

**Ioan Tabus, Ph.D., Professor**

9.9.2022

1.Full name, gender	Ioan Tabus, male
2.Place and date of birth	Birlad, Romania, January 6, 1957
Citizenship	Finnish and Romanian
Domicile:	
3. Education and degrees	<ul style="list-style-type: none"><li>• March 1995: PhD degree (with honors) from the Department of Information Technology, Tampere University of Technology, Finland; thesis title: <i>Training and Model Based Approaches for Optimal Stack and Boolean Filtering with Applications in Image Processing.</i></li><li>• 1982 MSc degree from the Control and Computers Department of the "Politehnica" University of Bucharest, Romania.</li></ul>
4.Linguistic skills:	Romanian (native), English (fluent), Finnish (Level 3)
5.Current position:	01.2000-Present Professor of Signal Processing, Tampere University of Technology (Signaalinkäsittelyn Professori)
6.Previous professional appointments	<ul style="list-style-type: none"><li>• 01.96-12.99 Senior researcher, Tampere University of Technology, Finland.</li><li>• 9.94-12.99 Associate Professor at the Control and Computers Department of the "Politehnica" University of Bucharest, Romania (on leave from 01.1996).</li><li>• 8.92-8.93, 8.94-3.95, 6.95-9.95 Visiting researcher at Tampere University of Technology</li><li>• 9.90-8.92, 9.93-8.94 Lecturer at Control and Computers Department of the "Politehnica" University of Bucharest</li><li>• 9.84-8.90 Teaching assistant at Control and Computers Department, "Politehnica" University of Bucharest, Romania</li><li>• 9.82-8.84 research and development engineer at Birlad Bearing Factory, Romania</li></ul>
7.Major research funding and academic leadership, student supervision	<ul style="list-style-type: none"><li>• Academy of Finland SPAG Center of excellence 2000-2005 and 2006-2011(a joint application of 10 Professors and Senior Researchers)</li><li>• Academy of Finland "Source and Channel coding" 1999</li><li>• Academy of Finland Varttunut tutkija 2002-2003</li><li>• Academy of Finland funding of a postdoctoral position 2003-2005</li></ul>

- 7.1 Awarded Grants:**
- Nokia -co-funding one postdoctoral position 2003-2005
  - Nokia Research Center - Universal Coding Tools, research grant 2008
  - Nokia Research Center - Universal signal coding for context based data representation, research grant 2009
  - Digile - Data to Intelligence - Tekes funding 2014-2015
  - Nokia Technologies - Point Clouds coding 2020
- 7.2 Supervised doctoral dissertations (15)  
(Name, Graduation year, Position after Graduation)**
- 1.Ciprian Doru Giurcaneanu (2001, Univ. Auckland, New Zealand), 2.Razvan Iordache (2001, General Electric, Paris, France), 3.Riitta Niemistö (2003, Huawei, Tampere, Finland), 4.Adriana Vasilache (2003, Nokia, Finland), 5.Cristian Mircean (2005, Global Maritime, Norway), 6.Gergely Korodi (2006, Research in Motion, Canada), 7.Andrea Hategan (2009, SwiftKey, UK), 8.Aliреза Razavi (2011, Tampere University of Technology), 9.Antti Liski (2013, Statistics Finland), 10.Florin Ghido (2013, Fraunhofer, Germany), 11. Alexandru Onose(2014, Heriot-Watt University Edinburgh), 12. Helena Astola (2015, Atostek Oy), 13. Ionut Schiopu (2016, VUB Brussels)14. Jenni Hukkanen (2018, Polight Finland), 15. Pekka Astola (2020,Nokia)
- 8.3 Supervised licentiate theses (2)**
- Jari Kataja (2012,VTT), Timo Suojoki (2005, Patria)
- 8.4 Supervised MSc theses (12)**
- P. Helin (2013), I. Schiopu (2011), H. Astola (2011), R. Moradi (2010), J. Zou (2009), S. Sarbu (2009), A. Homescu (2009), Y. Yang (2006), J. Hofman (2005), M. Sharma (2005), M. Paolieri (2005), D. Leon (1998)
- 9. Major teaching duties**
- Courses given: System Identification(1993-95), Advanced Signal Processing (2013-2022), Adaptive Signal Processing (1996-2012), Signal Compression (2000-2022), Spectrum Estimation (2000-2012), Doctoral Seminars (2000-2016)  
Coordinator of the international program and member in the board of the International Master's Program in Information Technology (1996-2012)
- 10. Scientific awards and honors**
- Co-recipient of "Traian Vuia" Award of the Romanian Academy for the year 1989 (with Petre Stoica and Dumitru Popescu)
  - Best paper award NSIP-2001: "Using MDL for gene expression prediction from microarray measurements" (with Jaakko Astola).
  - Best paper award NORSIG-2004: "Protein is compressible" (with Andrea Hategan)
  - Best paper award 3DTV-CON 2016: "Sparse Modelling and Predictive Coding of Subaperture Images for Lossless Plenoptic Image Compression" (with Petri Helin, Pekka Astola, Bhaskar Rao)
  - ICIP 2017 Light Field Image Coding Challenge Winner, Most Innovative Algorithm (with P.Helin and P. Astola)

