University POLITEHNICA of Bucharest
Faculty of: **Electronics, Telecommunications and Information Technology**
Department: **Telecommunications**
Assoc. Prof. PhD. Eng. Ruxandra-Georgiana ȚAPU

L I S T
of scientific works and activities

A.   List of the 10 most representative scientific papers

[1]. **R. Tapu**, B. Mocanu, T. Zaharia:" *DEEP-HEAR: A Multimodal Subtitle Positioning System Dedicated to Deaf and Hearing-Impaired People*," in IEEE Access*,* vol. 7, pp. 88150-88162, 2019.
http://dx.doi.org/10.1109/ACCESS.2019.2925806 , **WOS:**000476810500044 (**Q1 - IF 4.098**)

[2]. B. Mocanu, **R. Tapu**, T. Zaharia:"*DEEP-SEE FACE: A Mobile Face Recognition System Dedicated to Visually Impaired People*," in IEEE Access*,* vol. 6, pp. 51975-51985, 2018. http://dx.doi.org/10.1109/ACCESS.2018.2870334 , **WOS**: 000447704600001 (**Q1 - IF 4.098**)

[3]. **R. Tapu**, B. Mocanu, T. Zaharia, "*Wearable assistive devices for visually impaired: A state of the art survey*", Pattern Recognition Letters 2018, http://dx.doi.org/10.1016/j.patrec.2018.10.031, (**Q2 - IF 2.81**)

[4]. **R. Tapu**, B. Mocanu, T. Zaharia: "*DEEP-SEE: Joint Object Detection, Tracking and Recognition with Application to Visually Impaired Navigational Assistance*" Sensors (Basel). 28.10.2017; vol. 17(11), pp. 1-24, DOI: http://dx.doi.org/10.3390/s17112473, **WOS**:000416790500035, (**Q1 - IF 3.031**)

[5]. **R. Tapu**, B. Mocanu, T. Zaharia, "*A computer vision-based perception system for visually impaired*", Multimedia Tools and Applications, pp. 1-37, 2017, DOI: http://dx.doi.org/10.1007/s11042-016-3617-6; **WOS**:000400845000037. (**Q2**, **IF – 2.101**).

[6]. B. Mocanu, **R. Tapu**, T. Zaharia, "*When Ultrasonic Sensors and Computer Vision Join Forces for Efficient Obstacle Detection and Recognition*", Sensors, 16(11):1807, pp. 1-23, 2016, ISSN 1424-8220, DOI: http://dx.doi.org/10.3390/s16111807, **WOS**:000389641700040 (**Q1- IF 3.031**).

[7]. **R. Tapu**, B. Mocanu, T. Zaharia, "*ALICE: A smartphone assistant used to increase the mobility of visual impaired people*", Journal of Ambient Intelligence and Smart Environments, vol. 7, no. 5, pp. 659-678, 2015, ISSN: 1876-1364, DOI: http://dx.doi.org/10.3233/AIS-150336, **WOS**:000361063200006 (**Q2** - **IF 1.063**)

[8]. B. Mocanu, **R. Tapu**, T. Zaharia, "*Seeing without sight – An automatic cognition system dedicated to blind and visually impaired* people", International Conference on Computer Vision Workshops (ICCV 2017), pp. 1452-1459, 22-29 Octombrie 2017, Venetia, Italia. DOI: http://dx.doi.org/10.1109/ICCVW.2017.172; **WOS**:000425239601056.

[9]. B. Mocanu, **R. Tapu**, T. Zaharia, "*Using computer vision to see*", European Conference on Computer Vision (ECCV), in Springer International Publishing Switzerland 2016, G. Hua and H. Jegou (Eds.): Part II, LNCS 9914, pp. 375-390, ISBN: 978-3-319-48880-6; DOI: http://dx.doi.org/10.1007/978-3-319-48881-3_26, 2016; **WOS**:000389501700026.

