, Arad, Romania;

Married

Nationality and citizenship: Romanian; Religion: Christian Orthodox.

#### LANGUAGES

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

#### TEACHING & RESEARCH:

11 years of experience in Foundry Technologies and Heat Treatment

22 years of experience: Science of Materials, Technology of Materials, Heat Treatment, Composite Materials, Quality Engineering, Enterprise Organization.

#### POSITIONS

- **Associate Professor 2016 –up to the present**
- **Senior lecturer**, 1993 - 2016, Dept. of Automation, Engineering, Textiles and Transport, Faculty of Engineering, “Aurel Vlaicu” University of Arad, Romania;
- **Chief of 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>

42- published paper (14 as first author, 28 as co-author).

7 ISI Journals

6 Conference Papers - indexed in Web of Science

2 Papers in BDI Journals

4 Conference Papers - indexed in International Data Bases – (IDB – Proceedings)

23 Papers in Peer-reviewed Journals

40 citations - <https://scholar.google.ro/citations?user=mH5aDa0AAAAJ&hl=en>

#### BOOKS & BOOKS CHAPTERS

3 scientific books.

## RESEARCH GRANTS -8

### RESEARCH GRANTS & CONTRACTS

1. **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* . **Valoarea contractului 4.1191.300 RON, for UAV- 1.628.000 RON; 2012- 2016;**
2. **Project manager on behalf of UAV Arad** - *Researches concerning the implementation of a tight vacuum ecological system of toilets for passenger carriages-in Romanian (ECO-TOALETA)/AMTRANS X1C14* – Excellence research project, **2005-2008; 1.041.000 RON; for UAV-320.000 RON**
3. **Researcher**, Researches concerning diagnosis methods for the increase of railway transport safety -in Romanian- (DIAGNOZA)/AMTRANS, X1C13/2005 -Excellence research project **2005-2008; UAV-45000 RON**
4. **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 CEEX-1 03/2005* - Excellence research project, **2005-2008. UAV-56.000 RON**
5. **Researcher**, *Troleibuz pentru transportul urban de călători “SOLO cu chopper” cu recuperare de energie la frânare și cu asigurarea condițiilor de transport de persoane cu handicap major conform directivelor CE 85/2001, pentru asigurarea compatibilității cu sistemul european*, contract nr. 7c18/09.09.2004 Proiect AMTRANS-2004-2006-Valoare proiect-UAV-Arad-144.000-lei
6. **Project manager**, *Active measures for reducing unemployment*. PHARE program, **1998. 62.000 ECU (70.000 euro)**
7. **Researcher S.C. ARIS S.A-** Obținerea fontei nodulare feritice utilizand sistemul de analiza termica adaptabil. Coordonator proiect- novaCast Technologies AB – Suedia , Beneficiar- S.C. ARIS Arad, 2005-2006/Elaboration of ferritic nodular cast iron using the Adaptable Thermal Analysis System. Project coordinator -novaCast Tehnologies AB-Sweden ,Beneficiary : S.C ARIS S.A-Arad/
8. **Project manager on behalf of S.C. ARIS S.A-** Arad-1985-1986/ Elaboration of lamellar cast iron parts in vacuum moulds – Partners: Politehnica University Bucharest, S.C. ARIS S.A. Arad /

### AFFILIATIONS

- Member in asociatia Managerilor Universitari 1994-1999
- Member in the Association for Interdisciplinary Research of Western Romania din 2011-prezent
- Member AGIR (The General Association of Engineers in Romania), Vicepresident between 1993-1995 in Arad
- Member SPIE-din 9.05.2014-prezent
- Visiting senior researcher University of Kent from 01.06.2015 to 31.12.2018.

### TEACHING ACTIVITY (current topics are bolded)

- **Lectures: Science of Materials** (1996-present); Technology of Materials (1996-2010); **Heat treatment** (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 Treatment** (1996-present).

### SYMPOSIA PARTICIPATION

- “Aurel Vlaicu” University of Arad Symposia (ISREIE), Arad **2010, 2012;**
- International Symposium – Interdisciplinary Regional Research, Novi Sad, June **2007**, ISBN 978-86-7892-042-4;

- Researches concerning the implementation of a tight vacuum ecological system of toilets for passenger carriages - CEEEX research project), National Symposium, November, **2007**, București, pg. 39-42, ISBN 978-973-0-0528;
- CONAT The 10<sup>th</sup> INTERNATIONAL CONGRESS – BRAȘOV, ISBN 973-635-394-X, 2004;
- 12<sup>th</sup> Symposium on Analytical and Environmental Problems, SZAB, pp.68-72, Szeged, 2005;
- 9<sup>th</sup> International Symposium – Interdisciplinary Regional Research, Novi Sad, June 2007, ISBN 978-86-7892-042-4.

