

Lista de lucrări
Ș.I. dr.ing. Raul Măluțan

a) Lista lucrărilor cele mai relevante pentru realizările profesionale proprii care sunt incluse în format electronic în dosar

1. **Raul Malutan**, Mircea Pop, Mihaela Cislariu, Monica Borda, Secure access system on the QorIQ NXP platform using RSA and DSA, Acta Tehnica Napocensis, ISSN 121-6542, vol. 48(4), pp. 23-26, 2016
2. **Raul Malutan**; Romulus Terebes; Christian Germain; Monica Borda; Mihaela Cislariu, Speckle noise removal in ultrasound images using sparse code shrinkage, E-Health and Bioengineering Conference (EHB), 2015, Iasi, Romania, pp. 1-4, DOI: 10.1109/EHB.2015.7391394, 2015
3. **Raul Malutan**; Calina Grosan, Web authentication methods using single sign on method and virtual keyboard, Proc. of IEEE Conference on Grid, Cloud & High Performance Computing in Science (ROLCG), Cluj Napca, 2015, DOI: 10.1109/ROLCG.2015.7367431
4. **Malutan, Raul**; Stefan, Vlad Ionut; Borda, Monica, Analysis of Decision and Estimation in Noisy Transmission Systems, Proceedings on 36th International Conference on Telecommunications and Signal Processing (TSP 2013), pp: 371-375, 2013
5. Tornea, O. ; Borda, M.E. ; Pileczki, V. ; **Malutan, R.**, *DNA Vernam cipher*, Proc. on E-Health and Bioengineering Conference (EHB), 2011, ISBN: 978-1-4577-0292-1
6. **Malutan, R.**, Gómez, P., Borda, M., *Independent component analysis algorithms for microarray data analysis*, Intelligent Data Analysis Journal, Vol. 14(2), pp. 193 – 206, ISSN: 1088-467X, DOI: 10.3233/IDA-2010-0416, 2010
7. **Malutan R.**, Bricier A., Borda M., Gómez P., *Microarray gridding based on Harris corner detector*, Proceedings of 19th International EURASIP Conference Biosignal2008, Brno, Cehia, ISBN 978-80-214-3613-8, pp 295-298, 2008
8. Belean, B., Fazakas, A., **Malutan, R.**, Borda, M., *Hardware implementation of microarray image segmentation*, Proceedings of IEEE International Conference on Automation, Quality and Testing, Robotics, Cluj-Napoca, Romania, ISBN 978-1-4244-2577-8, Vol. 3, pp. 292-295, 2008 DOI: 10.1109/AQTR.2008.4588930
9. Diaz, F.; **Malutan, R.**; Gomez, P.; Martinez, R.; Stetter, B.; Fe Paz, M.; Garcia, E.; Pelaez, J.; *Estimating Oligo-nucleotide Microarray Expression by Hybridization Process Modelling*, IEEE/NLM Life Science Systems and Applications Workshop, Maryland, USA, ISBN: 1-4244-0278-6, pp 1-2, 2006
10. F. Díaz, **R. Malutan**, P. Gómez Vilda, V. Rodellar, and C. G. Puntonet, *Robust Processing of Microarray Data by Independent Component Analysis*, Lecture Notes in Computer Science, IWANN 2005, ISSN 0302-9743, ISBN: 3-540-26208-3, vol. 3512, pp. 1051-1058, 2005 DOI: 10.1007/11494669_129

b) Teza de doctorat

1. Emil Raul Malutan, „New methods in microarray statistical processing for genomic research from Independent Component Analysis and Higher Order Statistics”, teza in cotutela, sustinuta la Madrid, Cum Laude, Technical University of Cluj Napoca, Romania - Polytechnic University of Madrid, Spain, Ianuarie 2010

c) Brevete de invenție și alte titluri de proprietate industrială

1. M. Borda, O.Tornea, R. Terebeș, **R. Măluțan**, OTP encryption system and method based on random sequences determined by DNA structures, Patent Number(s): RO129751-A2, cerere de brevet indexata Web of Science. Derwent Primary Accession Number: 2014-Q48050 [58]
2. Borda, M., Belean, B., Terebeș, R., **Malutan, R.**, Method and hardware architecture for automatic microarray image addressing, Patent Number(s): RO127341-A2, cerere de brevet indexata Web of Science/ Derwent Primary Accession Number: 2012-G18344 [68]

