

Publikationen

In dem Zeitraum von 2001 bis Dezember 2019 sind von NIT Gruppe zahlreiche Publikationen veröffentlicht. Dabei handelt es sich um 15 Buchbeiträge, über 75 Journalen, über 250 Konferenzbeiträge.

Bibliographische Metriken (h-Index): 28 in Google Scholar (2020)

Zehn wichtigste Publikationen in den letzten 5 Jahre (mit wissenschaftlichen Qualitätssicherung) *

Arbeiten, die in Publikationsorganen mit einer wissenschaftlichen Qualitätssicherung zum Zeitpunkt der Antragstellung erschienen oder endgültig angenommen sind, in fachüblicher Gliederung; Buchveröffentlichungen.

1. Sebastian Handrich, Laslo Dinges, Ayoub Al-Hamadi, Philipp Werner, Frerk Saxen, Zaher Al Aghbari: "Simultaneous Prediction of Valence / Arousal and Emotion Categories and its Application in an HRC Scenario" in Journal of Ambient Intelligence and Humanized Computing (JAIHC), 2020.
2. Philipp Werner, Daniel Lopez-Martinez, Steffen Walter, Ayoub Al-Hamadi, Sascha Gruss, Rosalid Picard : Automatic Recognition Methods Supporting Pain Assessment: A Survey . **IEEE Transactions on Affective Computing**, 2019, DOI: 10.1109/TAFFC.2019.2946774.
3. Michal Rapczynski, Philipp Werner, Ayoub Al-Hamadi: Effects of Video Encoding on Camera Based Heart Rate Estimation: **IEEE Transactions on Bio-medical Engineering**, 2019 March 13. PP(99):1-1 DOI: 10.1109/TBME.2019.2904326.
4. Werner, Philipp; Al-Hamadi, Ayoub; Limbrecht-Ecklundt, Kerstin; Walter, Steffen; Gruss, Sascha; Traue, Harald : Automatic pain assessment with facial activity descriptors In: **IEEE transactions on affective computing**. - New York, NY : IEEE, insges. 14 S., 2016.
5. Gruss, S., Geiger, M., Werner, P., Wilhelm, O., Traue, H. C., Al-Hamadi, A., Walter, S.: Multi-Modal Signals For Analyzing Pain Responses To Thermal And Electrical Stimuli. **Journal Vis. Exp.** (Pending Publication), e59057, 2019.
6. Enzberg, Sebastian; Al-Hamadi, Ayoub: A multiresolution approach to model-based 3-D surface quality inspection; In: **IEEE transactions on industrial informatics**. NY : IEEE, Bd. 12.2016, 4, S. 1498-1507
7. *Marc-André Fiedler, Michal Rapczynski, Ayoub Al-Hamadi: Fusion-Based Approach for Respiratory Rate Recognition From Facial Video Images. IEEE Access 8: 130036-130047 (2020)*
8. Werner, Philipp; Al-Hamadi, Ayoub; Limbrecht-Ecklundt, Kerstin; Walter, Steffen; Traue, Harald : Head movements and postures as pain behavior ; **PLOS ONE** - San Francisco, California, US: PLOS, Vol. 13.2018, 2, Art. e0192767, insgesamt 17 S.;
9. Mofteh Elzobi, Ayoub Al-Hamadi: Generative vs. Discriminative Recognition Models for Off-Line Arabic Handwriting, **Journal Sensors** 18 (9): 2786, 2018.
10. Saeed, A. Al-Hamadi, and H. Neumann: Facial point localization via neural networks in a cascade regression framework, **Journal Multimedia Tools and Applications**, pp. 1–23, 2017.

I) Patents

- Erik Lilienblum und Ayoub Al-Hamadi: Vorrichtung und Verfahren zur optischen Vermessung von 3D-Oberflächen (Patents Nr. 10 2016 119 819)
- Michal Rapczynsik und Ayoub Al-Hamadi: Dreidimensionale Messung orts aufgelöster Farbänderungen in Echtzeit (Patent ist angemeldet)

