

## CORINA NAFORNITĂ – PUBLICATIONS

### 1. RELEVANT PUBLICATIONS published after the PhD thesis

1. Isar, A.; **Nafornita, C.**, On the statistical decorrelation of the 2D discrete wavelet transform coefficients of a wide sense stationary bivariate random process Digital Signal Processing Volume: 24 Pages: 95-105 Published: 2014, DOI: 10.1016/j.dsp.2013.10.001
2. **Nafornita, C.**, Isar, A., and Nelson, J. D. B., Regularised, semi-local Hurst estimation via generalised lasso and dual-tree complex wavelets" IEEE International Conference on Image Processing ICIP 2014, Paris, France, pp. 2689-2693, ISBN: 978-1-4799-5750-7
3. Adrian Macaveiu, **Corina Nafornita**, Alexandru Isar, Andrei Campeanu, Ioan Nafornita, A Method for Building the Range-Doppler Map for Multiple Automotive Radar Targets, 11th International Symposium on Electronics and Telecommunications (ISETC), 2014, 14-15 Nov. 2014, Timisoara, Romania, pp. 151-156, ISBN 978-1-4799-7266-1
4. **C. Nafornita**, Y. Berthoumieu, I. Nafornita and A. Isar, Kullback-Leibler Distance Between Complex Generalized Gaussian Distributions, EUSIPCO 2012, Bucharest, Romania, August 27-31, pp. 1850-1854 ISI-P
5. **Corina Nafornita**, Alexandru Isar, Maria Kovaci, "Increasing Watermarking Robustness using Turbo Codes," IEEE International Symposium on Intelligent Signal Processing WISP 2009, Budapest, Hungary, 26-28 August 2009 pp. 113-118, ISBN 978-1-4244-5058-9
6. **C. Nafornita**, I. Firoiu, J.-M. Boucher, A. Isar, A New Watermarking Method Based on the Use of the Hyperanalytic Wavelet Transform Proc. SPIE Europe: Photonics Europe, vol. 7000: Optical and Digital Image Processing 7000W, pp.7000W-1-7000W-12, ISBN 97808194 71987, Strasbourg, April, 2008 ISI-P
7. Schutz, A., Berthoumieu, Y., Turcu, F., **Nafornita, C.**, Isar, A., Barycentric distribution estimation for texture clustering based on information-geometry tools, 2012 10th International Symposium on Electronics and Telecommunications, ISETC 2012 – Conference Proceedings , art. no. 6408132 , pp. 343-346 ISI-P
8. Firoiu, I.; **Nafornita, C.**; Isar, D.; Isar, A.; Bayesian Hyperanalytic Denoising of SONAR Images, Geoscience and Remote Sensing Letters, IEEE; 2011, 8(6), 1065-1069 (DOI : 10.1109/LGRS.2011.2155617) ISI
9. Ioana Firoiu, **Corina Nafornita**, Jean-Marc Boucher, Alexandru Isar, Searching Appropriate Mother Wavelets for Hyperanalytic Denoising, Advances in Electrical and Computer Engineering, Issue 4, 2010, ISSN: 1582-7445, ISI
10. Ioana Adam(Firoiu), **Corina Nafornita**, Jean-Marc Boucher, Alexandru Isar, Image Denoising Using a New Implementation of the Hyperanalytic Wavelet Transform, IEEE Transactions on Instrumentation and Measurement, august 2009, vol. 58, no. 8, pp. 2410-2416. ISI

### 2. PhD THESIS

1. **Corina Nafornita**, Ph.D. Thesis, Contributii la marcarea transparenta a imaginilor in domeniul transformatei wavelet (Contributions to Image watermarking in the wavelet domain), 2008, coordinators prof. Monica BORDA, prof. Alexandru ISAR, in Romanian, Politehnica Publishing House, 240 pages, ISSN 1842-7014/ISBN 978-973-625-774-2.