<b>11. Other academic merits and activities</b>	<ol style="list-style-type: none"> <li>1. Evgeny Ageenko, Joensuu University, 2000</li> <li>2. Aki Härmä, Helsinki University of Technology, 2001</li> <li>3. Mihai Enescu, Helsinki University of Technology, 2002.</li> <li>4. Stefan Werner, Helsinki University of Technology, 2002.</li> <li>5. David Mary, University Sophia Antipolis, France, 2003</li> <li>6. Qosai Kanafani, University Paris 13, France, 2003.</li> <li>7. Joonas Lehtinen, University of Turku, 2004.</li> <li>8. Isabel Tienda, University of Granada, Spain, 2006.</li> <li>9. Alexander Akimov, University of Joensuu, 2006.</li> <li>10. Teemu Roos, University of Helsinki, 2007.</li> <li>11. Tommi Mononen, University of Helsinki, 2009</li> <li>12. Minjie Chen, University of Eastern Finland, 2012</li> <li>13. Panu Lusto, University of Helsinki 2013</li> <li>14. Marco Zamarin, Techn. University of Denmark, 2013</li> <li>15. Mohammad Rezaei, University of Eastern Finland, 2016</li> <li>16. Yuan Zou, University of Helsinki, 2017</li> <li>17. Mohammed Mobien Mohammad, Aalto University, 2017</li> <li>18. Ismail Bezzine, University Sorbonne Paris Nord, 2020</li> <li>19. Dancho Panovsky, Télécom SudParis, 2020</li> <li>20. Muhammad Umair Mukati, Denmark Tech.University, 2022</li> </ol>
<b>11.1 Reviewer or Committee member for PhD theses (19)</b>	
<b>11.2 International peer evaluation of funding applications (3)</b>	<ul style="list-style-type: none"> <li>• Nominated an expert assessor of international standing by Australian Research Council (ARC), 2003,2011.</li> <li>• Reviewer for Deutsche Forschungsgemeinschaft (German Research Foundation) (2011)</li> <li>• Reviewer for The Research Foundation, Flanders (2015-16)</li> </ul>
<b>11.3 Membership and positions of trust in scientific societies</b>	<ul style="list-style-type: none"> <li>• 1995-1998 Member of IEEE</li> <li>• 1999-present Senior Member of IEEE</li> </ul>
<b>Editor-in-Chief (1)</b>	<ul style="list-style-type: none"> <li>• EURASIP Journal on Bioinformatics and System Biology, Editor-in-Chief 2005 - 2013</li> </ul>
<b>Associate Editor (3)</b>	<ul style="list-style-type: none"> <li>• Associate Editor IEEE Transactions on Signal Processing: 2002-2005.</li> <li>• Associate Editor Signal Processing (Eurasip/Elsevier Journal): 2006-2009.</li> <li>• Associate Editor IEEE Transactions on Image Processing: 2020-present.</li> </ul>
<b>Guest editor (3)</b>	<ul style="list-style-type: none"> <li>• Guest Editor, Signal Processing (Eurasip/Elsevier Journal) Special issue on Genomic Signal Processing, 2002.</li> <li>• Guest Editor, IEEE Signal Processing Magazine, Special Issue on Signal Processing for Genomics, January 2007.</li> <li>• Guest Editor, IEEE Journal of Selected Topics in Signal</li> </ul>

Processing, Special Issue on genomic and proteomic signal processing, June 2008.

12. Scientific and societal impact of research

Total number of publications: 43 reviewed journal papers, 11 reviewed book chapters, 160 peer-reviewed conferences, 1 issued patent, 2 patent applications.