II) Buchbeiträge

- [1]. Samy Bakheet, Ayoub Al-Hamadi, Video-Based Recognition and Representation of Human Actions, Book, 236 pages, LAP LAMBERT Academic Publishing 2018
- [2]. Sebastian Handrich, Omer Rashid, and Ayoub Al-Hamadi: Non-intrusive Gesture Recognition in Real *Companion* Environments.; Chapter 16, Companion Technology A Paradigm Shift in Human-Technology Interaction, Springer international Publishing AG 2017, pp. 321-345.
- [3]. Robert Niese, Ayoub Al-Hamadi, and Heiko Neumann: Automated Analysis of Head Pose, Facial Expression and Affect; Chapter 18, Companion Technology A Paradigm Shift in Human-Technology Interaction, Springer international Publishing AG 2017, pp. 365-387.
- [4]. Frerk Saxen, Anne Köpsel, Simon Adler, Rüdiger Mecke, Ayoub Al-Hamadi, Johannes Tümler, and Anke Huckauf: Investigation of an Augmented Reality-Based Machine Operator Assistance-System. Chapter 23, Companion Technology A Paradigm Shift in Human-Technology Interaction, Springer international Publishing AG 2017, pp. 471-485.
- [5]. Ingo Siegert, Felix Schüssel, Miriam Schmidt, Stephan Reuter, Sascha Meudt, Georg Layher, Gerald Krell , Thilo Hörnle, Sebastian Handrich, Ayoub Al-Hamadi, Klaus Dietmayer, Heiko Neumann, Günther Palm, Friedhelm Schwenker, and Andreas Wendemuth: Multi-modal Information Processing in *Companion*-Systems: A Ticket Purchase System. Chapter 25, Companion Technology A Paradigm Shift in Human-Technology Interaction, Springer international Publishing AG 2017, pp. 493-500.
- [6]. Mahmoud Elmezain, Ayoub Al-Hamadi, Human-Computer Interaction: Gesture Spotting and Recognition, Book, 168 pages, LAP LAMBERT Academic Publishing (26. März 2014)
- [7]. Tarik Ljouad, Aoutif Amine, Ayoub Al-Hamadi, and Mohamed Rziza: Towards a Novel Reidentification Method Using Metaheuristics, Chapter 25, Recent Developments in Metaheuristics, Springer international Publishing AG 2018, pp. 626- 445, 201
- [8]. Tornow, M. Grasshoff, N. Nguyen, A. Al-Hamadi and B. Michaelis (2012). *Fast Computation of Dense and Reliable Depth Maps from Stereo Images*, Machine Vision - Applications and Systems, ISBN: 978-953-51-0373-8, InTech, pp. 47-72.
- [9]. Al-Hamadi A.: *Fortschritte bei der Analyse von bewegten Farbbildern unter dem Einfluss von nicht-kooperativen Messsituationen*; Habilitationsschrift; 277 Seiten, Universität Magdeburg; Verteidigung 06. Mai 2010.
- [10]. Fahad A. Al-Zahrani, Hassan. M. Mustafa, Ayoub Al-Hamadi, U. A. Khashaba: *Modelling of Computer-Assisted Learning Using Artificial Neuronal Networks*, Series: Mathematics Research Developments Engineering Tools, Techniques and Tables, ISBN: 978-1-61761-553-5, Pub. Date: 2011 1st quarter, Nova Science Publishers, Status: PP
- [11]. M. Elmezain, A. Al-Hamadi, O. Rashid, B. Michaelis: *Posture and Gesture Recognition for Human-Computer-Interaction*, In-tech, Advanced Technologies", ISBN: 978-953-7619-X-X, October 2009, Book Chapter, pp.414-440.
- [12]. Al-Hamadi A.: *Verbesserte Störsicherheit bei der Bewegungsanalyse in monokularen Farbbildsequenzen durch adaptive Farbraumtransformation*, Dissertation; 166 Seiten, Universität Magdeburg; September 2001.
- [13]. Al-Hamadi, A.; Niese, R.; Michaelis, B: *A Fast and Robust Approach for the Segmentation of Moving Objects*; Computational Imaging and Vision; Book of Computer Vision and Graphics, Springer Verlag, pp. 13-20, 2006, [ISBN 10-1-4020-4179 (e-book)].
- [14]. Al-Hamadi, A.; Niese R.; Michaelis, B: *Feature-based Correspondence Analysis in Color Image Sequences*; Computational Imaging and Vision; Book of Computer Vision and Graphics, Springer Verlag, pp. 179-187, 2006, [ISBN 10-1-4020-4179 (e-book)].
- [15]. Al-Hamadi Ayoub, Roman Calow, Bernd Michaelis: *3D-Bewegungsanalyse in der "Neuro-Medizintechnik" (Produktlinie 2)*: Schlussbericht zum Projekt, published 2004, 124 Seite.

