

## LISTA DE LUCRĂRI

(extras 2011-2015)

Prof.dr.ing. Radu-Eugen BREAZ

### 1. Lucrări în reviste cotate ISI cu factor de impact și scor relativ de influență

#### 2015

O. Bologa, R.E. Breaz\*, S.G. Racz, *A Fuzzy-based Decision Support Tool for Engineering Curriculum Design*, International Journal of Computers Communications & Control, Volume: 10 Issue: 6 (December), pp. 803-811, ISSN 1841-9836, SRI 0.258, FI 0.746

\*autor corespondent

#### 2012

Breaz, R., Bologa, O., Tera, M., Racz, G., *Researches Regarding the Use of Complex Trajectories and Two Stages Processing in Single Point Incremental Forming of Two Layers Sheet*, The 14<sup>th</sup> Conference on Metal Forming, Krakow - Poland, September 16-19, 2012, published on Journal "Steel Research International", Special Edition, Publishing Company: Wiley-VCH Verlag GmbH & Co. KGaA, ISBN 978-3-514-00797-0, ISSN 1611-3683, pp. 427-430, 2012 (factor impact 0.493)

### 2. Lucrări în volume ale conferințelor indexate Thomson Reuters (ISI Proceedings)

#### 2015

R.E. Breaz, O.C. Bologa, S.G. Racz, A.L. Chicea, *Mechatronics – Objectives and Main Challenges of The Study Programme and How Are They Addressed at "Lucian Blaga" University of Sibiu*, 9th International Technology, Education and Development Conference INTED 2015, 2-4 March, 2015, Madrid, Spain, ISBN 978-84-606-5763-7, ISSN 2340-1079, pp. 3349-3358, <http://library.iated.org/view/BREAZ2015MEC>

A.L. Chicea, R.E. Breaz, *Introducing Computer Aided Techniques for Manufacturing Prosthetic Devices into the Curriculum of Manufacturing Engineers*, 9th International Technology, Education and Development Conference INTED 2015, 2-4 March, 2015, Madrid, Spain, ISBN 978-84-606-5763-7, ISSN 2340-1079, pp. 3568-3574, <http://library.iated.org/view/CHICEA2015INT>

A.L. Chicea, R.E. Breaz, O. Bologa, M. Tera, *Increasing the Quality of Mechatronics Study Programme at "Lucian Blaga" University of Sibiu*, 7th International Conference on Education and New Learning Technologies, 6-8 July, 2015, Barcelona, Spain, ISBN 978-84-606-8243-1, ISSN 2340-1117, pp. 5062-5068, <http://library.iated.org/view/CHICEA2015INC>

M. Tera, R.E. Breaz, O. Bologa, S.G. Racz, *Developing a Knowledge Base about the Technological Forces within the Asymmetric Incremental Forming Process*, Key Engineering Materials, vol. 651, pp. 1115-1121, 10.4028/www.scientific.net/KEM.651-653.1115, 2015

R.E. Breaz, O. Bologa, *Researches Regarding the Use of Fuzzy Controllers within CNC Feed Drives*, Applied Mechanics and Materials, vol. 772, pp. 229-234, 10.4028/www.scientific.net/AMM.772.229, 2015

A.L. Chicea, R.E. Breaz, O. Bologa, *Building 3D Geometric and Kinematic Models of Five-Axis Machine-Tools for Manufacturing Prosthetic Devices*, Applied Mechanics and Materials (IMANE 2015) vol. 809-810, pp. 1004-1009, 10.4028/www.scientific.net/AMM.809-810.1004, 2015

O. Bologa, R.E. Breaz, S.G. Racz, *Method for estimating the manual nesting process efficiency for profiling machines, based upon image processing techniques*, (MTEM 2015), Cluj-Napoca, Applied Mechanics and Materials, Vol. 808, pp. 86-91, Nov. 2015, doi: 10.4028/www.scientific.net/AMM.808-86