Web of Science database

142 included publications, Sum of the times cited: 929,

H-index: 18

Google scholar:

302 publications, Sum of the times cited: 2264,

H-index: 25, i10-index 62

13. Scientific positions of trust

- Member of IEEE TC Bio Image and Signal Processing 2005-2010
- Chapter Chair, IEEE Signal Processing-Circuits and Systems joint chapter, Finland, 2000-2001.

Organizing committees

- Finance co-chair: WS'99 IEEE Speech Coding Workshop, Haikko Manor, Porvoo, Finland, 20-23 June 1999.
- Finance co-chair: EUSIPCO 2000, Tampere, Finland, 2000.
- Conference co-chair: Geometric, Nonlinear, and Morphological Methods in Image Analysis, Part of IS&T/SPIE's International Symposium on Optics and Photonics 2005, San Diego, California, USA.
- Technical Co-Chair IEEE Workshop on Genomic Signal Processing and Statistics, GENSIPS 2006, May 28-30 2006, College Station TX, USA
- Technical Co-Chair IEEE Workshop on Genomic Signal Processing and Statistics, GENSIPS 2007, Tuusula, 10-12 June 2007, Finland
- General Co-Chair 2008 Workshop on Information Theoretic Methods in Science and Engineering August 18 - 20, 2008, Tampere, Finland
- General Co-Chair Second Workshop on Information Theoretic Methods in Science and Engineering August 17 - 19, 2009, Tampere, Finland
- General Co-Chair Third Workshop on Information Theoretic Methods in Science and Engineering August 16 - 18, 2010, Tampere, Finland
- Co-Chair Sixth Workshop on Information Theoretic Methods in Science and Engineering August 26 - 29, 2013, Tokyo, Japan
- Chair 9th Workshop on Hot Topics in 3D Multimedia (Hot3D), July 2018, San Diego, USA,
- Technical Chair 7th European Workshop on Visual Information Processing, November 2018, Tampere, Finland

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## Ioan Tabus - Publication list

### A1. Peer-reviewed scientific articles in journals

- [1] I. Tabus and E. Palma, "Lossless Compression of Plenoptic Camera Sensor Images", in *IEEE Access*, vol. 9, pp. 31092-31103, 2021.
- [2] P. Astola, L. A. da Silva Cruz, E. A. B. da Silva, T. Ebrahimi, P. G. Freitas, A. Gilles, K.-J. Oh, C. Pagliari, F. Pereira, C. Perra, S. Perry, A. M. G. Pinheiro, P. Schelkens, I. Seidel, I. Tabus, "JPEG Pleno: Standardizing a coding framework and tools for plenoptic imaging modalities" in *ITU Journal: ICT Discoveries*, vol. 3(1), 23 June 2020. (Persistent link: <http://handle.itu.int/11.1002/pub/8153d79a-en>).
- [3] I. Tabus, E.C. Kaya, "Information Theoretic Modeling of High Precision Disparity Data for Lossy Compression and Object Segmentation", in *Entropy*, 21, 1113, pp. 1-21, 2019, doi:10.3390/e21111113.
- [4] P. Astola; I. Tabus, "Coding of Light Fields Using Disparity-Based Sparse Prediction" in *IEEE Access*, vol. 7:1, pp. 176820-176837, December 2019 10.1109/ACCESS.2019.2957934.
- [5] P. Helin, P. Astola, B. Rao, I. Tabus, "Minimum description length sparse modeling and region merging for lossless plenoptic image compression," in *IEEE Journal of Selected Topics in Signal Processing*, October 2017 doi: 10.1109/JSTSP.2017.2737967.
- [6] H. Astola and I. Tabus, "On the linear programming bound for linear Lee codes". *Springer-Plus*, 5:246, pp. 1-13, 12 April 2016.
- [7] H. Astola and I. Tabus, Sharpening the linear programming bound for linear Lee codes. *Electronics Letters*, Volume 51, Issue 6, pp. 492-494, 19 March 2015.
- [8] I. Tabus, Patch-based conditional context coding of stereo disparity images. *IEEE Signal Processing Letters*, 21:10, pp. 1220-1224, Oct. 2014.
- [9] I. Tabus, I. Schioppa, J. Astola. Context coding of depth map images under the piecewise-constant image model representation. *IEEE Transactions on Image Processing*, 22:11, pp. 4195-4210, 2013.
- [10] I. Schioppa, I. Tabus. "Lossy depth image compression using greedy rate-distortion slope optimization". *IEEE Signal Processing Letters*, 20:11, pp. 1066-1069, 2013.
- [11] F. Ghido I. Tabus. "Sparse modeling for lossless audio compression". *IEEE Transactions on Audio, Speech, and Language Processing*, 21:1, pp. 14-28, 2013.
- [12] B. Dumitrescu, A. Onose, P. Helin, I. Tabus. "Greedy Sparse RLS". *IEEE Transactions on Signal Processing*, 60:5, pp. 2194-2207, 2012.
- [13] A. Liski, I. Tabus, R. Sund, and U. Hakkinen. "Variable Selection by sNML Criterion in Logistic Regression with an Application to a Risk-Adjustment Model for Hip Fracture Mortality". *Journal of Data Science*, vol. 10, pp. 321-343, 2012.