II) Journalbeiträge

- [16]. D. Strazdas, J. Hintz, A. -M. Felßberg and A. Al-Hamadi: "Robots and Wizards: An Investigation Into Natural Human–Robot Interaction," in IEEE Access, vol. 8, pp. 207635-207642, 2020, doi: 10.1109/ACCESS.2020.3037724.
- [17]. Sebastian Handrich, Laslo Dinges, Ayoub Al-Hamadi, Philipp Werner, Frerk Saxen, Zaher Al Aghbari: "Simultaneous Prediction of Valence / Arousal and Emotion Categories and its Application in an HRC Scenario" in Journal of Ambient Intelligence and Humanized Computing (JAIHC), 2020.
- [18]. Bakheet, S.; Al-Hamadi, A. A Framework for Instantaneous Driver Drowsiness Detection Based on Improved HOG Features and Naïve Bayesian Classification. *Journal Brain Sci.* 2021, 11, 240. <https://doi.org/10.3390/brainsci11020240>.
- [19]. Bakheet, S.; Al-Hamadi, A. Computer-Aided Diagnosis of Malignant Melanoma Using Gabor-Based Entropic Features and Multilevel Neural Networks. *Diagnostics* 2020, 10, 822. <https://doi.org/10.3390/diagnostics10100822>
- [20]. Marc-André Fiedler, Michal Rapczynski, Ayoub Al-Hamadi: *Fusion-Based Approach for Respiratory Rate Recognition From Facial Video Images. IEEE Access 8: 130036-130047 (2020)*
- [21]. Thorsten Hempel, Ayoub Al-Hamadi: *Pixel-Wise Motion Segmentation for SLAM in Dynamic Environments. IEEE Access 8: 164521-164528 (2020)*
- [22]. Bakheet, S., Al-Hamadi, A. Chord-Length Shape Features for License Plate Character Recognition. *J Russ Laser Res* 41, 156–170 (2020). <https://doi.org/10.1007/s10946-020-09861-1>.
- [23]. Walter, S., Al-Hamadi, A., Gruss, S. *et al.* Multimodale Erkennung von Schmerzintensität und -modalität mit maschinellen Lernverfahren. *Schmerz* 34, 400–409 (2020). <https://doi.org/10.1007/s00482-020-00468-8>
- [24]. Frisch, S., Werner, P., Al-Hamadi, A. *et al.* : Von der Fremdbeurteilung des Schmerzes zur automatisierten multimodalen Messung der Schmerzintensität. *Journal Schmerz* (2020). Springer, <https://doi.org/10.1007/s00482-020-00473-x>, impact factor 1,26.
- [25]. Philipp Werner, Daniel Lopez-Martinez, Steffen Walter, Ayoub Al-Hamadi, Sascha Gruss, Rosalid Picard : Automatic Recognition Methods Supporting Pain Assessment: A Survey . *IEEE Transactions on Affective Computing*, 2019, DOI: 10.1109/TAFFC.2019.2946774.
- [26]. Gruss, S., Geiger, M., Werner, P., Wilhelm, O., Traue, H. C., Al-Hamadi, A., Walter, S.: Multi-Modal Signals For Analyzing Pain Responses To Thermal And Electrical Stimuli. *Journal Vis. Exp.* (Pending Publication), e59057, 2019.
- [27]. Michal Rapczynski, Philipp Werner, Ayoub Al-Hamadi: Effects of Video Encoding on Camera Based Heart Rate Estimation: IEEE Transactions on Bio-medical Engineering, 2019 March 13. PP(99):1-1 DOI: 10.1109/TBME.2019.2904326
- [28]. Ehsan Othman, Frerk Saxen, Dmitri Bershadskyy, Philipp Werner, Ayoub Al-Hamadi, Joachim Weimann: Predicting Group Contribution Behaviour in a Public Goods Game from Face-to-Face Communication. *Journal Sensors* 19(12): 2786 (2019)
- [29]. Mahmoud Elmezain, Ayoub Al-Hamadi: Vision-based human activity recognition. *International Arab Journal of Information Technology* , Volume 15 (3): 389-395 (2018)
- [30]. Moftah Elzobi, Ayoub Al-Hamadi: Generative vs. Discriminative Recognition Models for Off-Line Arabic Handwriting, *Journal Sensors* 18 (9): 2786, 2018
- [31]. Philipp Werner, A. Al-Hamadi, K. Limbrecht-Ecklundt, S. Walter, H. C. Traue: Head movements and postures as pain behavior, *Journal PLOS ONE* 13(2), 2018.
- [32]. Krell, Gerald; Nezhad, Nazila Saeid; Walke, Mathias; Hamadi, Ayoub; Gademann, Günther: Assessment of iterative closest point registration accuracy for different phantom surfaces captured by an optical 3-D sensor in radiotherapy *In: Computational and mathematical methods in medicine: an interdisciplinary journal of mathematical, theoretical and clinical aspects of medicine - New York, NY [u.a.]: Hindawi, 2017, Art. 2938504, insgesamt 13 S.;*