d) Cărți și capitole în cărți

1. Bogdan Belean, Monica Borda, Raul Măluțan, Architectures reconfigurables pour le traitement du signal : applications pratiques dans le codage d'information et le traitement des images (limba franceză), ISBN 978-973-662-870-2, 117p, U.T.Press, Cluj-Napoca, 2013
2. Raul Măluțan and Pedro Gómez Vilda, Thermodynamics of Microarray Hybridization (limba engleză), Book Chapter in Thermodynamics - Fundamentals and Its Application in Science edited by Ricardo Morales-Rodriguez, ISBN 978-953-51-0779-8, InTech, 2012 DOI: 10.5772/51624
3. Raul Malutan, Monica Borda, Bogdan Belean, Traitement du signal génomique - Travaux pratiques (limba franceză), UT Press, ISBN 978-973-662-608-1, 57p, U.T.Press, Cluj-Napoca, 2011

e) Articole/studii in extenso, publicate în reviste din fluxul științific internațional principal

1. **Raul Malutan**, Mircea Pop, Mihaela Cislariu, Monica Borda, Secure access system on the QorIQ NXP platform using RSA and DSA, Acta Tehnica Napocensis, ISSN 121-6542, vol. 57(2), 2016
2. **Raul Malutan**, Pedro Gomez Vilda, Monica Borda, A hybrid unsupervised and supervised clustering applied to microarray data, International Journal of Advances in Telecommunications, Electrotechnics, Signals and Systems, Vol 2, No 3, ISSN: 1805-5443 doi: 10.11601/ijates.v2i3.21, 2013
3. **Malutan, Raul**; Gomez Vilda, Pedro; Borda, Monica, Combined Clustering Methods for Microarray Data Analysis, Advanced Engineering Forum, ISSN: 2234-9898, Volume: 8-9 Pages: 508-515, 2013
4. **R. Malutan**, P. Gómez Vilda and M. Borda, Unsupervised Analysis of Microarray Data, Bulletin of the Polytechnic Institute of Iasi. Electrical Engineering, Power Engineering, Electronics, ISSN 1223-8139, 2011
5. **Malutan, R.**, Gómez, P., Borda, M., *Independent component analysis algorithms for microarray data analysis*, Intelligent Data Analysis Journal, Vol. 14(2), pp. 193 – 206, ISSN: 1088-467X, DOI: 10.3233/IDA-2010-0416, 2010
6. **R. Malutan**, A. Bricier, M. Borda, P. Gomez, Microarray Image Processing Using Harris Corner Detection Method, Scientific Bulletin of the Polytechnic University of Timisoara, Transactions on Electronics and Communications, ISSN: 1583-3380, Vol. 53(67/2), pp. 135-139, 2008
7. B. Belean, M. Borda, **R. Malutan**, V. Rodellar, P. Gomez, FPGA based digital device for microarray image processing, Scientific Bulletin of the Polytechnic University of Timisoara, Transactions on Electronics and Communications, ISSN: 1583-3380, Vol. 52(66/1), pp. 15-18, 2007

8. **R. Malutan**, P. Gomez Vilda, M. Borda, F. Diaz, Estimation Reliability Of Microarray Data Using High Order Statistics, Acta Tehnica Napocensis, ISSN 121-6542, vol. 48(4), pp. 23-26, 2007
9. **Malutan R.**, Borda M., Gomez P., Diaz F, Hybridization modelling in estimation of oligonucleotide microarray expression, Scientific Bulletin of the Politehnica University of Timisoara, Transactions on Electronics and Communications, ISSN 1583-3380, vol.50(64/2), pp.29-33, 2005
10. **Malutan R.** , Gómez P., Borda M., Microarray image classification and recognition for cancer treatment. K-Means clustering of public data base from breast cancer treatment, Scientific Bulletin of The Politehnica University of Timisoara, Vol. 49, No. 63, ISSN 1583-3380, pp. 337-342 , 2004

f) Publicații in extenso, apărute în lucrări ale principalelor conferințe internaționale de specialitate