[10]. **R. Tapu**, B. Mocanu, A. Bursuc, T. Zaharia - "*A Smartphone-Based Obstacle Detection and Classification System for Assisting Visually Impaired* People", International Conference On Computer Vision ICCV Workshops, pp.444 - 451, 1-8 Dec. 2013; ISBN: 978-1-4799-3022-7, DOI: http://dx.doi.org/10.1109/ICCVW.2013.65; **WOS**:000349847200061

B.   The complete list of scientific works

I.   PhD theses (T)

T1. „*Analiza şi interpretarea semantică a informaţiei video pentru indexarea colaborativă*" ("*Semantic analysis and interpretation of video information for collaborative indexing*") - University "Politehnica" of Bucharest, Faculty of Electronics, Telecommunications and Information Technology.

T2. „*Segmentation et structuration de documents video pour l'indexation*" ("*Segmentation and structuring of video documents for indexing applications*") – "Ecole Doctorale Informatique, Telecommunications et Electronique de Paris (EDITE)", University „Pierre et Marie Curie" carried out on the basis of a joint supervision agreement with Institute Mines-Telecom/Telecom Sudparis, Paris, France- With the distinction: „Très honorable".

II.   Published Books (C)

Ca – Books / courses published by recognized publishing houses.

Ca1. D. Ciurea, M. Răducanu, **R. Tapu** – „*Tehnici şi sisteme de transmisiuni multiplex*" ("*Multiplex Techniques and Transmission Systems*") – Seminar work and laboratory guidance, Nautică Publisher, ISBN 978-606-6810-27-2, 2014.

Ca2. R. Tapu, B. Mocanu, „*Compresia semnalelor multimedia*" ("*Multimedia signals compression*"), Cavallioti Publisher, ISBN: 978-606-551100-2, 179 pages, 2018.

Cb – Specialized books published by recognized publishers (author, co-author, publisher)

Cb1. R. Tapu, B. Mocanu: - „*Sisteme de compresie şi codare video*" ("*Video compression and encoding systems*"), Politehnica Press Publisher, ISBN: 978-606-515-506-0, 2013.

Cb2. B. Mocanu, **R. Tapu** - „*Reţele de comunicaţii şi sisteme multimedia*" ("Communication networks and multimedia systems"), Politehnica Press Publisher, ISBN: 978-606-515-380-6, 2012.

Cb3. E. Tapu, B. Mocanu, **R. Tapu** – „*Design şi procesare imagistică*" ("*Image design and processing*"), Cavallioti Publisher, ISBN: 978-606-551088-3, 259 pages, 2017.

III.   Other published materials (I, D)

D – Other published works: chapters published in collective volumes, theoretical chapters written, functional laboratory systems etc.

D1. R. Tapu şi T. Zaharia - "*Video Segmentation and Structuring for Indexing Applications*", in Multimedia Data Engineering Applications and Processing, IGI-Global printing House, Hershey, PA, USA, Eds. Shu-Ching Chen and Mei-Ling Shyu, ISBN: 978-1-4666-2940-0, vol. 2, pp. 205-225, 2011. doi: http://dx.doi.org/10.4018/978-1-4666-2940-0.ch011

IV.   Scientific papers published (R, V)

Ris – In recognized specialized journals of international circulation (quoted / indexed by ISI Thomson Reuters, or indexed in other International Databases - BDI specific to the domain, which make a selection process of the magazines based on performance criteria).

Ris1. R. Tapu, B. Mocanu, T. Zaharia:" *DEEP-HEAR: A Multimodal Subtitle Positioning System Dedicated to Deaf and Hearing-Impaired People*," in IEEE Access, vol. 7, pp. 88150-88162, 2019. http://dx.doi.org/10.1109/ACCESS.2019.2925806, **WOS**:000476810500044 (**Q1** - in the year of publication 2019; Domain: Computer science, information systems), **Impact factor 4.098.**

Ris2. R. Tapu, B. Mocanu, T. Zaharia, "*Wearable assistive devices for visually impaired: A state of the art survey*", Pattern Recognition Letters 2018, http://dx.doi.org/10.1016/j.patrec.2018.10.031, (**Q2** – in the year of publication 2018; Domain: Computer Science, Artificial Intelligence), **Impact factor 2.81.**

Ris3. B. Mocanu, **R. Tapu**, T. Zaharia: B. Mocanu, R. Tapu and T. Zaharia, "*DEEP-SEE FACE: A Mobile Face Recognition System Dedicated to Visually Impaired People*," in IEEE Access. **WOS**:000416790500035, DOI: http://dx.doi.org/10.1109/ACCESS.2018.2870334 (**Q1** - in the year of publication 2018; Domain: Computer science, information systems), **Impact factor 4.098.**