#### 2014

Muresan, G., Morar, L., Breaz, R.E., *Teaching CAM Techniques and CNC Programming in Technical Universities – An Integrated Approach*, International Technology, Education and Development Conference INTED 2014, 10-12 March 2009, Valencia, Spain, ISBN 978-84-616-8412-0 / ISSN 2340-1079, 2014, pp. 4115-4122

Breaz, R.E, Bologa, O., Racz, S.G., *Mechatronics – A Study Program Required By The Industry*, International Technology, Education and Development Conference INTED 2014, 10-12 March 2009, Valencia, Spain, ISBN 978-84-616-8412-0 / ISSN 2340-1079, 2014, pp. 4123-4131

Cotigă, C., Racz, S.G., Bologa, O., Breaz, R.E., *Researches Regarding the Usage of Titanium Alloys in Cranial Implants*, Applied Mechanics and Materials, Vol 657, pp. 173-177

Tera, M., Bologa, O., Breaz, R.E., Racz, S.G., *Contributions Regarding Incremental Forming Process of Bimetallic Sheets*, Applied Mechanics and Materials, Vol 657, pp. 178-182

Crenganis, M., Breaz, R.E., Racz, G., Bologa, O., *Inverse Kinematics for a 7 DOF Robotic Arm Using the Redundancy Circle and ANFIS Models*, Applied Mechanics and Materials, Vol 657, pp. 823-828

Crenganis, M., Breaz, R.E., Racz, G., Bologa, O., *Inverse Kinematics for a 7 DOF Robotic Arm Using the Redundancy Circle and Fuzzy Models*, Applied Mechanics and Materials, Vol 555, pp. 320-326

Chera, I., Bologa, O., Racz, G., Breaz, R.E., *Experimental Researches Regarding Strain Measurement of Incrementally Formed Sheet Metal Parts Done Using an Industrial Robot*, Applied Mechanics and Materials, Vol 555, pp. 300-305

Briș, C., Breaz, R.E., Gîrjob, C., Chicea, A., *Researches Regarding Optimising the Contouring Precision of CNC Laser Cutting Machines*, Applied Mechanics and Materials, Vol 555, pp. 580-585

Cotigă, C., Bologa, O., Racz, S.G., Breaz, R.E., *Method for Manufacturing Custom-Shaped Prosthetic Parts from Titanium Alloys by Incremental Forming Using Industrial Robots*, Applied Mechanics and Materials, Vol 555, pp. 575-579

Tera, M., Bologa, O., Breaz, R.E., Racz, S.G., *Theoretical and Experimental Researches Regarding Multilayer Materials Used for Incremental Forming*, Applied Mechanics and Materials, Vol 555, pp. 413-418

Chicea, A.L., Breaz, R.E., Bologa, O., Racz, *Using Serial Industrial Robots and CAM Techniques for Manufacturing Prosthetic Devices*, ICAMAT 2014

Chicea, A., Breaz, R.E., Gîrjob, C., Biris, C., Bologa, O., *Combining Engineering and Medical Knowledge for Manufacturing Medical Devices Using CAD/CAE/CAM Techniques*, 7th International Conference of Education, Research and Innovation, 17-19 November, 2014, Seville, Spain, ISBN 978-84-617-2484-0, ISSN 2340-1095, pp. 388-397

Tirnovcean, S., Breaz, R.E., Tera, M., Bologa, O., Racz, S.G., *Teaching CAD/CAE/CAM Techniques for CNC Profiling and Punching Machines at Master Level*, 7th International Conference of Education, Research and Innovation, 17-19 November, 2014, Seville, Spain, ISBN 978-84-617-2484-0, ISSN 2340-1095, pp. 479-486

## 2013

Breaz, R., Bologa, O., Tera, M., Racz, G., *Determination of Technological Forces in the Incremental Forming Process*, Applied Mechanics and Materials Vol. 371 (2013), © (2013) Trans Tech Publications, Switzerland, 2013, ISBN 978-3-03785-786-1, pp. 133-137, doi:10.4028/www.scientific.net/AMM.371.133, 2013