### **3. PUBLICATIONS**

#### **BOOKS AND BOOK CHAPTERS - INTERNATIONAL PUBLISHERS (A.1.1.1)**

1. **Corina Nafornita** and Alexandru Isar (2011). Application of Discrete Wavelet Transform in Watermarking, Discrete Wavelet Transforms - Algorithms and Applications, Hannu Olkkonen (Ed.), ISBN: 978-953-307-482-5, InTech, Available from: <http://www.intechopen.com/articles/show/title/application-of-discrete-wavelet-transform-in-watermarking>
2. Alexandru Isar, Ioana Firoiu, **Corina Nafornita** and Sorin Moga (2011). SONAR Images Denoising, Sonar Systems, N. Z. Kolev (Ed.), ISBN: 978-953-307-345-3, InTech, Available from: <http://www.intechopen.com/articles/show/title/sonar-images-denoising>

#### **BOOKS AND BOOK CHAPTERS - NATIONAL PUBLISHERS (A.1.1.2)**

3. **Corina Nafornita**, "Signals and Systems, vol. 1", Politehnica Publishing House, 2009, ISBN 978-606-554-013-2 (978-606-554-014-9 vol I), published in English.
4. **Corina Nafornita**, Ph.D. Thesis, Contributii la marcarea transparenta a imaginilor in domeniul transformatei wavelet (Contributions to Image watermarking in the wavelet domain), 2008, coordinators prof. Monica BORDA, prof. Alexandru ISAR, in Romanian, Politehnica Publishing House, 240 pages, ISSN 1842-7014/ISBN 978-973-625-774-2
5. **Corina Nafornita**, "Atacuri asupra imaginilor marcate transparent", (Attacks on watermarked images), Politehnica Publishing House, 2007, ISBN 978-973-625-414-7, 130 pages, published in Romanian
6. **Corina Nafornita**, "Digital Watermarking in the Wavelet Domain", Politehnica Publishing House, Timisoara, 2005, 42pages, ISBN 973-625-236-1, published in English.

#### **TEACHING MATERIAL AND WORKS (A1.2.1)**

1. **Corina Nafornita**, "Culegere de probleme de teoria probabilitatilor si procese aleatoare", (Problems of probability theory and random processes), online, Timisoara, 2008, published in Romanian, 46 pag
2. **Nafornita Corina**, Signals and systems, note de curs, <http://shannon.etc.upt.ro/teaching/ss-pi/>, an 2 Politehnica International, ETC 2010, 295p
3. **Nafornita Corina**, Signal Processing, note de curs, <http://shannon.etc.upt.ro/teaching/sp-pi/> an 2 Politehnica International, ETC 2010 245p
4. **Nafornita Corina**, Kovaci Maria, Gal Janos, Semnale si sisteme, laborator <http://shannon.etc.upt.ro/teaching/ssist/an 2 ETC 2010>, 32pag
5. **Nafornita Corina**, Signals and systems, laborator, <http://shannon.etc.upt.ro/teaching/ss-pi/an 2 Politehnica International, ETC, 2010>, 30pag
6. **Nafornita Corina**, Signal Processing, laborator, <http://shannon.etc.upt.ro/teaching/sp-pi/an 2 Politehnica International, ETC, 2010>, 25pag
7. **Nafornita Corina**, Signals and Systems, seminar <http://shannon.etc.upt.ro/teaching/ss-pi/an 2 Politehnica International, ETC, 2010>, 57pag
8. **Nafornita Corina**, Signal Processing, seminar, <http://shannon.etc.upt.ro/teaching/sp-pi/an 2 Politehnica International, ETC, 2010>, 111pag