- [14] J. Yang, J.A. Eddy, Y. Pan, A. Hategan, I. Tabus, Y. Wang, D. Cogdell, N.D. Price, R.E. Pollock, A.J. Lazar, K.K. Hunt, J.C. Trent, and W. Zhang. "Integrated Proteomic and Genomic Analysis Reveals a Novel Mesenchymal to Epithelial Reverting Transition in Leiomyosarcoma through Regulation of Slug". *Molecular and Cellular Proteomics*, Vol. 9, No. 11, pp. 2405-2413, November 2010.
- [15] J. Dougherty, I. Tabus and J. Astola. "Inference of Gene Regulatory Networks Based on a Universal Minimum Description Length". *EURASIP Journal of Bioinformatics and Systems Biology*. Article ID 482090, 11 pages, doi:10.1155/2008/482090, 2008.
- [16] Schonfeld, D., Goutsias, J., Shmulevich, I., Tabus, I., and Tewfik, A. H., "Introduction to the issue on genomic and proteomic signal processing", *IEEE Journal of Selected Topics in Signal Processing*, pp. 257-260, June 2008.
- [17] G. Korodi and I. Tabus, "Compression of annotated nucleotide sequences" *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, Volume: 4, Issue: 3, pp. 447-457, July-Sept. 2007
- [18] K.N.Mendes, D. Nicorici, D. Cogdell, I. Tabus, O.Yli-Harja, R.Guerra, S.R. Hamilton, and W. Zhang "Analysis of Signaling Pathways in 90 Cancer Cell Lines by Protein Lysate Array", *J. Proteome Res.*, 2007, 6 (7), pp. 2753-2767, 2007.
- [19] G. Korodi, I. Tabus, J. Rissanen and J. Astola. "DNA sequence compression based on the normalized maximum likelihood model". *IEEE Signal Processing Magazine*, pp. 47-53, January 2007.
- [20] M. Akkiprik, D. Nicorici, D. Cogdell, Y. J. Jia, A. Hategan, I. Tabus, O. Yli-Harja, D. Yu, A. Sahin, W. Zhang. "Dissection of Signaling Pathways in Fourteen Breast Cancer Cell Lines Using Reverse-Phase Protein Lysate Microarray". *Technology in Cancer Research and Treatment*, Vol. 5, Number 6, December 2006.
- [21] I. Tabus, A. Hategan, C. Mircean, J. Rissanen, I. Shmulevich, W. Zhang, J. Astola, "Nonlinear modeling of protein expressions in protein arrays", *IEEE Transactions on Signal Processing*, 54:6, 2394-2407, June 2006.
- [22] R. Jiang, C. Mircean, I. Shmulevich, D. Cogdell, Y. Jia, I. Tabus, K. Aldape, R. Sawaya, J. Bruner, G. Fuller, W. Zhang. Pathway alterations during glioma progression revealed by reverse phase protein lysate arrays. *Proteomics*, 6, 2964-2971, 2006.
- [23] G.N. Fuller, C. Mircean, I. Tabus, E. Taylor, R. Sawaya, J.M. Bruner, I. Shmulevich and W. Zhang. Molecular voting for glioma classification reflecting heterogeneity in the continuum of cancer progression. *Oncology Reports* 14: 651-656, 2005.
- [24] C.D. Giurcaneanu, I. Tabus, J. Astola. Clustering time series gene expression data based on sum-of-exponentials fitting. *EURASIP Journal on applied Signal Processing*, vol. 2005, No. 8, pp. 1159-1173, 2005
- [25] G. Korodi and I. Tabus. An efficient normalized maximum likelihood algorithm for DNA sequence compression. *ACM Transactions on Information Systems*, January, vol. 23, No.1, pp. 3-34, 2005.