Chera, I., Bologa, O., Racz, G., Breaz, R., *Robot-Forming – An Incremental Forming Process using an Industrial Robot by means of DELMIA software package*, Applied Mechanics and Materials Vol. 371 (2013), © (2013) Trans Tech Publications, Switzerland, 2013, ISBN 978-3-03785-786-1, pp. 416-421, doi:10.4028/www.scientific.net/AMM.371.416, 2013

Breaz, R., Bologa, O., Tera, M., Racz, G., *Computer Assisted Techniques for the Incremental Forming Technology*, 18<sup>th</sup> IEEE International Conference on Emerging Technologies & Factory Automation, September 10-13, Cagliari, Italy

## 2012

Breaz, R.E., Tirnovcean, S., Biris, C., Bologa, O.C., *Improving the Dynamic Behavior and Working Accuracy of the CNC Laser Cutting Machines*, 12th International Conference on Control, Automation, Robotics and Vision, (ICARCV 2012), Guangzhou, China December 5-7, 2012, ISBN 978-1-4673-1870-9, pp. 1642-1647, 2012, DOI 10.1109/ICARCV.2012.6485437, <http://www.icarcv.org/2012/>

Crenganis, M., Breaz, R.E., Racz, G.S., Bologa, O.C., *Inverse Kinematics of a 7 DOF Manipulator using Adaptive Neuro-Fuzzy Inference Systems*, 12th International Conference on Control, Automation, Robotics and Vision, (ICARCV 2012), Guangzhou, China December 5-7, 2012, ISBN 978-1-4673-1870-9, pp. 1232-1237, 2012, DOI 10.1109/ICARCV.2012.6485351, <http://www.icarcv.org/2012/>

Breaz, R., Racz, G., Bologa, O., Oleksik, V., *Motion Control of Medium Size CNC Machine-Tools - A Hands-on Approach*, the 7th IEEE Conference on Industrial Electronics and Applications (ICIEA 2012), Singapore, July 18-20 2012, ISBN 978-1-4577-2118-2, pp. 2112 – 2117, 2012, DOI 10.1109/ICIEA.2012.6361079, <http://www.iecea.org/2012/>

Crenganiş, M., Breaz, R., Racz, G., Bologa, O., *The Inverse Kinematics Solutions of a 7 DOF Robotic Arm Using Fuzzy Logic*, the 7th IEEE Conference on Industrial Electronics and Applications (ICIEA 2012), Singapore, July 18-20 2012, ISBN 978-1-4577-2118-2, pp. 518 – 523, 2012, DOI 10.1109/ICIEA.2012.6360783, <http://www.ieeeicicia.org/2012/>

Tera, M., Deac, C., Oleksik, V., Bologa, O., Breaz, R., Biris, C., *Comparative Study by Numerical Analysis on the Formability of Deep-Drawn Tailor-Welded Blanks*, Advanced Materials Research, Trans Tech Publications LTD, Laubstrutstr 24, CH-8717 STAFA-Zurich, Switzerland Volume: 463-464, DOI: 10.4028/www.scientific.net/AMR.463-464.582, ISSN 1022-6680, ISBN: 978-3-03785-363-4, pp. 582-586, 2012

Tirnovean, S., Breaz, R.E., Biris, C., Bologa, O.C., *Simulation tools for studying the behavior of CNC laser cutting machines in different working regimes*, 16th International Conference on System Theory, Control and Computing (ICSTCC 2012), Sinaia, Romania, October 12-14, 2012, Print ISBN: 978-1-4673-4534-7, pp. 1-6, 2012, <http://www.aie.ugal.ro/icstcc2012>

Crenganiş, M., Breaz, R., Racz, G., Bologa, O., *Contributions Regarding the Inverse Kinematics of a 7 DOF Redundant Robotic Arm Using ANFIS*, 16th International Conference on System Theory, Control and Computing (ICSTCC 2012), Sinaia, Romania, October 12-14, 2012, Print ISBN: 978-1-4673-4534-7, pp. 1-6, 2012, <http://www.aie.ugal.ro/icstcc2012>