#### **ISI JOURNALS (A2.1)**

1. Isar, A.; **Nafornita, C.**, On the statistical decorrelation of the 2D discrete wavelet transform coefficients of a wide sense stationary bivariate random process Digital Signal Processing Volume: 24 Pages: 95-105 Published: 2014, DOI: 10.1016/j.dsp.2013.10.001
2. Firoiu, I.; **Nafornita, C.**; Isar, D.; Isar, A.; Bayesian Hyperanalytic Denoising of SONAR Images, Geoscience and Remote Sensing Letters, IEEE; 2011, 8(6), 1065-1069 (DOI : 10.1109/LGRS.2011.2155617) ISI

3. Ioana Firoiu, **Corina Nafornita**, Jean-Marc Boucher, Alexandru Isar, Searching Appropriate Mother Wavelets for Hyperanalytic Denoising, Advances in Electrical and Computer Engineering, Issue 4, 2010, ISSN: 1582-7445, ISI
4. I. Adam(Firoiu), **Corina Nafornita**, Jean-Marc Boucher, Alexandru Isar, Image Denoising Using a New Implementation of the Hyperanalytic Wavelet Transform, IEEE Trans. on Instrumentation and Measurement, august 2009, vol. 58, no. 8, pp. 2410-2416. ISI

### **JOURNALS – OTHER INTERNATIONAL DATABASES BDI (A2.2)**

5. **Corina Nafornita**, Alexandru Isar, Watermarking Based on the Hyperanalytic Wavelet Transform, Acta Technica Napocensis-Electronics and Telecommunications, Vol. 49, nr. 3, pp. 21-28, ISSN 1221-6542 2008
6. **Corina Nafornita**, Alexandru Isar, Monica Borda, "Pixel-wise masking for watermarking using local standard deviation and wavelet compression," Scientific Bulletin of Politehnica Univ. of Timisoara, Trans. on Electronics and Telecommunications, tom 51(65), fasc.2, pp. 146-151, ISSN 1583-3380, International Symposium of Electronics and Telecommunications, September 21-23, 2006, Timisoara, Romania.
7. Bernhard Rothenstein, Ioan Damian, **Corina Nafornita**, "Relativistic Doppler Effect Free of "Plane Wave" and "Very High" Frequency Assumptions", APEIRON studies in infinite nature, online journal, ISSN 0843-6061, 2005, pp. 122-135. SCOPUS
8. **Corina Nafornita**, "A Wavelet-Based Watermarking for Still Images", Scientific Bulletin of Politehnica University of Timisoara, Trans. on Electronics and Telecommunications, 49(63), 2, 2004, special number dedicated to the Proc. of Symposium of Electronics and Telecommunications ETc 2004, 22 - 23 October 2004, Timisoara, pp. 126-131.
9. Janos Gal, **Corina Nafornita**, Andrei Campeanu, " Lowpass Active Filter Synthesis Based on Mesh Current Emulation of LC Ladder Structures", Scientific Bulletin of Politehnica University of Timisoara, Trans. on Electronics and Telecommunications, ISSN 1583-3380, tom 49(63), 1, 2004, number dedicated to the Proc. of Symposium of Electronics and Telecommunications ETc 2004, 22-23 Oct. 2004, Timisoara, pp 164-167.
10. Bernhard Rothenstein, **Nafornita Corina** Three levels of understanding physical relativity: Galileo's relativity, Up-to-date Galileo's relativity and Einstein's relativity: A historical survey. Scientific Bulletin of Politehnica Univ. Of Timisoara, Trans. on Mathematics and Physics, 2004,49(63), 2, pp.60-69, 2004 , 49(63) 60-69
11. **Corina Nafornita**, A. Isar, "Digital Watermarking of Still Images using the Discrete Wavelet Transform" Scientific Bulletin of Politehnica University of Timisoara, Trans. on Electronics and Telecommunications, 48 (62), 1, ISSN 1583-3380, 2003, pp. 73-78.