1. Dumitru Balanici, Vlad Tomsa, Monica Borda, **Raul Malutan**, Full duplex OTP cryptosystem based on DNA key for text transmissions, LNCS Volume 9522, pp 39-48, 8th International Conference on Security for Information Technology and Communications (SECITC), Location: Bucharest, ROMANIA, Date: JUN 11-12, 2015
2. **Raul Malutan**; Romulus Terebes; Christian Germain; Monica Borda; Mihaela Cislariu, Speckle noise removal in ultrasound images using sparse code shrinkage, E-Health and Bioengineering Conference (EHB), 2015, Iasi, Romania, pp. 1-4, DOI: 10.1109/EHB.2015.7391394, 2015
3. Romulus Terebes; Monica Borda; Christian Germain; **Raul Malutan**; Ioana Ilea, A multiplicative gradient-based anisotropic diffusion approach for speckle noise removal, Proc. of E-Health and Bioengineering Conference (EHB), Iasi, Romania 2015, DOI: 10.1109/EHB.2015.7391605
4. **Raul Malutan**; Calina Grosan, Web authentication methods using single sign on method and virtual keyboard, Proc. of IEEE Conference on Grid, Cloud & High Performance Computing in Science (ROLCG), Cluj Napca, 2015, DOI: 10.1109/ROLCG.2015.7367431
5. Doru-Ionut Noje; **Raul Malutan**, Head movement analysis in lie detection, Proc. of IEEE Conference on Grid, Cloud & High Performance Computing in Science (ROLCG), Cluj Napca, 2015, DOI: 10.1109/ROLCG.2015.7367432
6. Raluca David; **Raul Malutan**; Monica Borda, TLS Protocol: Improving using ElGamal elliptic curves and One-Time-Pad, Proc. on 11th International Symposium on Electronics and Telecommunications (ISETC 2014), Timisoara, 14-15 nov, 2014
7. Tornea Olga, Borda Monica, Terebes Romulus, **Malutan Raul**, *New DNA Based Random Sequence Generation and OTP Encryption Systems for Transmission and Storage*, Proceedings on 6th International Conference on Security for Information Technology and Communication, vol. 1, pp 1-9, Bucuresti, 2013
8. **Malutan, Raul**; Stefan, Vlad Ionut; Borda, Monica, Analysis of Decision and Estimation in Noisy Transmission Systems, Proceedings on 36th International Conference on Telecommunications and Signal Processing (TSP 2013), pp: 371-375, 2013
9. **R. Măluțan**, P. Gomez Vilda, M. Borda, *Combined unsupervised biclustering of microarray data*, Proceedings on 35th International Conference on Telecommunications and Signal Processing (TSP 2012), ISBN: 978-1-4673-1117-5 (print), DOI 10.1109/TSP.2012.6256350
10. **Raul Măluțan**, Pedro Gomez Vilda, Monica Borda, *Two way clustering of microarray data using a hybrid approach*, Proceedings of the 34th International Conference on Telecommunications and Signal Processing, TSP 2011, IEEE Catalog Number/ISBN: CFP1188P-CDR / 978-1-4577-1409-2