- [33]. Bakheet, Samy; Al-Hamadi, Ayoub, M. A. Mofaddel: Recognition of Human Actions Based on Temporal Motion Templates *In: British Journal of Applied Science and Technology: Sciencedomain International*, Bd. 20(5).May 2017, insges. 11 S.
- [34]. Bakheet, Samy; Al-Hamadi, Ayoub: Hand Gesture Recognition Using Optimized Local Gabor Features *In: Journal of Computational and Theoretical Nanoscience*, Vol. 14, 1-10, 2017, ASP American Scientific Publishers.
- [35]. A. Saeed, A. Al-Hamadi, and H. Neumann: Facial point localization via neural networks in a cascade regression framework, *Journal Multimedia Tools and Applications*, pp. 1–23, 2017.
- [36]. A. Al-Hamadi, A. Saeed, R. Niese, S. Handrich, and H. Neumann: Emotional Trace: Mapping of Facial Expression to Valence-arousal Space,” *British Journal of Applied Science and Technology*, vol. 16, no. 6, pp. 114, 2016.
- [37]. Bakheet, Samy; Al-Hamadi, Ayoub : A discriminative framework for action recognition using f-HOL features *In: Journal Information*. - Basel : MDPI Publ, Bd. 7.2016, 4, S. 68
- [38]. Bakheet, Samy; Al-Hamadi, Ayoub : A hybrid cascade approach for human skin segmentation *In: British Journal of Mathematics & Computer Science*. - London [u.a.] : Sciencedomain International, Bd. 17.2016, 6, insges. 14 S.
- [39]. Enzberg, Sebastian von; Al-Hamadi, Ayoub: A multiresolution approach to model-based 3-D surface quality inspection; *In: IEEE transactions on industrial informatics*. - New York, NY : IEEE, Bd. 12.2016, 4, S. 1498-1507
- [40]. Limbrecht-Ecklundt, K.; Werner, Philipp; Traue, H. C.; Al-Hamadi, Ayoub; Walter, S.: Mimische Aktivität differenzierter Schmerzintensitäten - Korrelation der Merkmale von Facial Action Coding System und Elektromyographie *In: Der Schmerz : Organ der Deutschen Gesellschaft zum Studium des Schmerzes, der Österreichischen Schmerzgesellschaft und der Deutschen Interdisziplinären Vereinigung für Schmerztherapie*. - Berlin : Springer, Bd. 30.2016, 3, S. 248-256
- [41]. Werner, Philipp; Al-Hamadi, Ayoub; Limbrecht-Ecklundt, Kerstin; Walter, Steffen; Gruss, Sascha; Traue, Harald : Automatic pain assessment with facial activity descriptors *In: IEEE transactions on affective computing*. - New York, NY : IEEE, insges. 14 S., 2016
- [42]. E. Lilienblum and A. Al-Hamadi, A structured light approach for 3-D surface reconstruction with a stereo line-scan system *In: IEEE transactions on instrumentation and measurement : IM ; a publication of the Instrumentation and Measurement Society*. - New York, NY : IEEE, Bd. 64.2015, 5, S. 1266 - 1274
- [43]. Samy Sadek, Ayoub Al-Hamadi: Entropic Image Segmentation: A Fuzzy Approach Based on Tsallis Entropy; *International Journal of Computer Vision & Signal Processing*, Vol. 5, Issue 1, 1-7 (2015).
- [44]. Laslo Dinges, Ayoub Al-Hamadi, Moftah Elzobi, Sherif El-etriby, and Ahmed Ghoneim,: ASM Based Synthesis of Handwritten Arabic Text Pages, *The Scientific World Journal*, vol. 2015, Article ID 323575, 18 pages, 2015. doi:10.1155/2015/323575
- [45]. Saeed, A.; Al-Hamadi, A.; Ghoneim, A.: Head Pose Estimation on Top of Haar-Like Face Detection: A Study Using the Kinect Sensor. *Journal Sensors* 2015, 15, 20945-20966.
- [46]. S. Walter, S. Gruss, K. Limbrecht-Ecklundt, H.C. Traue, P. Werner, A. Al-Hamadi, N. Diniz, G. M. da Silva, und A.O. Andrade: Automatic pain quantification using autonomic parameters, in *Journal of Neuroscience & Psychology*, 2014Vol. 7 (3), 2014, 363-380.
- [47]. Saira S. Pathan, Ayoub Al-Hamadi, Bernd Michaelis: Crowd behaviour analysis and anomaly detection by statistical modelling of flow patterns, *International Journal of Data Mining, Modling and Management , IJDMMM* 6(2): 168-186, 2014.
- [48]. P. Werner, A. Al-Hamadi, und R. Niese: Comparative Learning Applied to Intensity Rating of Facial Expressions of Pain, *International Journal of Pattern Recognition and Artificial Intelligence*, Vol. 28, No. 5, 2014, S. 1451008-1 – 1451008-26.
- [49]. A. Saeed, A. Al-Hamadi, R. Niese, and M. Elzobi: Frame-Based Facial Expression Recognition Using Geometrical Features. *Advances in Human-Computer Interaction (Publisher Hindawi)*, vol. 2014, no. 1, pp. 1–13, 2014.