L. S. BOCÎL, 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**.

## List of Relevant Publications

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

*h-index = 4 (ISI Web of Science)*

### Theses

**T1. Huțiu G.**, *Studies and researches concerning the utilization of recycled materials for the manufacturing of Sn - base antifriction alloys without Cd and As*, **Ph.D. Thesis**, Politehnica Univ. of Timisoara, **2003**, Supervisor: Prof. Marin Trusculescu, Politehnica Univ. of Timisoara, Romania

### Books Contributions and Chapters

**B3.** Trusculescu M., **Huțiu G.**, *Metals and Non-ferrous Alloys*, (in romanian), Romanian Academy of Technical Sciences Politehnica Timișoara Publishing House, ISBN 973-625-091-1, pg. 382;( coautor-147 pg.), **2009**.

**B2.** **Huțiu G.**, *Antifriction Ecological Alloys*, (in romanian), Politehnica Timișoara Publishing House, pg. 127, ISBN 973- 625-282-5, **2005**;

**B1.** **Huțiu G.**, *Science and engineering of materials*, Politehnica Timișoara Publishing House 150 pg., ISBN 973-625-285-X, **2005**

### Papers published in ISI Journals

**J7.** Craciunescu E., Sinescu C.\*, Negrutiu M. L., Pop D. M., Lauer H.-C., Rominu M., **Huțiu Gh.**, Bunoiu M., Duma V.-F.\*, Antoniac I., *Shear Bond Strength Tests of Zirconia Veneering Ceramics after Double Burnings*, *J of Adhesion Science and Technology* **29** (2015); ISSN 0169-4243; **ISI IF 1,091/2014/2015**; in print; <http://dx.doi.org/10.1080/01694243.2015.1117304>

**J6.** Duma V.-F.\*, Dobre G., Demian D., Cernat R., Sinescu C., Topala F. I., Negrutiu M. L., **Huțiu Gh.**, and Bradu A., Podoleanu A. Gh., *Handheld scanning probes for optical coherence tomography*, *Romanian Reports in Physics* **67**(4) (2015); ISSN 1221-1451; **ISI IF 1.517/2014** – in print;

**J5.** **Huțiu Gh.**, Duma V.-F.\*, Demian D., Bradu A., and Podoleanu A. Gh., *Surface imaging of metallic material fractures using optical coherence tomography*, *Applied Optics* **53**(26), 5912-5916 (2014), ISSN 0003-6935; **ISI IF 1.784/2014**; <http://dx.doi.org/10.1364/AO.53.005912>; **OPEN ACCESS**

**J4.** Demian D., Duma V.-F.\*, Sinescu C., Negrutiu M. L., Cernat R., Topala F. I., Hutiu Gh., Bradu A., and Podoleanu A. Gh., *Design and testing of prototype handheld scanning probes for optical coherence tomography*, *Journal of Engineering in Medicine* **228**(8), 743-753 (2014); ISSN 0954-4119; **ISI IF 1.329/2014**; <http://dx.doi.org/10.1177/0954411914543963>; **OPEN ACCESS**

**J3.** G. Sima, **G. Hutiu**, L. Bocii, *Technological Aspects of Assembling and Processing Narrow Tubes*, Revista Facultad de Ingeniería No. 64, Universidad de Antioquia Columbia, ISSN 01206230, pg. 195-199, **2013 (IF-0.07)**

**J2.** **G. Hutiu**, A. Motica, G. Sima, A. Plesa, *Optimization of the Ductile Cast Irons Elaboration through the Adaptable Thermal Analysis System*, Metalurgia International No. 8, ISSN 1582-2214, pg. 39-43 **2009**; (IF-0.173 in 2009)

**J1.** **G. Huțiu**, D. Chambre, *Studies concerning the elimination of Cd and As from retrievable Sn-Sb based antifriction alloys*, Journal of Chemistry, No. 5/2008, ISSN 0034-7752, pg. 550-554, [http://www.revistadechimie.ro/arhiva\\_eng.asp](http://www.revistadechimie.ro/arhiva_eng.asp); **(IF 0.9-2008)**

### Conference Papers - indexed in Web of Science (ISI and International Data Bases – IDB - Proceedings)

**ISI.C6.** Duma V.-F., Dobre G. M., Demian D., Cernat R. C., Sinescu C., Negrutiu M. L., Hutiu Gh., Bradu A., Rolland J. P., Podoleanu A. Gh., "Constructive solutions of handheld probes with galvanometer scanners for biomedical and industrial imaging. Applications in OCT," *Proc. SPIE*, Vol. 9633, 96330Q, Mazuray L., Wartmann R., Wood A. P., Eds., *SPIE OptiFab (Optical Design and Engineering VI)*, Rochester, NY (USA), Oct. 12-15, 2015; doi: 10.1117/12.2195839