- [26] C. Mircean, I. Shmulevich, D. Cogdell, W. Choi, Y. Jia, I. Tabus, S.R. Hamilton, W. Zhang. Robust estimation of protein expression ratios with lysate microarray technology. *Bioinformatics*, 21:9, pp. 1935–1942, 2005.
- [27] C.D. Giurcaneanu and I. Tabus. Cluster structure inference based on clustering stability with applications to microarray data analysis. *EURASIP Journal on Applied Signal Processing*, Special issue in Genomic Signal Processing, Vol. 2004, No. 1, 64–80, 2004.
- [28] C. Mircean, I. Tabus, T. Kobayashi, M. Yamaguchi, H. Shiku, I. Shmulevich, W. Zhang. Pathway analysis of informative genes from microarray data reveals that metabolism and signal transduction genes distinguish different subtypes of lymphomas. *International Journal of Oncology*, 24(3):497–504, 2004.
- [29] C.D. Giurcaneanu, I. Tabus, J. Astola, J. Ollila and M. Vihinen. Fast iterative gene clustering based on information theoretic criteria for selecting the cluster structure. *Journal of Computational Biology*, 11(4):660–682, 2004.
- [30] A. Vasilache and I. Tabus. Robust indexing of lattices and permutation codes over binary symmetric channels. *Signal Processing*, Vol. 83, No. 7, pp.1467–1486, 2003.
- [31] J. Astola, E. Dougherty, I. Shmulevich, I. Tabus. Editorial: Genomic Signal Processing. *Signal Processing, Special issue on Genomic Signal Processing*, Vol. 83, No.4, April, 2003.
- [32] I. Tabus, J. Rissanen and J. Astola. Classification and feature gene selection using the normalized maximum likelihood model for discrete regression. *Signal Processing, Special issue on Genomic Signal Processing*, Vol. 83, No.4, pp. 713–727, April, 2003.
- [33] Stefanoiu, D., Tabus, I. Lossless Signal Compression Using Adaptive Lifting I2I Transforms. *Studies in Informatics and Control*, Vol. 11, No. 4, pp. 313–329, 2003.
- [34] R. Iordache, I. Tabus, and J. Astola. Robust index assignment using Hadamard transform for vector quantization transmission over finite-memory contagion channels. *Circuits, Systems and Signal Processing*, Vol. 21, No. 5, pp. 483–507, 2002.
- [35] I. Tabus, J. Rissanen. Asymptotics of Greedy Algorithms for Variable-to-Fixed Coding of Markov Sources. *IEEE Trans. Information Theory*, Vol. 48, No. 7, pp. 2022–2035, July 2002.
- [36] R. Niemistö, B. Dumitrescu and I. Tabus. SDP design procedures for near-optimum IIR compaction filters. *Signal Processing*, Vol. 82, pp. 911–924, 2002.
- [37] Stefanoiu, D., Tabus, I. Euclidean lifting schemes for I2I wavelet transform implementation. *Studies in Informatics and Control*, Vol. 11, No. 2, pp. 255–270, 2002.
- [38] C.D. Giurcaneanu, I. Tabus. Optimal coding of quantized Laplacian sources for predictive image compression. *Journal of Mathematical Imaging and Vision*, Vol. 16, No. 3, pp. 251–268, May 2002.
- [39] A. Vasilache, B. Dumitrescu, I. Tabus. Multiple-Scale Leader-Lattice VQ with Application to LSF Quantization. *Signal Processing*, Vol. 82, No. 4, pp. 563–586, 2002.
- [40] C.D. Giurcaneanu, I. Tabus, S. Mereuta. Using contexts and R-R interval estimation in lossless ECG compression. *Computer Methods and Programs in Biomedicine*, Section I: Methodology, No. 67, pp. 177–186, March 2002.

