Complete publication list

**prof. RNDr. Ing. Ivan Bajla, PhD.**

At May 2019

**AAB National scientific monograph**

1. JAROSLAVSKIJ, L. – BAJLA, I. *Metódy a systémy číslicového spracovania obrazov*. Bratislava : ALFA, 1989, 526 s. (podiel 45%)

**ABC Chapters in international scientific monographs**

1. BAJLA, I. – HOLLÄNDER, I. – WITKOVSKÝ, V. Task-based evaluation of image diffusion filtering algorithms. In *Empirical Evaluation Methods in Computer Vision*. Editors H.I. Christensen, P.J. Phillips. World Scientific Press, 2002, 89-115. (50%)
2. BAJLA, I. – SOUKUP, D. Is the parts-based concept of NMR relevant for object recognition tasks? In *Machine Learning Research Progres.* Editors H. Peters, M. Vogel. New York : Nova Science Publishers, 2010, 463-471. (80%)
3. BAJLA, I. – SOUKUP, D. – ŠTOLC, S. Occluded image object recognition using localized nonnegative matrix factorization methods. In *Object Recognition*. Editor Tam Phuong Cao. Rijeka, Croatia : InTech, 2011, 83-106. (70%)

**ABD Chapters in national scientific monograph**

1. BAJLA, I. Výpočtový model. In *Ľudský činiteľ vo vede*. Autor J. Sedliak. Bratislava : Veda, 1980.

**ACB National university coursebook**

1. BAJLA, I. *Základy číslicového spracovania obrazov*. Elektronický učebný text pre PGŠ vo vednom odbore meracia technika.Bratislava : Ústav merania a meracej techniky SAV. ISBN 978-80-969672-2-3. http://www.um.sav.sk/sk/images/stories/dep03/doc/Bajla-PGS-UM-SAV.zip

**ACD Chapters in national university coursebooks**

1. BAJLA, I. Čo je to číslicové spracovanie obrazov. In *Číslicové spracovanie obrazov*. Bratislava : DT ZSVTS – ÚM SAV, 1991, 8-14.
2. BAJLA, I. Matematické základy ČSO-I. Obraz ako signál. In *Číslicové spracovanie obrazov*. Bratislava : DT ZSVTS – ÚM SAV, 1991, 15-32.
3. BAJLA, I. – HOLLÄNDER, I. Metódy preparovania číslicových obrazov. In *Číslicové spracovanie obrazov*. Bratislava : DT ZSVTS – ÚM SAV, 1991, 100-127. (60%)
4. BAJLA, I. – PISÁR, A. Aplikácia ČSO v medicínskej introskopii. In *Číslicové spracovanie obrazov*. Bratislava : DT ZSVTS – ÚM SAV, 1991, 150-187. (70%)