**ISI.C5.** Duma V.-F., Dobre G. M., Demian D., Cernat R. C., Sinescu C., Topala F. I., Negrutiu M. L., **Hutiu Gh.**, Bradu A., Rolland J. P., Podoleanu A. Gh., Handheld probes and galvanometer scanning for optical coherence tomography, *Proc. SPIE*, Vol. 9626, 9626-50, Mazuray L., Wartmann R., Wood A. P., Eds., *SPIE Optical Design (Optical Design and Engineering VI)*, Jena (Germany), Sept. 7-10, 2015; doi: [10.1117/12.2191130](https://doi.org/10.1117/12.2191130)

**ISI.C4.** Duma V.-F.\*, Demian D., Sinescu C., Negrutiu M. L., Cernat R., Topala F. I., **Hutiu Gh.**, Bradu A., Podoleanu A. Gh., Handheld scanning probes for OCT: Developments, applications and perspectives, *Proc. SPIE*, Vol. 9670, Todea C., Podoleanu A., Duma V.-F., Eds., *5<sup>th</sup> World Federation of Lasers in Dentistry - European Division (WFLD-ED) & 6<sup>th</sup> Intl Conference Lasers in Medicine (ICLM)*, Bucharest (Romania), May 7-9, 2015

**ISI.C3.** Duma V.F.\*, Schitea A., Tuf M., Cira O., **Hutiu Gh.**, Demian D., Mnerie C., Kaposta I., Optomechanics 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, Garcia-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);

**ISI.C2.** Duma V.F.\*, **Hutiu G.**, Cira O., Demian D., Mnerie C., Kaposta I., Building an Optomechanics 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>;

**ISI.C1.** Duma V.F.\*, Negrutiu M.L.\*, Sinescu C., Miutescu E.\*, Burlea A., Vlascici M.\*, Negru C., Gheorghiu N.\*, Demian D., **Hutiu G.**, Mnerie C., Marcauteanu C., Topala F., Rolland J., Voiculescu I., and Podoleanu A. Gh.\*, Towards a Research Pole in Photonics in Western Romania, *Proc. SPIE*, Vol. 9289, 928916, 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/10.1117/12.2070787>

#### **Papers published in BDI Journals**

**2. 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, pp.40-42; ISSN 1453-0384, **2004**;

**1. G. HUȚIU, I. COPACI**, *Equipment for the treatment of melts via mechanical vibrations*, Revista Facultad de Ingenieria Universidad de Antioquia, Columbia, pp. 82- 88, ISSN 0120-6230, **2004**.

#### **Conference Papers - indexed in International Data Bases – (IDB - Proceedings)**

**C4. E. Muncuț, Ghe. Sima, Ghe. Huțiu** **Methods of choose the way for transfer welding tandem**, ANNALS of the Oradea University, Fascicle of Management and Technological Engineering, Volume VII (XVII), **2008** ISSN 1583-0691 pag 2851-2857 <http://imtuoradea.ro/auo.fmte/2008.index.pdf>

**C3. 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**

**C2. 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**.

**C1. 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, pp. 68-72, Szeged, **2005**;

#### **Papers in Peer-reviewed Journals**

**23.** Duma V.-F., Demian D., Hutiu Gh., Sinescu C., Topala F., Negrutiu M. L., Dobre G., Bradu A., Podoleanu A. Gh., Biomedical imaging using Optical Coherence Tomography. Devices, systems, and applications, *BioRemed International Conference*, Oradea (Romania), Sept. 19, **2015**;