### **ISI PROCEEDINGS (A2.1)**

1. **Corina NAFORNITA**, Adrian MACAVEIU, Alexandru ISAR, Ioan NAFORNITA, Andrei CAMPEANU, Envelope Detector with Denoising to Improve the Detection Probability, pp 59-64. May 29-31, 2014, Bucharest, 10th International Conference on Communications, COMMUNICATIONS 2014
2. **Corina Nafornita**, Alexandru Isar, Estimating directional smoothness of images with the aid of the hyperanalytic wavelet packet transform, Signals, Circuits and Systems (ISSCS), 2013 International Symposium on , IEEE Xplore, Iasi, Romania, ISBN 978-1-4799-3193-4 , 1, 4 WOS:000337926700024
3. **Nafornita, C.**, Isar, A., A complete second order statistical analysis of the Hyperanalytic Wavelet Transform, 2012 10th International Symposium on Electronics and Telecommunications, ISETC 2012 – Conference Proceedings , art. no. 6408040 , pp. 227-230 ISI-P

4. **Nafornta, C.**, Isar, A., Nafornta, I., The Hyperanalytic Wavelet Packets - A solution to increase the directional selectivity in image analysis, 2012 10th International Symposium on Electronics and Telecommunications, ISETC 2012 – Conference Proceedings , art. no. 6408041 , pp. 231-234 ISI-P
5. Schutz, A., Berthoumieu, Y., Turcu, F., **Nafornta, C.**, Isar, A., Barycentric distribution estimation for texture clustering based on information-geometry tools, 2012 10th International Symposium on Electronics and Telecommunications, ISETC 2012 – Conference Proceedings , art. no. 6408132 , pp. 343-346 ISI-P
6. **C. Nafornta**, Y. Berthoumieu, I. Nafornta and A. Isar, Kullback-Leibler Distance Between Complex Generalized Gaussian Distributions, EUSIPCO 2012, Bucharest, Romania, August 27-31, pp. 1850-1854 ISI-P
7. Arvinti, B.; **Nafornta, C.**; Alexandru, I.; Costache, M.; ECG signal compression using wavelets. Preliminary results, 2011 10th International Symposium on Signals, Circuits and Systems (ISSCS), 2011 , pp. 1 - 4 ISI-P
8. **Nafornta, C.**; Isar, D.; Isar, A.; Searching the most appropriate mother wavelets for Bayesian denoising of sonar images in the Hyperanalytic Wavelet domain; Statistical Signal Processing Workshop (SSP), June 2011 ISI-P
9. **Corina Nafornta**, Ioana Firoiu, Dorina Isar, Jean-Marc Boucher, Alexandru Isar, "A Second Order Statistical Analysis of the 2D Discrete Wavelet Transform", Proceedings of IEEE International Conference Communications 2010, Bucuresti, Romania, June 10-12, ISBN: 978-1-4244-6363-3, pp. 145-148. ISI-P
10. **Corina Nafornta**, Ioana Firoiu, Dorina Isar, Jean-Marc Boucher, A. Isar, A Second Order Statistical Analysis of the Hyperanalytic Wavelet Transform, Proceedings of the 9th IEEE International Symposium of Electronics and Telecommunications, ISETC 2010, Timisoara, Romania, November 2010, pp. 311-314, ISBN : 978-1-4244-8458-4 ISI-P
11. **Corina Nafornta**, Alexandru Isar, "On the Choice of the Mother Wavelet for Perceptual Data Hiding," IEEE International Symposium on Signals, Circuits and Systems ISSCS 2009, Iasi, Romania, 9-10 July 2009, vol.1, pp. 233-236, ISBN 978-1-4244-3784-9. ISI-P
12. **Corina Nafornta**, Alexandru Isar, Maria Kovaci, "Increasing Watermarking Robustness using Turbo Codes," IEEE International Symposium on Intelligent Signal Processing WISP 2009, Budapest, Hungary, 26-28 August 2009 ISI-P
13. **C. Nafornta**, I. Firoiu, J.-M. Boucher, A. Isar, A New Watermarking Method Based on the Use of the Hyperanalytic Wavelet Transform Proc. SPIE Europe: Photonics Europe, vol. 7000: Optical and Digital Image Processing 7000W, pp.7000W-1-7000W-12, ISBN 97808194 71987, Strasbourg, April, 2008 ISI-P
14. **Corina Nafornta**, Robustness Evaluation of Perceptual Watermarks, International Symposium on Signal, Circuits and Systems, ISSCS 2007, Iasi, Romania, 12-13 July 2007, Vol.2, ISBN: 1-4244-0969-1. ISI-P
15. **C. Nafornta**, A New Pixel-Wise Mask for Watermarking, Proc. of ACM Multimedia and Security Workshop 2007, Dallas, TX, USA. ISI-P
16. I. Adam, **C. Nafornta**, J.-M. Boucher, A. Isar, A Bayesian Approach of Hyperanalytic Wavelet Transform Based Denoising, Proc. IEEE Int. Symp. on Intelligent Signal Processing WISP2007, Alcalá de Henares, Madrid, Spain, Oct. 3-5, 2007, pp.1-6, ISBN: 978-1-4244-0829-0 ISI-P
17. Ioana Adam, **Corina Nafornta**, Jean-Marc Boucher, Alexandru Isar, A New Implementation of the Hyperanalytic Wavelet Transform, International Symposium on Signal, Circuits and Systems, ISSCS 2007, Iasi, Romania, 12-13 July 2007, Vol.2, ISBN: 1-4244-0969-1 ISI-P
18. **Corina Nafornta**, Alexandru Isar, Monica Borda, "Improved Pixel-Wise Masking for Image Watermarking," in Multimedia Content Representation, Classification and