Ris4. R. Tapu, B. Mocanu, T. Zaharia: "*DEEP-SEE: Joint Object Detection, Tracking and Recognition with Application to Visually Impaired Navigational Assistance*" Sensors (Basel). 28.10.2017; vol. 17(11), pp. 1-24, DOI: http://dx.doi.org/10.3390/s17112473, WOS:000416790500035, (**Q1** – in the year of publication 2017; Domain: Instruments & Instrumentation), **Impact factor 3.031.**

Ris4. R. Tapu, B. Mocanu, T. Zaharia, "*A computer vision-based perception system for visually impaired*", Multimedia Tools and Applications, pp. 1-37, 2016, doi: http://dx.doi.org/10.1007/s11042-016-3617-6, **WOS**:000400845000037. (**Q2** – in the year of publication 2017; Domain: Computer Science, Software Engineering), **Impact factor 2.101.**

Ris5. B. Mocanu, **R. Tapu**, T. Zaharia, "*When Ultrasonic Sensors and Computer Vision Join Forces for Efficient Obstacle Detection and Recognition*", Sensors, 16(11):1807, pp. 1-23, doi: http://dx.doi.org/10.3390/s16111807; **WOS**:000389641700040, (**Q1** – in the year of publication 2016; Domain: Instruments & Instrumentation), **Impact factor 3.031.**

Ris6. R. Tapu, B. Mocanu, T. Zaharia, "*ALICE: A smartphone assistant used to increase the mobility of visual impaired people*", Journal of Ambient Intelligence and Smart Environments, vol. 7, no. 5, pp. 659-678, 2015, doi: http://dx.doi.org/10.3233/AIS-150336, **WOS**:000361063200006, (**Q2** – in the year of publication 2015; Domain: Computer Science, Information Systems), **Impact factor 1.063.**

Ris7. R. Tapu, B. Mocanu, T. Zaharia, "*Automatic Assistant for Better Mobility and Improved Cognition of Partially Sighted Persons*," Advances in Electrical and Computer Engineering, ISSN: 1582-7445, vol.15, no.3, pp.45-52, 2015, doi: http://dx.doi.org/10.4316/AECE.2015.03006; **WOS**:000360171500006, **Impact factor 0.661.**

Ris8. B. Mocanu, **R. Tapu**, T. Zaharia, "*3D Object Metamorphosis with Pseudo Metameshes*," Advances in Electrical and Computer Engineering, ISSN: 1582-7445, vol.15, no.1, pp.115-122, 2015, doi: http://dx.doi.org/10.4316/AECE.2015.01016; **WOS**:000352158600016, **Impact factor 0.661.**

Ris9. R. Tapu, B. Mocanu, E. Tapu and T. Petrescu, "*Structure from motion using unordered sets of images*", Scientific Bulletin, Series C on Electrical Engineering and Computer Science, University „Politehnica" of Bucharest, ISSN 2286-3540, vol.77(4), pp. 155 – 166, 2015 http://www.scientificbulletin.upb.ro/rev_docs_arhiva/fulld91_154176.pdf **SCOPUS.**

Ris10. R. Tapu, B. Mocanu and T. Petrescu, - "*A Complete Framework For Video Temporal Segmentation*", Scientific Bulletin, Series C on Electrical Engineering and Computer Science, University „Politehnica" of Bucharest, ISSN 1454-234, vol.73(4), pp. 235 – 246, 2011. http://www.scientificbulletin.upb.ro/rev_docs_arhiva/full29698.pdf **SCOPUS.**

Ris11. B. Mocanu, **R. Tapu** and T. Petrescu, - "*Open 3D Mesh Parameterization Based On Edge Ratio Preservation*", Scientific Bulletin, Series C on Electrical Engineering and Computer Science, University „Politehnica" of Bucharest, ISSN 1454-234, vol.73 (4), pp. 169 – 180, 2011; http://www.scientificbulletin.upb.ro/rev_docs_arhiva/full96570.pdf, **SCOPUS**.