**ADC Papers in international journals indexed by CurrentContent and ISI-WoS**

1. BAJLA, I. – OSOSKOV, G.A. Application of REDUCE–2 algebraic manipulation system in calibration problems of track chamber picture processing devices. *Computer Physics Communications*, **20**, 1980, 81-83. (90%)
2. MATEJ, S. – BAJLA, I. A high–speed reconstruction from projections using direct Fourier method with optimized parameters – An experimental analysis. *IEEE Transactions on Medical Imaging*, **9**, 1990, 4, 421-429. (40%)
3. ALLINEY, S. – MATEJ, S. – BAJLA, I. On the possibility of direct Fourier reconstruction from divergent–beam projections. *IEEE Transactions on Medical Imaging*, **12**, 1993, 2, 173-181. (25%)
4. BAJLA, I. – HOLLÄNDER, I. Nonlinear filtering of magnetic resonance tomograms by geometry–driven diffusion. *Machine Vision and Applications*, **10**, 1998, 243-255. (70%)
5. BAJLA, I. – ŠRÁMEK, M. Nonlinear filtering and fast ray tracing of 3–D image data. *IEEE Engineering in Medicine and Biology Magazine*, 17, 1998, 2, 73-80. (60%)
6. HOLLÄNDER, I. – BAJLA, I Adaptive smoothing of MR brain images by 3D geometry driven diffusion. *Computer Methods and Programs in Biomedicine*, **55**, 1998, 157-176. (30%)
7. BAJLA, I. – ŠRÁMEK, M. Improvement of 3D visualization of the brain using anisotropic diffusion smoothing of MR data. *Healthcare Technology and Management. Special Series of the International Journal of Technology Management*, **1**, 1999, 3/4, 390-400. (60%)
8. BAJLA, I. – HOLLÄNDER, I. Locally adaptive conductance in geometry–driven–diffusion filtering of magnetic resonance tomograms. *IEE Proceedings – Vision, Image and Signal Processing*, **147**, 2000, 3, 271-282. (70%)
9. BAJLA, I. – HOLLÄNDER, I. Geometry–driven–diffusion filtering of magnetic resonance images using model–based conductance. *Machine Vision and Applications*, **12**, 2001, 5, 223-237. (60%)
10. FÜRTLER, J. – MAYER, K. – KRATTENTHALLER, W. – BAJLA, I. SPOT––development tool for software pipeline optimization for VLIW–DSPs used in real–time image processing. *Real–Time Imaging,* **9**, 2003, 6, 387–399. (10%)
11. BAJLA, I. – HOLLÄNDER, I. – FLUCH, S. – BURG, K. – KOLLÁR, M. An alternative method for electrophoretic gel image analysis in the GelMaster software. *Computer Methods and Programs in Biomedicine*, **77**, 2005, 3, 209–231. (50%)
12. BAJLA, I. – HOLLÄNDER, I. – GMEINER, G. – REICHEL, Ch. Quantitative analysis of images in erythropoietin doping control. *Medical and Biological Engineering and Computing*, **43**, 2005, 3, 403–409. (70%)
13. BAJLA, I. – HOLLÄNDER, I. – MINICHMAYR, M. – GMEINER, G. – REICHEL, Ch. GASepo – a software solution for quantitative analysis of digital images in Epo doping control. *Computer Methods and Programs in Biomedicine*, **80**, 2005, 246–270. (50%)
14. ŠTOLC, S. – BAJLA, I. Improvement of band segmentation in Epo images via column shift transformation with cost functions. *Medical & Biological Engineering & Computing,* **44**, 2006, 4, 257–274. (40%)
15. BAJLA, I. – Rublík, F. – Arendacká, B. – Farkaš, I. – HORNIŠOVÁ, K. – ŠTOLC, S. – Witkovský, V. Segmentation and supervised classification of image objects in Epo doping–control. *Machine Vision and Applications*, **20,** 2009, 243–259. (50%)
16. BAJLA, I. – HOLLÄNDER, I. – Czedik–Heiss, D. – GRANEC, R. Classification of image objects in Epo doping control using fuzzy decision tree. *Pattern Analysis and Applications,* **12**, 2009,285–300. (85%)
17. TEPLAN, M. - BAJLA, I. – ROSIPAL, R. – RUSNAK, M. Feature clustering of intracranial pressure time series for alarm function estimation in traumatic brain injury. In *Physiological Measurement*, **38**, 2017, 11, 2015–2043. (35%)
18. ŠKOVIERA, R. – BAJLA, I. – ŠKOVIEROVÁ, J. Object recognition in clutter color images using Hierarchical Temporal Memory combined with salient-region detection. In *Neurocomputing*, **307**, 2018, 172-183. (45%)

**ADD Papers in national journals indexed by CurrentContent and ISI-WoS**

1. ŠTOLC, S. - BAJLA, I. – VALENTÍN, K. – ŠKOVIERA, R. Pair-wise temporal pooling method for rapid training of the HTM networks used in computer vision applications. Computing and Informatics **31**, 2012, 4, 901-919. (25%)