### 2011

Breaz, R.E., Bologa, O.C., Tera, M., Deac, C., *Low-cost motion control solution for industrial manufacturing systems*, 9th IEEE International Conference on Industrial Informatics (INDIN), pp. 280 – 285, E-ISBN 978-1-4577-0433-8, Print ISBN: 978-1-4577-0435-2, ISSN1935-4576, Lisbona, 26-29 July, 2011 (ISI Proceedings, Engineering Village: Inspec), [http://www.uninova.pt/indin2011/home/home\\_i2011.php](http://www.uninova.pt/indin2011/home/home_i2011.php)

## 3. Lucrări în reviste indexate BDI (Engineering Village, Scopus, etc.)

### 2015

O. Bologa, R.E. Breaz, A.L. Chicea, S.G. Racz, *Using Serial Industrial Robots in CNC Milling Processes*, ICMS 2015, Iaşi, Buletinul Institutului Politehnic din Iaşi, Secţia Construcţii de Maşini, Tomul LXI (LXV), Fasc. 3, ISSN 1011-2855, pp. 21-28, 2015

### 2014

Mureşan, G., Morar, L., Breaz, R.E., *Contributions Regarding the Use of a CAM Software Solution In Multi-Axes Machining*, Acta Technica Napocensis, Series: Applied Mathematics and Mechanics, Vol. 57, Issue I, March, 2014, Technical University of Cluj-Napoca, pp. 93-98, <http://atna-mam.utcluj.ro/index.php/Acta/article/view/187/183>

Mureşan, G., Morar, L., Breaz, R.E., *Researches Regarding the Assessment of Manufacturing Accuracy of Numerically Controlled Machine-Tools*, Academic Journal of Manufacturing Engineering, Vol 12, Issue 1/2014, ISSN 1583-7904, 2014 (Ulrich's Database, Index Copernicus), pp.14-19, [http://www.eng.upt.ro/auif/Lucrari\\_PDF\\_2014\\_1/2\\_AJME\\_Muresan\\_14-19.pdf](http://www.eng.upt.ro/auif/Lucrari_PDF_2014_1/2_AJME_Muresan_14-19.pdf)

Mureşan, G., Morar, L., Breaz, R.E., *The Influence of Tool Trajectories Upon the Accuracy Of The Manufactured Parts*, Academic Journal of Manufacturing Engineering, Vol 12, Issue 1/2014, ISSN 1583-7904, 2014, (Ulrich's Database, Index Copernicus), pp.62-67, [http://www.eng.upt.ro/auif/Lucrari\\_PDF\\_2014\\_1/10\\_AJME\\_Muresan\\_62-67.pdf](http://www.eng.upt.ro/auif/Lucrari_PDF_2014_1/10_AJME_Muresan_62-67.pdf)

Tera, M, Breaz, R.E., Bologa, O., Racz, G., *Using a CNC Milling Machine for Incremental Forming*, Proceedings in Manufacturing Systems, Volume 9, Issue 2, 2014, ISSN 2067-9238, pp. 99-104, (Ulrich's Database, Index Copernicus, Research Bible), [http://www.icmas.eu/Journal\\_archive\\_files/Vol\\_9-Issue2\\_2014\\_PDF/99-104\\_Tera.pdf](http://www.icmas.eu/Journal_archive_files/Vol_9-Issue2_2014_PDF/99-104_Tera.pdf)

### 2013

Chera, I., Bologa, O., Racz, G., Breaz, R., *Trajectory Control for an Incremental Forming Process Using an Industrial Robot in DELMIA*, Academic Journal of Manufacturing Engineering, Vol 11, Issue 1/2013, ISSN 1583-7904, 2013, pp. 32-37, (Ulrich's Database, Index Copernicus), [http://www.eng.upt.ro/auif/Lucrari\\_PDF\\_2013\\_1/Chera.pdf](http://www.eng.upt.ro/auif/Lucrari_PDF_2013_1/Chera.pdf)