Ris12. R. Tapu, E. Tapu, B. Mocanu and E. Dragulanescu, "*A survey of the low-level descriptors used for content based multimedia retrieval*", Metalurgia International ISSN: 1582-2214, vol. 14, pp. 12-15, 2009;**WOS**:000270962400002.

Ris13. B. Mocanu, E. Tapu, **R. Tapu** and E. Dragulanescu, "*A complete survey of the 3D shape methods representation*", Metalurgia International 2009, ISSN: 1582-2214, vol. 14, pp. 16-20, 2009; **WOS**:000270962400003.

Ris14. E. Tapu, **R. Tapu** and I. Simion, "*Simulation techniques of the contact resistance in adhesive conductors*", Metalurgia International 2009, ISSN: 1582-2214, vol. 14(5), pp. 45-51, 2009; **WOS**:000265002400008.

Ris15. E. Tapu, **R. Tapu**, B. Mocanu and E. Dragulanescu, "*Researches on maximizing the generated power of a nanosatellite solar panels*", Metalurgia International 2009, ISSN: 1582 2214, vol. 14(6), pp. 57-62, 2009; **WOS**:000265002600011.

Vis – In the volumes of internationally recognized scientific events, organized in the country and abroad, indexed by ISI Thomson Reuters or indexed in other BDI International Databases, which make a selection process of publications based on performance criteria.

Vis1. B. Mocanu, **R. Tapu**, T. Zaharia: „Design of a CNN Face Recognition System Dedicated to Blinds", 2019 IEEE International Conference on Consumer Electronics (ICCE), Las Vegas, NV, USA, 2019, pp. 1-2, http://dx.doi.org/10.1109/ICCE.2019.8661933, **WOS**: 000462912600043.

Vis2. R. Tapu, B. Mocanu, T. Zaharia: „Face Recognition in Video Streams for Mobile Assistive Devices Dedicated to Visually Impaired", 2018 14th International Conference on Signal-Image Technology & Internet-Based Systems (SITIS), Las Palmas de Gran Canaria, Spain, 2018, pp. 137-142, **WOS**: 000469258400019. http://dx.doi.org/10.1109/SITIS.2018.00030, **WOS**: 000469258400019.

Vis3. B. Mocanu, **R. Tapu** and T. Zaharia, "*Single object tracking using offline trained deep regression networks*," 2017 Seventh International Conference on Image Processing Theory, Tools and Applications (IPTA), Montreal, QC, 2017, pp. 1-6. DOI: http://dx.doi.org/10.1109/IPTA.2017.8310091, **WOS**:000428743900015.

Vis4. B. Mocanu, **R. Tapu**, T. Zaharia, "*Automatic Extraction of Story Units from TV News*", 35th edition of the IEEE International Conference on Consumer Electronics (ICCE 2017), pp. 414-415, 8-11 Ianuarie 2017, Las Vegas, SUA. DOI: http://dx.doi.org/10.1109/ICCE.2017.7889377; **WOS**:000403392300172

Vis5. B. Mocanu, **R. Tapu**, T. Zaharia, "*Seeing without sight – An automatic cognition system dedicated to blind and visually impaired people*", International Conference on Computer Vision (ICCV 2017) Workshops, pp. 1452-1459, 22-29 Octombrie 2017, Venetia, Italia. DOI: http://dx.doi.org/10.1109/ICCVW.2017.172; **WOS**:000425239601056

Vis6. D. Taralunga, B. Mocanu, **R. Tapu**, "*Automatic real time derivation of breathing rate from thermal video sequences*", European Medical and Biological Engineering Conference - Nordic-Baltic Conference on Biomedical Engineering and Medical Physics (EMBEC 2017), pp. 81-84, 11-15 Iunie 2017, Tampere, Finlanda. DOI: https://doi.org/10.1007/978-981-10-5122-7_21. **WOS**: 000449778900021.

Vis7. B. Mocanu, **R. Tapu**, T. Zaharia, "*Object tracking using deep convolutional neural networks and visual appearance models*", in Advanced Concepts for Intelligent Vision Systems (ACIVS 2017), Editors: J. Blanc-Talon, D. Popescu, W. Philips and P. Scheunders, pp. 439-450, 2017, DOI: https://doi.org/10.1007/978-3-319-70353-4_10. (**BDI**: Springerlink) **WOS**: 000463335100010.