**ADE Papers in impacted international journals indexed by other databases**

1. BAJLA, I. – OSOSKOV, G.A. Problemy i algoritmy kalibrovky ustrojstv dlja izmerenija snimkov s trekovych kamer. *Soobščenija OIJaI*, P10–11834, 1978, 32 s. (80%)
2. BAJLA, I. – OSOSKOV, G.A. – HEARN, A. C. Programma ortogonalizaciji polinomov ot dvuch peremennych na jazyke REDUCE–2. *Soobščenija OIJaI,* P10–11944, 1978, 11 s. (50%)
3. BAJLA, I. a kol. Točnostnyje charakteristiki skanirujuščego avtomata AELT–2/160. *Soobščenija OIJaI*, P10–12990, 1980, 12 s. (70%)
4. BAJLA, I. a kol. Sistema obrabotki snimkov s ustanovki MIS na skanirujuščem avtomate AELT–2/160. *Soobščenija OIJaI*, P10–80–430, 1980, 24 s. (20%)
5. BAJLA, I. – OSOSKOV, G.A. – PRICHOĎKO, V.I. K voprosu o sžatiji dannych pri besfiľmovom sjeme informaciji so strimernych kamer. Metodičeskije aspekty i občščaja koncepcija sžatija. *Soobščenija OIJaI*, P10–80–162, 1980, 14 s. (70%)
6. BAJLA, I. – OSOSKOV, G.A. K voprosu o sžatiji dannych pri besfiľmovom sjeme informaciji so strimernych kamer. 2. Analiz dvuch osnovnych algoritmov sžatija. *Soobščenija OIJaI*, P10–80–237, 1980, 10 s. (90%)
7. BAJLA, I. – OSOSKOV, G.A. Algoritmy i programmy bystrogo slent–preobrazovanija proizvoľnoj razmernosti. *Soobščenija OIJaI*, P10–80–389, 1980, 16 s. (90%)
8. BAJLA, I. – OSOSKOV, G.A. Ob ispoľzovaniji preobrazovanija Walsha – Hadamarda dlja vyčislenija bystrogo slent–preobrazovanija. *Soobščenija OIJaI*, P11–80–417, 1980, 12 s. (90%)
9. BAJLA, I. – OSOSKOV, G.A. – PRICHOĎKO, V.I. – TURZOVÁ, M. K voprosu o sžatiji dannych. 3. Programnyj imitator apparatury sžatija dannych. *Soobščenija OIJaI*, P10–82–653, 1982, 16 s. (50%)
10. BAJLA, I. – OSOSKOV, G.A. K voprosu o vyčisleniji bystrogo slent–preobrazovanija. *Avtometrija*, **18,** 1982, 5, 16–22. (80%)
11. WITKOVSKÝ, V. – BAJLA, I. Statistical criteria for 3D image solid segmentation within linear regression model. *Machine Graphics and Vision*, **2**, 1993, 4, 339–355. (30%)
12. BAJLA, I. Algoritmy nelinejnogo sglaživanija JaMR–tomogramm, osnovannyje na neizotropnoj diffuzii. *Komputernaja optika*, **14–15**, 1995, 97–112.
13. SOUKUP, D. – BAJLA, I. Robust object recognition under partial occlusions using NMF. *Computational Intelligence and Neuroscience*, 2008, article ID 857453, doi: 10.1155 /2008 /857453. <http://www.hindawi.com/journals/cin/2008/857453.html> (40%)