Bologa, O., Racz, G., Breaz, R., Crenganiş, M., *Comparative study regarding the generation of circular profiles through cutting*, Welding and Material Testing, year XXII, Nr. 2/2013, ISSN 1453-0392, 2013, pp. 19-23, (CSA, Weldasearch, IIS Data), <http://www.bid-isim.ro/>

Chera, I., Bologa, O., Racz, G., Breaz, R. and Crenganiş, M., *FEM Researches Regarding Incremental Forming Process*, Annals of the Oradea University, Fascicle of Management and Technological Engineering, Volume XXII (XII), Nr. 2013/1, ISSN 1583-0691, 2013, pp. 53-58, (Ulrich's Database, Index Copernicus, ICAAP), <http://imtuoradea.ro/auo.fmte/files-2013-v1/Chera%20lonut%201.pdf>

Breaz, R., Bologa, O., Tera, M., Racz, G., *CAM Approaches for the Incremental Forming Process*, Academic Journal of Manufacturing Engineering, Vol 11, Issue 3/2013, ISSN 1583-7904, 2013, pp.100-103, (Ulrich's Database, Index Copernicus), [http://www.eng.upt.ro/auif/Lucrari\\_PDF\\_2013\\_3/21-%20Breaz%20R..pdf](http://www.eng.upt.ro/auif/Lucrari_PDF_2013_3/21-%20Breaz%20R..pdf)

Crenganiș, M., Breaz, R., Racz, G., Bologa, O., *The Kinematic Solution of a Redundant Robotic Arm Using Matlab Simmechanics and ANFIS Models*, Buletinul Institutului Politehnic din Iași, Secția Construcții de Mașini, Tomul LIX (LXIII), Fascicula 3, ISSN 1011-2855, 2013, pp. 33-40, (Ulrich's Database, Index Copernicus)

Chera, I., Bologa, O., Racz, G., Breaz, R., *Researches Regarding an Incremental Forming Process by Means of an Industrial Robot*, Buletinul Institutului Politehnic din Iași, Secția Construcții de Mașini, Tomul LIX (LXIII), Fascicula 3, ISSN 1011-2855, 2013, pp. 41-46, (Ulrich's Database, Index Copernicus)

Breaz, R., Tera, M., Bologa, O., Racz, G., *Evaluating the Accuracy of the Parts Processed by Means of Incremental Forming Using CAD/CAM Techniques*, Buletinul Institutului Politehnic din Iași, Secția Construcții de Mașini, Tomul LIX (LXIII), Fascicula 3, ISSN 1011-2855, 2013, pp. 47-52, (Ulrich's Database, Index Copernicus)

Breaz, R., Biriș, C., Bologa, O., Tîrnovean, S., *Studying the Behavior of CNC Laser Cutting Machines in the Contouring Regime*, Proceedings in Manufacturing Systems, Volume 8, Issue 3, ISSN 2067-9238, 2013, pp. 165-170, (Ulrich's Database, Index Copernicus, Research Bible) [http://www.icmas.eu/Volume8\\_Issue3\\_2013.htm#pp.\\_165-170](http://www.icmas.eu/Volume8_Issue3_2013.htm#pp._165-170)

## 2012

Cioca, L.I., Breaz, R.E., *Decision Support System for Manufacturing Processes Reengineering Based Upon Fuzzy Logic Techniques*, 14th IFAC Symposium on Information Control Problems in Manufacturing, București, May 23-25, 2012, pp. 1111-1116, ISBN 978-3-902661-98-2, ISSN 1474-667, 2012 (Scopus, <http://www.ifac-papersonline.net/Detailed/53865.html>)

Tera M., Bologa, O., Breaz R., Chera, I., Tîrnovean, S., *Study of Incremental Deep-drawing of Bimetallic Sheets*, Proceedings in Manufacturing Systems, Volume 7, Issue 4, 2012, ISSN 2067-9238, pp. 235-240