- [41] I. Tabus and J. Astola. On the Use of MDL Principle in Gene Expression Prediction. *Journal of Applied Signal Processing*, Volume 2001, No. 4, pp. 297–303, December 2001.
- [42] B. Dumitrescu, I. Tabus, P. Stoica. On the parameterization of positive real sequences and MA parameter estimation. *IEEE Transactions on Signal Processing*, vol. 49, no. 11, pp. 2630–2639, November 2001.
- [43] B. Dumitrescu, I. Tabus. Predictive LSF computation. *Signal Processing*, vol.81, no.10, pp. 2019–2031, 2001.
- [44] I. Tabus, C. Popeea and J. Astola. A Design Procedure for Optimal Energy Compaction IIR Filters. *IEEE Trans. Circuits and Systems II*, Vol. 48, No. 7, 740–744, July 2001.
- [45] C.D. Giurcaneanu, I. Tabus, J. Astola. Adaptive context based sequential prediction for lossless audio compression. *Signal Processing*, vol 80, pp. 2283–2294, 2000.
- [46] D. Petrescu, I. Tăbuș, and M. Gabbouj. Library-Median-Stack ( $\mathcal{L}$ -M-S) Filters for Image Restoration Applications. *IEEE Transactions on Image Processing*, IP-8:1299-1305, September, 1999.
- [47] D. Petrescu, I. Tăbuș, and M. Gabbouj. Prediction Capabilities of Boolean and Stack Filters for Lossless Image Compression. *Multidimensional systems and signal processing*, vol.10, no.2, pp. 161–187, April, 1999.
- [48] R. Niemistö, I. Tăbuș, and J. Astola. A fast algorithm for adaptive polynomial filtering. *Signal Processing*, vol.70, no.2, pp. 147–151, October 1998.
- [49] I. Tăbuș, D. Petrescu, and M. Gabbouj. A training framework for stack and Boolean filtering – Fast optimal design procedures and robustness case study. *IEEE Transactions on Image Processing. Special Issue on Nonlinear Image Processing*, IP-5:809–826, June 1996.
- [50] I. Tăbuș, M. Gabbouj, and Y. Lin. Neural networks training methods for WOS filter optimal design. *Studies in Informatics and Control*, 3:89–95, March 1994.

## A2. Peer-reviewed scientific articles in research books

- [51] J. Hukkanen, E. Sabo, and I. Tabus, “MDL based structure selection of union of ellipse models for scaled and smoothed histological images,” in *Advances in Intelligent Control Systems and Computer Science*, ser. Advances in Intelligent Systems and Computing, I. Dumitrache, Ed. Springer Berlin Heidelberg, 2013, vol. 187, pp. 77–89.
- [52] J. Rissanen and I. Tabus. “Rate-Distortion without random codebooks,” In: I. Tabus, K. Egiiazarian, and M. Gabbouj (eds.). “Festschrift in honor of Jaakko Astola on the occasion of his 60th birthday”, TICSP Series #47, pp. 79–86, 2009.
- [53] J. Rissanen, P. Myllymäki, T. Roos, I. Tabus, and K. Yamanishi (Editors), Proceedings of the Fourth Workshop on Information Theoretic Methods in Science and Engineering (WITMSE-2011), Series of Publications C, Report C-2011-45, Department of Computer Science, University of Helsinki, 2011.