**ADF Papers in impacted national journals indexed by other databases**

1. BOLF, J. – FROLLO, I. – BAJLA, I. Elektromagnetický pohon pri aplikácii ľavostranného podporného bypassu v experimentálnej praxi. *Acta Metronomica*, **6**, 1970, 3, 1–24 . (80%)
2. BAJLA, I. Metronomické aspekty terminológie tvarových odchýlok. *Jemná mechanika a optika*, **23**, 1978, 11, 307–309.
3. BAJLA, I. Vzťah lineárneho a polárneho záznamu tvarových odchýlok v matematickom modeli. *Jemná mechanika a optika*, **23**, 1978, 12, 341–344.
4. BAJLA, I. – TURZOVÁ, M. – OSOSKOV, G. A. An aproach to video data compression for on–line image processing in high energy physics. *Computers and Artificial Intelligence*, **3**, 1984, 6, 527–538. (80%)
5. BAJLA, I. – TURZOVÁ, M. – OSOSKOV, G. A. Software simulator of the video data compressor for image processing in high energy physics. *Computers and Artificial Intelligence*, **4**, 1985, 1, 45–57. (45%)
6. BAJLA, I. – MATEJ, S. – SVITOK, P. Local application of on–line image grey scale transformations. *Elektrotechnický časopis*, **39**, 1988, 10, 737–745. (70%)
7. BAJLA, I. – PISÁR, A. – LATTA, P. – MATEJ, S. – KLINOVSKÝ, D. Dialógový systém číslicového spracovania biomedicínskych obrazov. *Automatizace*, **33**, 1990, 8, 205–209. (40%)
8. BAJLA, I. – MATEJ, S. – HOLLÄNDER, I. Využitie dialógového systému číslicového spracovania biomedicínskych obrazov v simulačnom výskume. *Automatizace*, **33**, 1990, 9, 248–253. (35%)
9. BAJLA, I. – HOLLÄNDER, I. – ŠRÁMEK, M. Problémy predspracovania a syntézy 3D obrazov v tomografii. Časť 1. Metodika 3D syntézy a predspracovania 2D obrazov. *Lékař a technika*, **24**, 1993, 2, 27–31. (60%)
10. BAJLA, I. – HOLLÄNDER, I. – ŠRÁMEK, M. Problémy predspracovania a syntézy 3D obrazov v tomografii. Časť 2. Metodika 3D syntézy a predspracovania 2D obrazov. *Lékař a technika*, **24**, 1993, 3, 51–57. (60%)
11. HOLLÄNDER, I. – ŠRÁMEK, M. – BAJLA, I. Problémy predspracovania a syntézy 3D obrazov v tomografii. Časť 3. Segmentácia 2D a 3D obrazov. *Lékař a technika*, **24**, 1993, 4, 75–81. (10%)
12. BAJLA, I. – BELAN, V. Tvorba a spracovanie digitálnych obrazov v rádiodiagnostike. *Bratislavské lekárske listy*, **94**, 1993, 5, 254–266. (90%)
13. BELAN, V. – BAJLA, I. Digitálne zobrazovanie a moderné rádiodiagnostické metódy. *Diagnóza*, **1**, 1994, 12–14. (30%)
14. BAJLA, I. – ŠRÁMEK, M. – BELAN, V. 3D vizualizácia – pomoc a výzva pre medicínu. *Lékař a technika*, **26**, 1995, 98–111. (50%)
15. BAJLA, I. – ŠRÁMEK, M. A modified approach and novel measure for evaluation of the image smoothing algorithm performance. *Journal of the Electrical Engineering*, **47**, 1996, 93–101. (80%)
16. BAJLA, I. – HOLLÄNDER, I. – BURG, K. Improvement of electrophoretic gel image analysis. *Measurement Science Review*, **1**, 2001, 5-10. (50%)
17. BAJLA, I. – HOLLÄNDER, I. – KOLLÁR, M. Novel algorithms implemented in the gel image analysis system GAS2. *Measurement Science Review*, **3**, 2003, 57–66. (50%)
18. BAJLA, I. – HOLLÄNDER, I. – WITKOVSKÝ, V. Performance evaluation method for geometry–driven diffusion filters. *Journal of Electrical Engineering*, **54**, 2003, 1-2, 3-12. (50%)
19. Heiss–Czedik, D. – Bajla, I. Using Self–organizing maps for object classification in Epo image analysis. *Measurement Science Review*, **5**, 2005, 11–16. (20%)
20. ŠTOLC, S. – Bajla, I. Improved accuracy of band detection in GASepo system for quantitative analysis of images in Epo doping control. *Measurement Science Review*, **7**, 2007, 14-18. (20%)
21. ŠTOLC, S. – BAJLA, I. On the optimum architecture of the biologically inspired hierarchical temporal memory model applied to the hand–written digit recognition. Measurement Science Review, 10, 2010, 28–49. (30%) (Invited paper)