## 2011

Blaga, A., Oleksik, V., Bologa, O., Breaz, R., *Experimental Studies and FEM Analysis Regarding the Influence of Geometric Parameters on Strain, Thickness Reduction and Forces in Incremental Forming Process*, Analele Universității "Eftimie Murgu" Reșița, Fascicula de Inginerie, Anul XVIII (2011), Nr. 3, ISSN 1453 – 7397, pp. 43-54 (indexare EBSCO, ProQuest, Index Copernicus)

Blaga, A., Bologa, O., Oleksik, V., Breaz, R., *Influence of Tool Path on Main Strains, Thickness Reduction and Forces in Single Point Incremental Forming Process*, Proceedings in Manufacturing Systems, Volume 6, Issue 4, 2011, ISSN 2067-9238, pp. 191-196 [http://www.icmas.eu/Journal\\_archive\\_files/Vol\\_6\\_Issue\\_4\\_2011\\_PDF/191-196\\_Bologa.pdf](http://www.icmas.eu/Journal_archive_files/Vol_6_Issue_4_2011_PDF/191-196_Bologa.pdf)

Crenganiș, M., Bologa, O., Breaz, R., Racz, G., *The Inverse Kinematics Solutions of a 7 DOF Robotic Arm Using Fuzzy Logic*, Bulletin of the Polytechnic Institute of Iași, Vol. LVII(LXI), Fascicle 4 - Machine Constructions, pp. 74-82, ISSN 1011-2855, Iași, 2011 (Index Copernicus)

Tera, M., Breaz, R.E., Oleksik, V., Bologa, O., Racz, G., *Simulations Regarding a CNC Milling Machine Feed Drive used in Forming Processes*, Bulletin of the Polytechnic Institute of Iași, Vol. LVII(LXI), Fascicle 4 - Machine Constructions, pp. 242-249, ISSN 1011-2855, Iași, 2011 (Index Copernicus)

## ALTE LUCRĂRI ȘI PUBLICAȚII (listă selectivă)

### Contracte obținute prin competiții naționale în calitate de director

1. *Cercetări privind realizarea unor sisteme mecatronice inteligente cu control al mișcării destinate sistemelor flexibile de fabricație și montaj I* (2004 și continuare 2005), cod CNCSIS 11, tema 1, beneficiar: Consiliul Național al Cercetării Științifice din Învățământul Superior (C.N.C.S.I.S.) - **Director**

2. *Realizarea unui sistem modularizat reconfigurabil de comandă numerică prin calculator personal pentru mașini unelte și utilaje de prelucrare I* (2002 și continuare 2003) program cod. 380, tema 92, beneficiar: Consiliul Național al Cercetării Științifice din Învățământul Superior (C.N.C.S.I.S.) - **Director**

3. *Cercetări privind realizarea unor sisteme de control ale mișcării multiaxiale comandate prin calculator I* (2000 și continuare 2001), programul tema B3, beneficiar Agenția Națională pentru Știință, Tehnologie și Inovare (A.N.S.T.I.) – **Director**

#### **Contracte obținute în cadrul Planului Național de Cercetare Dezvoltare și Inovare (inclusiv programe “Cercetare de excelență”)**

1. *Sisteme agabaritice de control al mișcării plane și spațiale utilizabile în industria autovehiculelor, AGAMIS, PNCDI II - Programul 4 – Parteneriate în domenii prioritare 72-206/2008, (2008-2011), beneficiar: Centrul Național de Management Programe - **Membru în colectivul de cercetare***

2. *Tehnologie integrată de evaluare și compensare a erorilor sistemelor de prelucrare (TINCOMP), PNCDI II - Programul 4 – Parteneriate în domenii prioritare 71-011/2007, (2007-2010), beneficiar: Centrul Național de Management Programe - **Membru în colectivul de cercetare***

3. *Dezvoltarea infrastructurii de cercetare a unui laborator pentru testarea materialelor avansate utilizate în producția de caroserii auto (TESTMAT), PNCDI II - Programul 2 – Capacități 124 CPI/2007, 2007-2008, beneficiar: Autoritatea Națională pentru Cercetare Științifică - **Membru în colectivul de cercetare***