Vis8. B. Mocanu, D. Taralunga, **R. Tapu**, E. Tapu, "*Respiratory rate estimation using nostril detection in thermal video streams*", E-Health and Bioengineering Conference (EHB 2017), pp. 201-204, 22-24 Iunie 2017, Sinaia, Romania. DOI: https://doi.org/10.1109/EHB.2017.7995396 **WOS**: 000445457500051

Vis9. B. Mocanu, **R. Tapu**, T. Zaharia, "*Using computer vision to see*", European Conference on Computer Vision (ECCV), in Springer International Publishing Switzerland 2016, G. Hua and H. Jegou (Eds.): Part II, LNCS 9914, pp. 375-390, ISBN: 978-3-319-48880-6; DOI: http://dx.doi.org/10.1007/978-3-319-48881-3_26, 2016; **WOS**:000389501700026.

Vis10. B. Mocanu, **R. Tapu** and T. Zaharia, "*Automatic segmentation of TV News into stories using visual and temporal information*", in Springer Berlin Heidelberg, Advances in Visual Computing, LNCS – Lecture Notes in Computer Science, Editors: Blanc-Talon, J., Distante, C., Philips, W., Popescu, D., Scheunders, P., vol. I, pp. 648-660, ISBN 978-3-319-48680-2, 2016; DOI: http://dx.doi.org/10.1007/978-3-319-48680-2_57. **WOS**: 000390177400057

Vis11. B. Mocanu, **R. Tapu**, T. Zaharia, "*Image re-ranking using graph based spanning structures and reciprocal nearest neighbors*", 34th edition of the International Conference on Consumer Electronics(ICCE 2016), pp. 437-438, ISSN: 2158-4001, DOI: http://dx.doi.org/10.1109/ICCE.2016.7430681, 7-11 Ianuarie 2016, Las Vegas, SUA. **WOS**:000386327000183.

Vis12. B. Mocanu, **R. Tapu** and E. Tapu, "*Video retrieval using relevant topics extraction from movie subtitles*," 2016 12th IEEE International Symposium on Electronics and Telecommunications (ISETC), Timisoara, 2016, pp. 327-330; IEEE Xplore, ISBN: 978-1-5090-3748-3, DOI: http://dx.doi.org/10.1109/ISETC.2016.7781123, **WOS**:000390717800073

Vis13. R. Tapu, B. Mocanu, T. Zaharia, "*TV News Retrieval based on Story Segmentation and Concept Association*", The 12th International Conference on Signal Image Technology and Internet based Systems (SITIS 2016), 28 Noiembrie - 1 Decembrie 2016, Naples, Italy, pp. 327-334, ISBN: 978-1-5090-5698-9, DOI: http://dx.doi.org/10.1109/SITIS.2016.60, **WOS**:000406473000051

Vis14. B. Mocanu, **R. Tapu** and T. Zaharia, "*An Obstacle Categorization System for Visually Impaired People*", 11th International Conference on Signal-Image Technology & Internet-Based Systems (SITIS), Thailand, Bangkok, pp. 147-154, 2015. doi: http://dx.doi.org/10.1109/SITIS.2015.58; **ISI WOS**:000380406500023.

Vis15. B. Mocanu, **R. Tapu** and T. Zaharia, "*Efficient graph spanning structures for large database image retrieval*," 2015 3rd IAPR Asian Conference on Pattern Recognition (ACPR), Kuala Lumpur, 2015, pp. 594-598. http://dx.doi.org/10.1109/ACPR.2015.7486572; **ISI, WOS**:000389269300119.

Vis16. B. Mocanu, **R. Tapu** and T. Zaharia, "*An outdoor cognition system integrated on a regular smartphone device*", E-Health and Bioengineering Conference (EHB), Iasi, Romania, pp. 1-4, 2015. doi: http://dx.doi.org/10.1109/EHB.2015.7391375; **ISI, WOS**:000380397900028.

Vis17. R. Tapu, B. Mocanu, T. Zaharia - "*Real time static/dynamic obstacle detection for visually impaired persons*", IEEE International Conference on Consumer Electronics (ICCE), pp. 394 - 395, 10-13 Jan. 2014, doi: http://dx.doi.org/10.1109/ICCE.2014.6776055, **ISI, WOS**:000352510400174.