**AFA Invited contributions at international scientific conferences published in the proceedings**

1. BAJLA, I. – WITTLING, W. – ŠRÁMEK, M. – PAUL, V. Algorithms for 3D anisotropic diffusion smoothing of MR brain images. In *BIOSIGNAL '94 : 12th International Conference*. Brno : Technical University Press, 1994, 13–17. (70%)
2. BAJLA, I. Geometry–driven diffusion – a promising methodological basis for medical image processing and 3D visualization. In *BIOSIGNAL '96 : 13th Biennal International Conference*. Brno : Technical University Press, 1996, 4–10.
3. BAJLA I. Geometry–driven diffusion – an alternative approach to image filtering/segmentation in dignostic imaging. In *Proceedings of the DIP–97 Conference on Digital Image Processing and Computer Graphics.* Proceedings of the SPIE 3346. Editors E. Wenger, L. Dimitrov. 1998, 56–71.
4. BAJLA, I. – HOLLÄNDER, I. – HEISS, D. – GRANEC, R. – MINICHMAYR, M. Object classification in images for Epo doping control based on fuzzy decision trees.In *Proceedings of the International Conference of Electronic Imaging, Applications of Neural Networks and Machine Learning in Image Processing IX*. Proceedings of the SPIE 5673. Editors N.M. Nasrabadi, S.A. Rizvi. 2005, 42–56. (70%)