- [50]. Frerk Saxen, Omer Rashid, Ayoub Al-Hamadi, Simon Adler, Alexa Kernchen, Rüdiger Mecke: Image-based Methods for Interaction with Head-Worn Worker-Assistance Systems. *Journal of Intelligent Learning Systems and Applications*, Aug. 2014, vol. 6, 141-152. doi: 10.4236/jilsa.2014.63011.
- [51]. Al-Ghamdi, Saeed A.; Mustafa, Hassan M. H.; Al-Bassiouni, Abdel Aziz M.; Al-Hamadi, Ayoub: *Simulation of improved academic achievement for a mathematical topic using neural networks modelling*. In *World of computer science and information technology journal*. - [S.l.], Bd. 3.2013, 4, S. 77-84;
- [52]. Sadek, Samy; Al-Hamadi, Ayoub; Michaelis, Bernd: *Toward real-world activity recognition - an SVM based system using fuzzy directional features* In: *WSEAS transactions on information science and applications*. - Athens : WSEAS, Bd. 10.2013, 4, S. 116-12
- [53]. S. Sadek, A. Al-Hamadi, G. Krell, and B. Michaelis: *An-invariant feature extraction for activity recognition*," *ISRN Machine Vision Journal*, vol. 1, pp. 1{7, July 2013.
- [54]. Saeed, Anwar; Al-Hamadi, Ayoub; Heuer, Michael: *Multi-modal fusion framework with particle filter for speaker tracking*; In: *International journal of future generation communication and networking*. - Taejön : SERSC, Bd. 5.2012, 4, S. 65-76;
- [55]. Mostafa A Ahmad, Aly M Meligy, Amal H Hashim and Ayoub K Al-hamadi. Article: *Reversible Data Hiding by Integer Wavelet Transform with Lossless EZW Bit-Stream*. *International Journal of Computer Applications* 66(2):8-15, March 2013. Published by Foundation of Computer Science, New York, USA.
- [56]. Samy Sadek, Ayoub Al-Hamadi, Bernd Michaelis, and Usama Sayed: *A fast statistical approach for human activity recognition*; *International Journal of Intelligence Science (IJIS)*, vol. 2, pp. 9–15, January 2012. DOI: 10.4236/ijis.2012.21002.
- [57]. Niese, R., Al-Hamadi, A., Farag, A., Neumann, H. & Michaelis, B. : *Facial expression recognition based on geometric and optical flow features in colour image sequences*. *Journal IET Computer Vision*, vol. 6, pp. 79–89, 2012.
- [58]. Elzobi, Moftan; Al-Hamadi, Ayoub; Al Aghbari, Zaher; Dings, Laslo: *IESK-ArDB - a database for handwritten Arabic and an optimized topological segmentation approach*; *International journal on document analysis and recognition*. - Berlin: Springer, insges. 14 S., 2012;
- [59]. Pathan, Saira Saleem; Rashid, Omer; Al-Hamadi, Ayoub; Michaelis, Bernd: *Multi-object tracking in dynamic scenes by integrating statistical and cognitive approaches*; *International journal of computer science issues*. - Mahebourg : Bd. 9.2012, 4, S. 180-189;
- [60]. Omer Rashid, Ayoub Al-Hamadi and Klaus Dietmayer: *Interpretation of Meaningful Expressions by Integrating Gesture and Posture Modalities*; *International Journal of Computer Information Systems and Industrial Management Applications*. ISSN 2150-7988, Volume 4 (2012), Dynamic publishers, © MIR Labs, Inc. USA, pp. 589-597.
- [61]. Rashid, Omer; Al-Hamadi, Ayoub; *An Integrated HCI framework for interpreting meaningful expressions* In: *International journal of computer science issues*. - Mahebourg : SoftwareFirst, Bd. 9.2012, 5, S. 411-421;
- [62]. Samy Sadek, Ayoub Al-Hamadi, Bernd Michaelis, and Usama Sayed: *A fast statistical approach for human activity recognition*; *International Journal of Intelligence Science (IJIS)*, vol. 2, pp. 9–15, January 2012. DOI: 10.4236/ijis.2012.21002.
- [63]. Samy Sadek, Ayoub Al-Hamadi, Bernd Michaelis, and Usama Sayed: *Face detection and localization in color images: An efficient neural approach*; *Journal of Software Engineering and Applications (JSEA)*, vol. 4, pp. 682–687, December 2011. DOI: 10.4236/jsea.2011.412080.
- [64]. Laslo Dinges, Ayoub Al-Hamadi, Moftah Elzobi, Zaher Al Aghbari and Hassan Mustafa: *Offline Automatic Segmentation based Recognition of Handwritten Arabic Words*. *International Journal of Signal Processing, Image Processing and Pattern Recognition* Vol. 4, No. 4, . 2011, pp. 131-144.
- [65]. Thien-Nghia Nguyen, Bernd Michaelis, Ayoub Al-Hamadi, Michael Tornow, and Marc-Michael Meinecke: *Stereo-Camera-based Urban Environment Perception using Occupancy Grid and Object Tracking*; *IEEE TRANSACTIONS ON INTELLIGENT TRANSPORTATION SYSTEMS*, VOL. PP, Issue: 99, 19 September 2011, pp. 1-12.