11. Bogdan Belean, Monica Borda, Bertrand LeGal, **Raul Malutan**, *FPGA technology and parallel computing towards automatic microarray image processing*, Proceedings of the 34th International Conference on Telecommunications and Signal Processing, TSP 2011, ISBN: 978-1-4577-1409-2
12. Tornea, O. ; Borda, M.E. ; Pileczki, V. ; **Malutan, R.**, *DNA Vernam cipher*, Proc. on E-Health and Bioengineering Conference (EHB), 2011, ISBN: 978-1-4577-0292-1
13. Borda, M. ; Belean, B. ; Terebes, R. ; **Malutan, R.**, *FPGA based SoC for automated cDNA microarray image processing*, Proc. on E-Health and Bioengineering Conference (EHB), 2011, 2011, ISBN: 978-1-4577-0292-1
14. **R. Malutan**, P. Gómez Vilda, I. Berindan Neagoe and M. Borda, *Hybridization Dynamics Compensation in Microarray Experiments*, Advances in Intelligent and Soft Computing, ISSN 1867-5662, Vol. 93, pp. 255-261, 2011 DOI: 10.1007/978-3-642-19914-1_34
15. **R. Malutan**, P. Gómez, M. Borda, *Oligonucleotide Microarray Probe Correction by FixedPoint ICA Algorithm*, Lecture Notes in Computer Science IWANN 2009, ISSN: 0302-9743, ISBN: 3-642-02480-7, vol. 5518, pp. 988 - 991, 2009 DOI: 10.1007/978-3-642-02481-8_150
16. Belean, B., Fazakas, A., **Malutan, R.**, Borda, M., *Hardware implementation of microarray image segmentation*, Proceedings of IEEE International Conference on Automation, Quality and Testing, Robotics, Cluj-Napoca, Romania, ISBN 978-1-4244-2577-8, Vol. 3, pp. 292-295, 2008 DOI: 10.1109/AQTR.2008.4588930
17. **Malutan R.**, Bricier A., Borda M., Gómez P., *Microarray gridding based on Harris corner detector*, Proceedings of 19th International EURASIP Conference Biosignal2008, Brno, Cehia, ISBN 978-80-214-3613-8, pp 295-298, 2008
18. **R. Malutan**, P. Gómez, F. Díaz, R. Martínez, V. Rodellar, M. Borda, *Modeling Diachronical Hybridization Microarray Data*, Proceedings of IEEE International Workshop on Nonlinear Signal and Image Processing, Bucharest, Romania, ISBN 978-973-708-254-1, pp. 174-178, 2007
19. V. Rodellar, F. Díaz, B. Belean, **R. Malutan**, B. Stetter, P. Gómez, R. Martínez, E. García, J. Peláez, *Genomic Microarray Image Processing on a FPGA for Portable Remote Applications*, Proceedings of IEEE 3rd Southern Conference on Programmable Logic, Mar del Plata, Argentina, ISBN 978-1-4244-0606-7, pp. 13-17, 2007
20. Gomez, P.; Diaz, F.; Belean, B.; **Malutan, R.**; Stetter, B.; Martinez, R.; Rodellar, V.; *Robust cDNA microarray image processing on a hand-held device*, Proceedings of IEEE International Conference on Reconfigurable Computing and FPGA's, San Luis Potosí, México, ISBN: 1-4244-0690-0, pp. 244-251, 2006
21. Gómez, P., Díaz, F., Belean, B., **Malutan, R.**, Stetter, B., Martínez, R., Rodellar, V., *An FPGA-based genetic microarray processing device*, Proceedings on 13th IEEE Int. Conf. on Electronics, Circuits and Systems, Nice, France, ISBN 1-4244-0395-2, pp. 363 – 366, 2006
22. Diaz, F.; **Malutan, R.**; Gomez, P.; Martinez, R.; Stetter, B.; Fe Paz, M.; Garcia, E.; Pelaez, J.; *Estimating Oligo-nucleotide Microarray Expression by Hybridization Process Modelling*, IEEE/NLM Life Science Systems and Applications Workshop, Maryland, USA, ISBN: 1-4244-0278-6, pp 1-2, 2006
23. P. Gómez, F. Díaz, R. Martínez, **R. Malutan**, V. Rodellar, C. G. Puntonet, *Robust Preprocessing of Gene Expression Microarrays for Independent Component Analysis*, Lecture Notes in Computer Science ICA 2006, ISSN 0302-9743, ISBN 3-540-32630-8, vol. 3889, pp.714-721, 2006, DOI: 10.1007/11679363_89
24. F. Díaz, **R. Malutan**, P. Gómez Vilda, V. Rodellar, and C. G. Puntonet, *Robust Processing of Microarray Data by Independent Component Analysis*, Lecture Notes in Computer Science, IWANN 2005, ISSN 0302-9743, ISBN: 3-540-26208-3, vol. 3512, pp. 1051-1058, 2005 DOI: 10.1007/11494669_129

25. Diaz F., **Malutan R.**, Gomez P., Rodellar V., Martinez R., and Borda M., *Low-pass frequency-domain filtering-of oligonucleotide microarray data images*, Proceedings on 7th IEEE International Symposium on Signals Circuits Systems, ISSCS 2005, Iasi, Romania, ISBN: 0-7803-9029-6, vol 2, pp. 477-480, 2005
26. **R. Malutan**, F. Díaz, P. Gómez, R. Martínez, M. Borda M., *Estimation of the Microarray Gene Expression Levels based on Correlation*, Proceedings on International Workshop on Genomic Signal Processing, GSP2005, Bucuresti, Romania, ISBN: 10-973-708-131-5, pp. 34 –40, 2005
27. F Díaz, **R Malutan**, P Gómez, V Rodellar, M Borda, Detection of artificial contamination in E. Coli microarray data, Proceedings of the 4th WSEAS International Conference on Electronic, Signal Processing and Control, 2005

23.06.2016

Șl.dr.ing, Raül Măluțan