- [54] I. Tabus and G. Korodi. "Genome compression using normalized maximum likelihood models for constrained Markov sources." In: Grünwald, P. et al. (eds.). *Festschrift in Honor of Jorma Rissanen on the Occasion of his 75th Birthday*, pp. 175–188, 2008.
- [55] I. Tabus and J. Rissanen. "Maximum likelihood model for logit regression," *Festschrift for T. Pukkila, University of Tampere*, pp. 295–300, 2006.
- [56] I. Tabus, J. Rissanen, J. Astola. Nonlinear signal modelling and structure selection with applications to genomics. In *Advances on nonlinear signal and image processing*, Edited by Steve Marshal and Giovanni Sicuranza, Hindawi Publishing Corporation, pp.79–102, 2006.
- [57] C.D. Giurcaneanu, C. Mircean, G.N. Fuller, and I. Tabus, Finding functional structures in glioma gene-expressions using gene shaving clustering and MDL principle. In "*Computational And Statistical Approaches To Genomics*" (W. Zhang and I. Shmulevich, eds.), Springer, pp. 89–118, 2006.
- [58] I. Tabus and J. Astola. Gene feature selection. In: *Genomic Signal Processing and Statistics*, (E.R. Dougherty, I. Shmulevich, J. Chen, Z.J. Wang, eds.), Hindawi Publishing Corporation, pp. 67–92, 2005.
- [59] J. Rissanen, I. Tabus. Kolmogorov's structure function in MDL theory and lossy data compression. In "*Advances in Minimum Description Length: Theory and Applications*", (P.D. Grünwald, I.J. Myung, M.A. Pitt, eds), The MIT Press Cambridge, 2003.
- [60] I. Tabus, C. Mircean, W. Zhang, I. Shmulevich, J. Astola. Transcriptome-based glioma classification using informative gene set. In "*Genomic and molecular neuro-oncology*" (W. Zhang and G. Fuller, eds), Jones and Bartlett Publishers, pp. 205–220, 2003.
- [61] Astola, J., Dougherty, E., Shmulevich, I., Tabus, I. (editors) *Signal Processing, Special issue on Genomic Signal Processing*, Vol. 83, No.4, 219 pages, April, 2003.
- [62] Tabus, I., Rissanen, J., Astola, J. Normalized maximum likelihood models for Boolean regression with application to prediction and classification in genomics. In "*Computational And Statistical Approaches To Genomics*" (W. Zhang and I. Shmulevich, eds.), Kluwer Academic Publishers, pp. 173–196, 2002, Second edition: Springer, pp. 235–258, 2006.
- [63] Fuller, G., Hess, K., Mircean, C., Tabus, I., Shmulevich, I., Rhee, C., Aldape, K., Bruner, J., Sawaya, A., Zhang, W. Human glioma diagnosis from gene expression data. In "*Computational And Statistical Approaches To Genomics*" (W. Zhang and I. Shmulevich, eds.), Kluwer Academic Publishers, p. 241–256, 2002.
- [64] D. Petrescu, I. Tabus, M. Gabbouj. Optimal Design of Boolean and Stack Filters and Their Application in Image Processing. In *Nonlinear Model-Based Image/Video Processing and Analysis*, C. Kotropoulos, I. Pitas (Editors) ISBN: 0-471-37735-X, Wiley Interscience, pp. 15–58 April 2001.

### A.3. Peer-reviewed scientific articles in conference proceedings

- [65] E. C. Kaya and I. Tabus, "Neural network modeling of probabilities for coding the octree representation of point clouds," 2021 IEEE 23rd International Workshop on Multimedia Signal Processing (MMSP), pp. 1-6, 2021.
- [66] E. C. Kaya, S. Schwarz and I. Tabus, "Refining the bounding volumes for lossless compression of voxelized point clouds geometry," 2021 IEEE International Conference on Image Processing (ICIP), pp. 3408-3412, 2021.
- [67] I. Tabus and E. Palma, "Lossless archiving view arrays from plenoptic cameras when camera sensor images are available," 2021 International Symposium on Signals, Circuits and Systems (ISSCS), 2021.
- [68] E. Palma, F. Battisti, M. Carli, P. Astola and I. Tabus, "Subjective quality evaluation of light field data under coding distortions," 2020 28th European Signal Processing Conference (EUSIPCO), pp. 526-530, 2021.
- [69] I. Tabus, E. C. Kaya and S. Schwarz, "Successive refinement of bounding volumes for point cloud coding," 2020 IEEE 22nd International Workshop on Multimedia Signal Processing (MMSP), pp. 1-6, 2020.
- [70] E.C. Kaya and I. Tabus, "Corner view disparity estimation for lossless light field compression", The first European Light Field Imaging Workshop (ELFI 2019), Borovets, Bulgaria, June, 2019.
- [71] C. Perra, P. Astola, E. A. B. da Silva, H. Khanmohammad, C. Pagliari, P. Schelkens, and I. Tabus "Performance analysis of JPEG Pleno light field coding", Proc. SPIE 11137, Applications of Digital Image Processing XLII, 111371H (6 September 2019).
- [72] P. Schelkens, P. Astola, E. A. B. da Silva, C. Pagliari, C. Perra, I. Tabus, and O. Watanabe "JPEG Pleno light field coding technologies", Proc. SPIE 11137, Applications of Digital Image Processing XLII, 111371G (6 September 2019).
- [73] P. Astola and I. Tabus, "WaSP: Hierarchical Warping, Merging, and Sparse Prediction for Lightfield Image Compression", EUVIP, Tampere, November 2018.
- [74] P. Astola and I. Tabus, "Improving Residual Coding of WaSP Light Field codec," 2018 International Conference on 3D Immersion (IC3D), Brussels, Belgium, 2018, pp. 1-8.
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