**AFC Contributions at international scientific conferences published in the peer-reviewed proceedings**

1. BAJLA, I. a kol. Matematičeskoje obespečenije sistemy obrabotki fotosnimkov s magnitnogo iskrovogo spektrometra na skanirujuščem avtomate AELT–2/160. In *Tezisy dokladov vsesojuznoj konferenciji po avtomatizaciji naučnych issledovanij na osnove primenenija EVM.* Novosibirsk, 1979, 94–95. (30%)
2. BAJLA, I. a kol. Bystryje algoritmy sžatija štrichovych izobraženij. In *Pervyj vsesojuznyj seminar po avtomatizacii naučnych issledovanij v jadernoj fizike i smežnych oblastiach.* Dušanbe, 1980, 302–306. (70%)
3. BAJLA, I. – OSOSKOV, G.A. Matematičeskije voprosy obrabotki kalibrovočnych izmerenij. In *Collection of Scientific Papers in Collaboration with Joint Institute for Nuclear Research Dubna*, USSR and Central Research Institute for Physics Budapest. Budapest : KFKI, 1982, 47–59. (80%)
4. BAJLA, I. – BÁN, J. – YAROSLAVSKIY, L.P. An improved method of digital image histogram matching. In *Circuit Theory and Design : 7th European Conference (ECCTD '85).* Part 2. Praha, 1985, 598-601. (60%)
5. MATEJ, S. – BAJLA, I. A software system for simulation of image reconstruction from projections in MR–tomography. In *Computer Analysis of Images and Patterns Conference (CAIP '87).* Wismar : WGMA, 1987, 155–156. (40%)
6. BAJLA, I. – MATEJ, S. – BOGNÁROVÁ, M. Computer simulation of the Fourier method of image reconstruction from projections in tomography. In *Advances in Biomedical Measurement.* Editors E.R. Carson, P. Kneppo, I. Krekule. New York : Plenum Press, 1988, 269–280. (50%)
7. BAJLA, I. Digital image procesing at the IMS: A 10 years – retrospective. In *Digital Image Processing and Computer Graphics : Theory and Application.* Editors E. Wenger, L. Dimitrov. Wien : Oldenbourg, 1991, 11–31.
8. BAJLA, I. – HOLLÄNDER, I. – MATEJ, S. – ŠRÁMEK. M. – LATTA, P. – PISÁR, T. An application of PC–based digital image processing in Computer Assisted Radiology. In *Computer Assisted Radiology Conference. Proceedings of CAR '91*. Editors H.U. Lemke, M.L. Rhodes, C.C. Jaffe, R. Felix. Springer Verlag, 1991, 880. (25%)
9. BAJLA, I. – ŠRÁMEK, M. – HRAŠKO, D. – MARUŠIAK, M. A comparison study of smoothing techniques for 3–D image synthesis from MRI data. In *BIOSIGNAL '92 : 11th International Conference*. Brno : Technická univerzita, 1992, 31–34. (50%)
10. BAJLA, I. Recent advances of digital image processing in the ČSFR. In *Modelling and New Methods in Image Processing and in GTS*. Wien, 1992, 9–11.
11. BAJLA, I. – MARUŠIAK, M. – ŠRÁMEK, M. Anisotropic filtering of MRI data based upon image gradient histogram. In *Computer Analysis of Images and Patterns : 5th International Conference (CAIP '93).* Springer Verlag, 1993, 90–97. (60%)
12. PISÁR, A. – BAJLA, I. Anisotropic diffusion smoothing of MR tomograms based on matrices. In *BIOSIGNAL '94 : 12th International Conference*. Brno : Technical University, 1994, 18–20. (30%)
13. BAJLA, I.– ŠRÁMEK, M. Improvement of 3D visualization of the brain using anisotropic diffusion smoothing of MR data. In *MEDINFO '95 : 8th World Congress on Medical Informatics*. Edmonton : International Medical Informatics Association, 1995, 683–686. (60%)
14. BAJLA, I. – HOLLÄNDER, I. Geometry–driven diffusion smoothing of the MR–brain images using a novel variable conductance. In *Proceedings of the 18th Annual International Conference of the IEEE Engineering in Medicine and Biology Society.* Amsterdam, 1996, 743-745. CD-ROM . (70%)
15. BAJLA, I. – HOLLÄNDER, I. Geometry–driven–diffusion filtering of MR brain images using dissimilarities and optimal relaxation parameter. In *Proceedings of the VIII Mediterranean Conference on MBEC (MEDICON ´98).* Limassol, 1998. CD–ROM. (70%)
16. BAJLA, I. – HANAJÍK M. – WITKOVSKÝ, V. Nonlinear filtering of MR images using geomtrically and statistically controlled diffusion. In *Proceedings of the 9th European Signal Processing Conference EUSIPCO ´98.* Rhodos, 1998, 793–795. (50%)
17. BAJLA, I. – ORGONÍKOVÁ, T. – SLÁDEČEK, M. – HANAJÍK, M. Geometry–driven diffusion filtering of multivalued MR data. In *BIOSIGNAL ´98 : 14th Biennal International Conference*. Brno : VUTIUM Press, 1998, 76–79. (50%)
18. BAJLA, I. – HOLLÄNDER, I. Pixel dissimilarities for local controlling of the conductance in geometry–driven diffusion. In *Digital Image Processing and Computer Graphics. Proceedings of the DIP–97 Conference*. Proceedings of the SPIE 3346. Editors E. Wenger, L. Dimitrov. Vienna, 1998, 120-128. (70%)
19. PENZ, H. – BAJLA, I. – MAYER, K. – KRATTENTHALER, W. High–speed template matching with point correlation in image pyramids. In *EUROPTO Conference on Diagnostic Imaging Technologies and Industrial Applications.* Proceedings of the SPIE 3827. Munich, 1999, 85–94. (20%)