- Security, September 11-13, 2006, Istanbul, Turkey, Lecture Notes in Computer Science, Springer-Verlag, pp. 90-97, ISSN 0302-9743 /ISBN 978-3-540-39392-4. ISI-P
19. **Corina Nafornita**, Alexandru Isar, Monica Borda, " Image Watermarking Based on the Discrete Wavelet Transform Statistical Characteristics," in Proc. of IEEE EUROCON 2005 - The International Conference on "Computer as a tool", November 21-24, 2005, Belgrade, Serbia and Montenegro, pp. 943-946, ISBN 1-4244-0050-3. ISI-P
  20. **Corina Nafornita**, "Improved Detection for Robust Image Watermarking", Proc. Of International Symposium on Signal, Circuits and Systems, ISSCS2005, Iasi, Romania, 14-15 July 2005, vol. 2, pp.473-476, ISBN 0-7803-9029-6. ISI-P

### **PROCEEDINGS PAPERS – OTHER INTERNATIONAL DATABASES BDI (A2.2)**

21. **Nafornita, C.**, Isar, A., and Nelson, J. D. B., Regularised, semi-local Hurst estimation via generalised lasso and dual-tree complex wavelets" IEEE International Conference on Image Processing ICIP 2014, Paris, France, pp. 2689-2693, ISBN: 978-1-4799-5750-7
22. **Corina Nafornita**, Alexandru Isar, Wavelet Based Contrast Enhancement for Still Images, 11th International Symposium on Electronics and Telecommunications (ISETC), 2014, 14-15 Nov. 2014, Timisoara, Romania, pp. 265-268, ISBN 978-1-4799-7266-1
23. Adrian Macaveiu, **Corina Nafornita**, Alexandru Isar, Andrei Campeanu, Ioan Nafornita, A Method for Building the Range-Doppler Map for Multiple Automotive Radar Targets, 11th International Symposium on Electronics and Telecommunications (ISETC), 2014, 14-15 Nov. 2014, Timisoara, Romania, pp. 151-156, ISBN 978-1-4799-7266-1
24. Arvinti-Costache, B.; Costache, M.; Stolz, R.; **Nafornita, C.**; Isar, A.; Toepfer, H.; A wavelet based baseline drift correction method for fetal magnetocardiograms, 2011 IEEE 9th International New Circuits and Systems Conference (NEWCAS), 2011, pp. 109 - 112 SCOPUS
25. V. Cuteanu, A. Isar, **C. Nafornita**, PAPR Reduction of OFDM Signals Using Multiple Symbol Representations -Clipping Hybrid Scheme, SPAMEC 2011, Cluj-Napoca EURASIP
26. V. Cuteanu, A. Isar, **C. Nafornita**, PAPR Reduction of OFDM Signals using Sequential Tone Reservation -Clipping Hybrid Scheme , SPAMEC 2011, Cluj-Napoca EURASIP
27. Dorina Isar, Alexandru Isar, **Corina Nafornita**, Building Riesz Bases with the Aid of Low-Pass Filters , SPAMEC 2011, Cluj-Napoca EURASIP