Vis18. R. Tapu, B. Mocanu, E. Tapu – "*Automatic extraction of salient objects in 3D stereoscopic videos*", 11th International Symposium on Electronics and Telecommunications (ISETC), ISBN: 978-1-4799-7265-4/14, pp. 249-252, Timişoara, Romania, Noiembrie 2014; http://dx.doi.org/10.1109/ISETC.2014.7010794; **ISI**, **WOS**:000366633300058.

Vis19. R. Tapu, B. Mocanu, E. Tapu – "*A survey on wearable devices used to assist the visual impaired user navigation in outdoor environments*", 11th International Symposium on Electronics and Telecommunications (ISETC), ISBN: 978-1-4799-7265-4/14, pp. 245-248, Timişoara, Romania, Noiembrie 2014; http://dx.doi.org/10.1109/ISETC.2014.7010793; **ISI**, **WOS**:000366633300057.

Vis20. B. Mocanu, **R. Tapu**, E. Tapu – "*Mesh deformation with hard constraints*", International Symposium on Signals, Circuits and Systems (ISSCS), pp. 1-4, Iasi, 11-12 July 2013; http://dx.doi.org/10.1109/ISSCS.2013.6651208; **ISI**, **WOS**:000337926700041.

Vis21. R. Tapu, B. Mocanu, E. Tapu – "*Automatic scene/DVD chapter extraction in Hollywoodian movies*", International Symposium on Signals, Circuits and Systems (ISSCS), pp. 1-4, Iasi, 11-12 July 2013; http://dx.doi.org/10.1109/ISSCS.2013.6651209; **ISI, WOS**:000337926700042.

Vis22. R. Tapu, T. Zaharia - "*Salient object detection based on spatiotemporal attention models*", IEEE International Conference on Consumer Electronics (ICCE), ISBN: 978-1-4673-1363-6, pp. 41-44, Las Vegas, Nevada, Ianuarie 2013, http://dx.doi.org/10.1109/ICCE.2013.6486786, **ISI**, **WOS**:000318797800018.

Vis23. R. Tapu, B. Mocanu, T. Zaharia - "*A computer vision system that ensure the autonomous navigation of blind people*", E-Health and Bioengineering Conference (EHB), pp.1- 4, 21-23 Nov. 2013; http://dx.doi.org/10.1109/EHB.2013.6707267; **ISI**, **WOS**:000346672900035.

Vis24. R. Tapu, B. Mocanu, A. Bursuc, T. Zaharia - "*A Smartphone-Based Obstacle Detection and Classification System for Assisting Visually Impaired People*", ICCV Workshop on Wearable Computer Vision Systems (WCVS), pp.444 - 451, 1-8 Dec. 2013; http://dx.doi.org/10.1109/ICCVW.2013.65, **ISI**, **WOS**:000349847200061.

Vis25. R. Tapu, B. Mocanu, E. Tapu – "*Salient Object Detection in Video Streams*", 10th International Symposium on Electronics and Telecommunications (ISETC 2012), ISBN: 978-1-4673-1176-2, pp. 275-278, Timişoara, Romania, Noiembrie 2012; http://dx.doi.org/10.1109/ISETC.2012.6408089; **ISI, WOS**:000318702700064.

Vis26. R. Tapu, T. Zaharia - "*Video Structuring: From Pixels to Visual Entities*", 20th European Signal Processing Conference (EUSIPCO-2012), pp. 1583-1587, Bucharest, 27-31 August 2012; **ISI**, **WOS**:000310623800318.

Vis27. B. Mocanu, **R. Tapu**, T. Petrescu and E. Tapu, "*An experimental evaluation of 3D mesh decimation techniques*", 10-th International Symposium on Signals, Circuits and Systems, ISSCS 2011, ISBN: 978-1-4577-0201-3, pp. 35-38, Iaşi, Romania, 2011; http://dx.doi.org/10.1109/ISSCS.2011.5978647; **ISI**, **WOS**:000337925400009.