20. BAJLA, I. – HOLLÄNDER, I. Geometry–driven–diffusion filtering of MR tomograms using model–based conductance. In *Proceedings of the 1st Joint BMES–EMBS Conference Serving Humanity, Advancing Technology*. Atlanta, 1999, 176. CD–ROM. (60%)
21. BAJLA, I. – HOLLÄNDER, I. – WITKOVSKÝ, V. Task–based evaluation of image diffusion filtering algorithms. In *Proceedings of the 2nd Workshop on Empirical Evaluation Methods in Computer Vision.* Dublin, 2000, 55–76. (50%)
22. PENZ, H. – BAJLA, I. – VRABL, A. – KRATTENTHALER, W. – MAYER, K. Fast real–time recognition and quality inspection of printed characters via point–correlation. In*Real–Time Imaging V*. Proceedings of SPIE 4303. San Jose, USA, 2001, 127–137. (20%)
23. BAJLA, I. – HOLLÄNDER, I. – BURG, K. – FLUCH, S. A novel approach to quantitative analysis of electrophoretic gel images of DNA fragments. In *Proceedings of the IEEE International Symposium on Biomedical Imaging.* Washington, 2002, 899–902. CD-ROM. (45%)
24. BRODERSEN, J. – MAYER, K.J. – LANDL, D. – BAJLA, I. Novel data acquisition and communication bus architecture for real–time multisensor imaging systems. In *Real–Time Imaging IV*. Proceedings of the SPIE 5012. Santa Clara, 2003, 122–131. (10%)
25. FÜRTLER, J. – MAYER, K.J. – KRATTENTHALER, W. – BAJLA, I. Novel development tool for software pipeline optimization for VLIW–DSPs used in real–time image processing. In *Real–Time Imaging IV.* Proceedings of the SPIE 5012. Santa Clara, 2003, 132–143. (10%)
26. BAJLA, I. – HOLLÄNDER, I. – GMEINER, G. – REICHEL, Ch. Analysis of EPO images after isoelectric focusing and double blotting. In *Proceedings of the 2nd IASTED International Conference BIOMED ’04*. Innsbruck, Austria, 2004, 228–233. CD-ROM. (70%)
27. HOLLÄNDER, I. – BAJLA, I. – MINICHMAYR, M. – GMEINER, G. –REICHEL, Ch. GASepo – system for analysis of images generated in EPO doping control. In *BIOSIGNAL 2004*. Brno, 2004, 273–277. (30%)
28. RAMOSER, H. – BIBER, J. – BAJLA, I. – HOLLÄNDER, I. Segmentation of electrophoretic images in doping control. In *Proceedings of the METMB ‘04 Conference*. Las Vegas, 2004, 467–470. (15%)
29. HOLLÄNDER, I. – BAJLA, I. – MINICHMAYR, M. – GMEINER, G. – REICHEL, Ch. GASepo - system for analysis of images generated in EPO doping control proteomics. In *Manfred Donike Workshop : 23d Cologne Workshop on Dope Analysis Platform*. Kolin, Germany, 2005. (5%)
30. ŠTOLC, S. – BAJLA, I. Improvement of band classification in GASepo system used in EPO Doping–Control. In *BIOSIGNAL 2006 : Proceedings of the 18th Biennal International EURASIP Conference*. Editors J. Jan, J. Kozumplík, I. Provazník. Brno : VUTIUM Press, 2006, 281–283. (30%)
31. BAJLA, I. – SOUKUP, D. Non–Negative matrix factorization: a study on influence of matrix sparseness and subspace distance metrics on image object recognition. In *International Conference on Quality Control by Artificial Vision 2007*. Proceedings of the SPIE 6356. Le Creusot, France, 2007, 14/1–14/12. (60%)
32. BAJLA, I. – SOUKUP, D. A modular non–negative matrix factorization for parts–based object recognition using subspace representation. In *International Conference on Electronic Imaging*. Proceedings of the SPIE 6813. Editors K.S. Niel, D. Fofi. San Jose, CA, USA, 2008. (80%)
33. ŠTOLC, S. – BAJLA, I. Application of the computational intelligence network based on hierarchical temporal memory to face. In *10th IASTED International Conference on Artificial Intelligence and Applications (AIA 2010)*. Editor M.H. Hamza. Innsbruck, Austria, 2010, 185-192. (40%)
34. ŠKOVIERA, R. – VALENTÍN, K. – ŠTOLC, S. – BAJLA, I. Recognition of untrustworthy face images in ATM sessions using a bio-inspired intelligent network. In *ICPRAM 2013 : 2nd International Conference on Pattern Recognition Applications and Methods*. Editors M. De Marsico, A. Fred. SciTePress, 2013, 511-517.
35. TEPLAN, M. - BAJLA, I. - ROSIPAL, R. - RUSNÁK, M. Intracranial pressure of patients after severe traumatic brain injury: A pilot study for lethality estimation from time series. In *YBERC 2014 : Proceedings of the 6th International Young Biomedical Engineers and Researchers Conference*. Editors E. Cocherová, J. Púčik. Bratislava : FEI STU, 2014, 89-92.
36. ŠKOVIERA, R. – BAJLA, I. – KUČEROVA, J. Object recognition in clutter color images using hierarchical temporal memory combined with salient-region detection. In *Computational Intelligence (CI 2015) : The 6th IASTED International Conference*. Editor M.H. Hamza. Acta Press, 2015, p. 245-254.

**AFD Contributions at national scientific conferences published in the peer-reviewed proceedings**

1. BAJLA, I. Redukcia vizuálnej informácie pri automatizácii merania vo fyzike vysokých energií. In *Teoretické problémy merania. Sympózium TC–7 ČsNK IMEKO a PROBASTAT '80*. Bratislava : ÚMMT SAV, 1980, 1-4.
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