22. Duma V.F.\*, Mnerie C., Demian D., Hutiu G., Kaposta I., Schitea A., Tuef M., Rohatinovici N., Building an Optomechatronics Group in a young university in Western Romania, *Proc. SPIE*, Eds., *Education and Training in Optics and Photonics (ETOP)*, Porto (Portugal), July 22-26, **2013**, ISSN 0277-786X;
21. 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, ISSN 2065-2569 **2012**;
20. **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, ISSN 2065-2569, pg. 127-135, October **2010**;
19. Sima Gheorghe, Sabaila Lavinia, Mortoiu Doina, Hutiu Gheorghe, Management for holonic manufacturing, *Annals of MTeM for octomber 2019 & Proceedings of the 9 International MTeM Conference*, Published by MTeM **2009**, Cluj Napoca, Romania, editor Cs. Gyenge;
18. A. Vladasel, S. Roman, A. Padurean, **G. Hutiu**, *Researches concerning the implementation of a tight vaccum ecological system of toilets for passenger carriages-* ( in romanian)- (CEEX research project), National Symposium, București, pg. 39-42, ISBN 978-973-0-0528, November **2007**;
17. G. Sima, **G. Hutiu**, G. Meszar, *A study regarding the use of the arc sensors in the robot welding*, Scientific and Technical Bulletin, Faculty of Engineering, Aurel Vlaicu University of Arad, Vol. I, no. 2, Series Mechanical Engineering, pp.53-58, **2005**;
16. I. COPACI, L. BOCHII, I. BELE, **G. HUȚIU**, *Assessment and adjustment of pressure distribution on disk brakes*, Sesiunea de comunicări științifice, Univ. C-tin Brâncuși, Târgu – Jiu, pp. 27-30, ISBN 973- 7637-25-9, 4-5 noiembrie, **2005**;
15. 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 noiembrie, **2005**;
14. G. SIMA, **G. HUȚIU**, G. MESZAR, *A study regarding the use of arc sensors in robot welding*, Scientific and Technical Bulletin – Facultatea de Inginerie Universitatea Aurel Vlaicu Vol.I, nr.2 Series Mechanical Engineering, pp. 53-58, **2005**;
13. 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, pp. 27-30, ISBN 973-7637-25-9, 4-5 November, **2005**;
12. G. Sima, **G. Hutiu**, *Considerations about the process of cold welding MPW (welding magnetic pulses)*, Scientific Session of C-tin Brâncuși, University Târgu-Jiu, pp. 107-109, ISBN 973-7637-25-9, 4-5 November, **2005**;
11. Sima Gheorghe, Hutiu Gheorghe, Meszar Gabriela. *A study regarding the use of the arc sensors in the robot welding*, Scientific and technical bulletin, vol. I nr.2, **2005** University of Arad;
10. I. HĂLĂCIUGĂ, **G. HUȚIU**, *Experiments concerning the improvement of the quality of parts reconditioned by build-up surfacing with metallic material*, CONAT-The 10<sup>th</sup> INTERNATIONAL CONGRESS – BRAȘOV, ISBN 973-635-394-X, **2004**;
9. **G. HUȚIU**, I. HĂLĂCIUGĂ, *Experiments concerning the ecological alloys with a Sn-Sb base used for the manufacturing of bearings*, CONAT - The 10<sup>th</sup> INTERNATIONAL CONGRESS –BRAȘOV, ISBN 973-635-394-X, **2004**;
8. I. HĂLĂCIUGĂ, **G. HUȚIU**, *Modeling and mathematical simulations for the testing of specific parameters of parts reconditioned via build-up surfacing*, CONAT - The 10<sup>th</sup> INTERNATIONAL CONGRESS – BRAȘOV ISBN 973-635-394-X, **2004**;
7. **G. HUȚIU**, **G. GHERMAN**, *Studies concerning int behaviour in service of fork-draw bar assembly of contact line*( in romanian) , Scientific and technical bulletin, University of Arad ISSN 1582-3431, 3-4 noiembrie **2004**;
6. **G. HUȚIU**, **G. GHERMAN**, *Studies on the behaviour in service of OL37 and OL37K railway switchgear bars-* ( in romanian), , Scientific and technical bulletin, vol I nr.2,2005 , ISSN 1582-3431, 3-4 noiembrie 2004;
5. **G. HUȚIU**, M. TRUȘCULESCU, *Structural changes induced via mechanical vibrations in LgSn87 alloy -* (in romanian), Scientific and technical bulletin, University of Timisoara , pp. 15-18, ISBN 973-687-127, 22-23 May, **2003**;

4. **G. HUȚIU**, *Studies concerning the elimination of As and Cd from Sn-Sb based alloys through vacuum melting*-(in Romanian), Scientific and technical bulletin, University of Arad , pp. 301-308, ISSN 1582-3393, **2000**;
3. Z. TANACS, **G. HUȚIU**, *Calculus for  $t_{8/5}$* -in Romanian- *Sinteza modalităților de calcul a  $t_{8/5}$*  ), Scientific and technical bulletin, University of Timisoara , mai **1999**;
2. **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*- (in romanian), Scientific Session , Arad, 48-53, **1988**;
1. **G. HUȚIU**, M. STOICIU, *Researches concerning the control of solidification of alloys cast in vacuum moulds* -(in Romanian), Scientific Session Sibiu, 33-36, **1982**;