Vis28. R. Tapu, B. Mocanu, M. Raducanu and T. Petrescu, "*Multiresolution median filtering based video temporal segmentation*", 10-th International Symposium on Signals, Circuits and Systems, ISSCS 2011, ISBN: 978-1-4577-0201-3, pp. 47-50, Iasi, Romania, 2011; http://dx.doi.org/10.1109/ISSCS.2011.5978651; ISI, **WOS**:000337925400012.

Vis29. R. Tapu and T. Zaharia – „*Scene change detection with temporally constrained clustering*", 3rd International Conference on Future Computer and Communications – ICFCC, ISBN: 978-0-7918-5971-1, pp. 71-76, Iasi, Romania, 3-5 June 2011; **ISI WOS**:000320410200011.

Vis30. B. Mocanu, M. Burlacu, J. Kohlenberg, M. Prathaban, P. Lorenz and **R. Tapu**, "*Determining optimal orbital path of a nanosatellite for efficient exploitation of the solar energy captured*", First International Conference on Advances in Satellite and Space Communications, ISBN: 978-0-7695-3694-1, pp. 128 133, Colmar, France, 2009; http://dx.doi.org/10.1109/SPACOMM.2009.23; **ISI**, **WOS**:000278100200024.

Vis31. R. Tapu, T. Zaharia - "*A complete framework for temporal video segmentation*", The 1st International Conference on Consumers Electronics, ICCE-2011, ISBN: 978-1-4577-0234-1, pp. 156-160, Berlin, Germany, 2011; doi: http://dx.doi.org/10.1109/ICCE-Berlin.2011.6031875 **- IEEE Xplore**

Vis32. R. Tapu, T. Zaharia and F. Preteux, - "*A scale-space filtering-based shot detection algorithm*", IEEE 26th Convention of Electrical and Electronics Engineers in Israel, ISBN: 978-1-4244-8682-3, pp.919-923, Eilat, Israel, 2010; http://dx.doi.org/10.1109/EEEI.2010.5661943 **- IEEE Xplore**

Vis33. B. Mocanu, **R. Tapu** and E. Tapu, "*Video retrieval using relevant topics extraction from movie subtitles*," 2016 12th IEEE International Symposium on Electronics and Telecommunications (ISETC), Timisoara, 2016, pp. 327-330; http://dx.doi.org/10.1109/ISETC.2016.7781123 **- IEEE Xplore**

Vis34. R. Tapu and T. Zaharia, "*Automatic Multilevel Temporal Video Structuring*," 2011 IEEE Fifth International Conference on Semantic Computing, Palo Alto, CA, 2011, pp. 387-394. http://dx.doi.org/10.1109/ICSC.2011.39 **- IEEE Xplore**

Vi – In the volumes of internationally recognized scientific events, organized in the country and abroad.

Vi1. B. Mocanu, E. Tapu, **R. Ţapu** - "*3D mesh metamorphosis*", 4th International Conference on Engineering Graphics and Design – ICEGD 2011, ISSN: 1011-2855, pp. 99-106, Iasi, Romania, 2-4 June 2011.

Vi2. E. Tapu, **R. Ţapu**, B. Mocanu, E. Drăgulănescu - „*Modeling algorithm of the auditory receptor*", The 3rd International Conference on Engineering Graphics and Design, ICEGD 2009, in Acta Technica Napocensis, ISSN: 1221-5872, vol. 1a, pp. 379 - 384, Cluj-Napoca, Romania, June 2009.

Vi3. E. Tapu, **R. Ţapu**, B. Mocanu - „*Research regarding the influence of graphical processing over the quality of images*", The 3rd International Conference on Engineering Graphics and Design, ICEGD 2009, in Acta Technica Napocensis, ISSN: 1221-5872, vol. 1a, pp. 373 - 378, Cluj-Napoca, Romania, June 2009.

Vi4. E. Tapu, **R. Tapu**, B. Mocanu - "*Projecting the shape using the genetic algorithms*", 2nd International Conference on Engineering Graphics and Design, pp. 209 – 212, Galati, Romania, June 7-10, 2007.

V. Patents / innovations

P1. R. Tapu, B. Mocanu, T. Zaharia, M. Parmentier, "*Automatic caption synchronization and positioning*", European patent of invention in joint collaboration with France Television – pending final approval.