4. *Materiale, tehnologii și echipamente pentru profilări plane și spațiale (MATEPROF), CEEX Nr. 130/2006, A.M.C.S.I.T. – Universitatea „Politehnica” din București, (2006-2008), beneficiar: Agenția Managerială de Cercetare Științifică, Inovare și Transfer Tehnologic – **Membru în colectivul de cercetare***

5. *Tehnologii avansate de încălzire rapidă în infraroșu a matritelor pentru prelucrare la cald, CEEX Nr. 217/2006, A.M.C.S.I.T. – Universitatea „Politehnica” din București, (2006-2008), Beneficiar: Agenția Managerială de Cercetare Științifică, Inovare și Transfer Tehnologic – **Membru în colectivul de cercetare***

6. *Metode de modelare, simulare și producție virtuală bazată pe tehnologia informației și comunicării dedicată noii generații de sisteme de prelucrare reconfigurabile, CEEX Nr. 22/2005 – INFOSOC București, (2005-2007), beneficiar: INFOSOC – **Membru în colectivul de cercetare***

7. *Sisteme inteligente de prelucrare prin deformare plastică la rece în construcție modulară (SINTDEF), CEEX, A.M.C.S.I.T. – Universitatea „Politehnica” din București, Nr. 24/2005 (2005-2007), beneficiar: Agenția Managerială de Cercetare Științifică, Inovare și Transfer Tehnologic – **Membru în colectivul de cercetare***

#### **Teza de doctorat**

Breaz Radu-Eugen, *Cercetări și contribuții privind precizia mașinilor unelte și tehnici de compensare a erorilor*, Teză de doctorat, Domeniul Inginerie Industrială, Universitatea Tehnică din Cluj-Napoca, 195 pag., conducător științific prof.univ.dr.ing. Liviu Morar, apreciată cu calificativul *Magna cum laudae*, 2001

#### **Cărți și îndrumare de laborator**

##### **Cărți**

Telea, D., Popp, I.O., **Breaz, R.E.**, *Masini, echipamente si strategii in sisteme flexibile de productie*, Editura Universității “Lucian Blaga” din Sibiu, ISBN 978-973-739-794-2 Sibiu, 598 pag., 2009

**Breaz, R.E.**, *Automatizări industriale*, Editura Universității “Lucian Blaga” din Sibiu, 2007, ISBN 978-973-739-535-1, 350 pag., 2007

**Breaz, R.E.**, Bogdan, L., *Automatizări în sisteme de producție*, Editura Universității “Lucian Blaga” din Sibiu, 2003, ISBN 973-651-719-5, 200 pag., 2003

Bârsan, I., **Breaz, R.E.**, *Ingineria sistemelor hidraulice automate*, Editura Universității “Lucian Blaga” din Sibiu, 2003, ISBN 973-651-718-7, 180 pag., 2003

Telea, D., **Breaz, R.E.**, Popp, I.O., Ceuşianu, A.N., *Maşini, utilaje şi strategii în sisteme de producţie*, Editura Dacia, Cluj-Napoca, 2001, ISBN 973-35-1300-8, 355 pag., 2001

Fetche, V., Telea, D., Bârsan, I., **Breaz, R.E.**, Pîslă, A., *Maşini unelte cu comandă numerică. Programarea*, Editura Universităţii din Sibiu, ISBN 973-9261-62-0, Sibiu, 1997, 282 pag., 1997

### ***Îndrumare de laborator***

Cofaru, N., Breaz R.E., *Programarea şi exploatarea maşinilor unelte cu comandă numerică*, Editura Universităţii „Lucian Blaga” din Sibiu, 2006, ISBN (10) 973-739-274-4, ISBN(13) 978-973-739-274-9, 2006

Fetche, V., Barsan, I., Telea, D., **Breaz, R.E.**, *Programarea numerică a maşinilor-unelte – aplicaţii*, Editura Universitatii “Lucian Blaga” din Sibiu, 1997, ISBN 973-9261-63-9, 332 pag., 1997