- [66]. Al Aghbari, Z. and Al-Hamadi, A.: *Efficient KNN search by linear projection of image clusters*. International Journal of Intelligent Systems, Vol. 26, Issue 9, pp. 844–865. doi: 10.1002/int.20496; 2011.
- [67]. Samy Sadek, Ayoub Al-Hamadi, Bernd Michaelis, and Usama Sayed: *An Action Recognition Scheme Using Fuzzy Log-Polar Histogram and Temporal Self-Similarity*," EURASIP Journal on Advances in Signal Processing, vol. 2011, Article ID 540375, 9 pages, 2011. doi:10.1155/2011/540375
- [68]. Robert Niese, Ayoub Al-Hamadi and Bernd Michaelis: *Emotion Recognition based on 2D-3D Facial Feature Extraction from Color Image Sequences*, Journal of Multimedia (JMM), 2010, Vol. 5, pp. 488-500, Oct. 2010.
- [69]. J. Appenrodt, A. Al-Hamadi, B. Michaelis: *Data Gathering for Gesture Recognition Systems Based on Mono Color-, Stereo Color- and Thermal Cameras*, International Journal of Signal Processing, Image Processing and Pattern Recognition (IJSIP), Vol. 3, No. 1, Springer, 2010, pp.37-50.
- [70]. Samy Sadek, Ayoub Al-Hamadi, Bernd Michaelis, and Usama Sayed: *A Statistical Framework for Real-Time Traffic Accident Recognition*, Journal of Signal and Information Processing, 2010, 1, pp. 77-81, Scientific Research.
- [71]. E. Lilienblum, R. Niese, A. Al-Hamadi, B. Michaelis: *A Stereo Vision System for Top View Book Scanners*, Internat. Journal of Computer Science, Vol. 5, No. 1, ISSN: 2070-3856, pp. 32-37, 2010.
- [72]. M. Elmezain, A. Al-Hamadi, R. Niese, B. Michaelis: *A Robust Method for Hand Tracking Using Mean-shift Algorithm and Kalman Filter in Stereo Color Image Sequence*, International Journal of Information Technology, Vol. 6, No. 1, ISSN: 2070-3961, pp. 24-28, 2010.
- [73]. Al-Hamadi, A.; Rashid, O.; Michaelis, B.: 2010. Posture recognition using combined statistical and geometrical feature vectors based on svm; International Journal of Information and Mathematical Sciences 6:1, /ISSN: 2010-4065, /pp. 7-14.
- [74]. Samy Sadek, Ayoub Al-Hamadi, Bernd Michaelis, and Usama Sayed: *Efficient Region-Based Image Querying*, International Journal of Computing, vol. 2 Issue: 10, pp. 1-6, June 2010.