VI. Research contracts and scientific reports (P,F)

P – Research projects obtained through competition, based on contract/grant, in the country/abroad (**Pn** – national, **Pi** - international).

Pn1. **Project coordinator**: UEFISCDI Youth Team (TE) Project - "*Intelligent outdoor navigation system dedicated to visually impaired people - SEE*", PN-II-RU-TE-2014-4-0202, Coordinator: University "Politehnica" of Bucharest, Romania, 2015 – 2017.

Pn2. **Project coordinator**: Excellence Research Grants Program, UPB – GEX. Identifier: UPB–EXCELENȚĂ–2017 Research project: „*Autonomous obstacle detection and recognitions system based on deep convolutional neural networks dedicated to visually impaired people*", Nr. 40/25.09.2017

Pi3. Reseach responsible for partner (Telecom SudParis): "*Subtil - Amélioration automatisée des services d'accessibilité en multimédia*" - collaborative research project supported by the French research program, Fonds National pour la société Numérique - Programme d'Investissement d'Avenir, Coordinated by France National Television, 2017 -2019.

Pi4. Reseach responsible for partner (Telecom SudParis): "*ALICE (Assistance for Better Mobility and Improved Cognition of Elderly Blind and Visually Impaired)*" - collaborative research project supported by the European AAL (Ambient Assisted Living) program AAL-2011-4-099, Coordinator: Comland d.o.o. IT Solutions Development, 2012 - 2015.

Pi5. Researcher: International research contract funded by ESA - "*GaVPro Developing a Galileo Vector Processing Receiver for Difficult Signal Conditions*", Nr: 4000114741/15/NL/ MM_EGEP ID 89.29, 2015 - 2016.

Pi6. Researcher: Research project supported by the European Union through the Competitiveness and Innovation program: "*Smart City + - Plateforme numérique de services d'hyperproximité*", 2013 - 2014.

Pi7. Researcher: Collaborative research project supported by the French research program FUI7 (Fonds Unique Interministériel), *3D-LIVE*, 2009-2012.

Pn8. Researcher: Excellence Research Grants Program, UPB – GEX. Identifier: UPB–EXCELENŢĂ–2016 Research project „*Sistem autonom cu abilităţi cognitive de asistare a deplasării autovehiculelor inteligente*" ("*Autonomous system with cognitive abilities designed to assist the autonomous displacement of intelligent vehicles*"), Nr. 97/26.09.2016, 2016 – 2017.

Pi9. Researcher: Collaborative research project supported by the French research program FUI7 (Fonds Unique Interministériel), "*Media4DPlayer - Accessible Media Player for All*", 2014 – 2016.

Pi10. Researcher: within the UBIMEDIA joint laboratory established between Institut Mines-Télécom France and Alcatel Lucent Bell Labs France, within the project „MultiXE/MNEMOS - *Multimédia numérique enrichi multi-modal optimisé et sémantique*", 2009-2011.

Pn11. Postdoctoral researcher: Research project „*InnoRESEARCH - Burse doctorale si postdoctorale in sprijinul inovării si competitivităţii in cercetare*" – as a postdoctoral researcher, POSDRU/159/1.5/S/132395, 2014-2015.

Pn12. Class A POSDRU expert: Research project PROMISE „*Sistem integrat de programe de masterat în domeniul ingineriei de sunet, imagine şi al aplicaţiilor multimedia*" ("*Integrated system of masters programs in the field of sound, image and multimedia applications*") FSE - European Structural, Coordinator: University "Politehnica" of Bucharest, Romania, 2012 – 2013., ID61178.

Pi13. Researcher: Research project „*AlgoFab - Ecosystème de Services pour la Valorisation d'Algorithmes de Traitement de Contenus Multimédia*", research project supported by the French program Investissements d'Avenir, Développement de l'Economie Numérique, Informatique en nuage, 2016-2017.

Pn14. Researcher: PNCD II National Research Contract – "*Expertiza store tehnico (stare metal) a recipientelor scadente ISCIR din cadrul CET Bucuresti Vest in vederea autorizarii functionarii de către ISCIR*", Contract number PNCD II - l2/08.ll.20l1, 2011-2013.

08.10.2019

Assoc. Prof. PhD. Eng. Ruxandra-Georgiana ŢAPU