28. Firoiu, I.; **Nafornita, C.**; Isar, D.; Boucher, J.-M.; Isar, A.; An asymptotic statistical analysis of the Hyperanalytic Wavelet Transform; 5th European Conference on Circuits and Systems for Communications (ECCSC), 2010 Nov. 2010 , Page(s): 274 - 277 SCOPUS
29. I. Nafornita, **C. Nafornita**, A. Isar, M. Borda, Perceptual Watermarks in the Wavelet Domain, Proceedings of Communications 2008 Workshop "New Technologies and Trends in IT and Communications", pp. 19-28, ISBN 978-606-521-008-0
30. A. Isar, S. Moga, **Corina Nafornita**, M. Oltean, I. Adam, "Image Denoising Using Wavelet Transforms With Enhanced Diversity", Proc. International Conference Communications 2006, Bucharest, June, 3-4, 2006, ISBN(10) 973-718-496-3, ISBN(13) 978-973-718-496-2, pp.161-164.
31. **Corina Nafornita**, Monica Borda, "Multiple Embedding in Wavelet Subbands for Robust Image Watermarking", in Proc. of IEEE International Workshop on Spectral Methods and Multirate Signal Processing, SMMSP 2005, 20-22 June 2005, Riga, Latvia, ISBN: 952-15-1366-7, pp. 135-140. SCOPUS
32. **Corina Nafornita**, Monica Borda, Amadou Kane, " A Wavelet-Based Digital Watermarking using Subband-Adaptive Thresholding for Still Images", microCAD 2004 International Scientific Conference, University of Miskolc, 18-19 March 2004, pp.87-92.

33. Bernhard Rothenstein, **Nafornita Corina** Red Shift and Blue Shift: A realistic approach PHYSICAL INTERPRETATIONS OF RELATIVITY THEORY-IX, Proceedings, Imperial College, London, 3 – 6 September 2004, vol.2, pp. 478-483, ISBN 1 873 694 09 1, 2005 2004 Sept. ISBN 1 873 694 09 1
34. Bernhard Rothenstein, **Nafornita Corina**, Software for Relativity Optics PHYSICAL INTERPRETATIONS OF RELATIVITY THEORY-IX, Proceedings, Imperial College, London, 3 – 6 September 2004, vol.2 published in 2005, pp. 484-496, ISBN 1 873 694 09 1. 2004 Sept. ISBN 1 873 694 09 1
35. E. Lupea, **C. Nafornita**, M. Nafornita, "Capacity of Frequency Selective Channels. Part I. Time Invariant Channels", Proceedings of International Workshop "Trends and Recent Achievements in Information Technology", May 16-18, 2002, Cluj-Napoca.
36. E. Lupea, **C. Nafornita**, M. Nafornita, "Capacity of Frequency Selective Channels. Part II. Time-Variable Channels", Proceedings of International Workshop "Trends and Recent Achievements in Information Technology", May 16-18, 2002, Cluj-Napoca.