- [75]. Niese R.; Al-Hamadi, A.; Michaelis, B.: *Analysis of Feature Space for a 2d/3d Vision based Emotion Recognition Method*, International Journal of Computational Intelligence, Vol. 6, No. 1, ISSN: 2070-3821, pp. 18-23, 2010.
- [76]. Al-Hamadi, M. Elmezain, B. Michaelis: *Hand Gesture Recognition Based on Combined Features Extraction*, International Journal of Computational Intelligence, Vol. 6, No. 1, ISSN: 2070-3821, pp. 1-6, 2010.
- [77]. Saira Saleem Pathan, Ayoub Al-Hamadi, Bernd Michaelis: *Intelligent Feature-guided Multi-Object Tracking in Monocular Color Image Sequences Using Kalman Filter*, Journal of Computing, Vol. 2, issue 11, 2010 (ISSN 2151-9617).
- [78]. Samy Sadek, Ayoub Al-Hamadi, Bernd Michaelis, Usama Sayed: *Image Retrieval Using Cubic-Splines Neural Networks*, International Journal of Video & Image Processing and Network Security IJVIPNS, Vol: 9 No: 10, pp. 17-22.
- [79]. Niese, R.; Al-Hamadi, A.; Panning, A.; Brammen, D.; Ebmeyer, U.; Michaelis, B.: *Towards Pain Recognition in Post-Operative Phases Using 3D-based Features From Video and Support Vector Machines*, International Journal of Digital Content Technology and its Applications (JDCTA), Vol. 3, Nr. 4, pp. 21-31.
- [80]. M. Elmezain, A. Al-Hamadi, J. Appenrodt, B. Michaelis: *A Hidden Markov Model-Based Isolated and Meaningful Hand Gesture Recognition* , International Journal of Electrical, Computer, and Systems Engineering, Vol. 3, No. 3, ISSN: 2070-3813, pp. 156-163, 2009. Paris, France
- [81]. M. Elmezain, A. Al-Hamadi, B. Michaelis: *A Novel System for Automatic Hand Gesture Spotting and Recognition in Stereo Color Image Sequences*, The Journal of WSCG, Vol.17, No. 1, ISSN: 1213-6972, pp. 89-96, Feb. 2-5, 2009. Plzen, CZ.
- [82]. Panning, A.; Al-Hamadi, A.; Niese, R.; Michaelis B.: *Facial Expression Recognition Approach based on Haar-Like Feature Detection*, International journal "Pattern Recognition and Image Analysis", Vol. 18, No. 3, pp. 447-452, 2008.

- [83]. Elmezain, M.; Al-Hamadi, A.; Michaelis, B.: *Real-Time Capable System for Hand Gesture Recognition Using Hidden Markov Models in Stereo Color Image Sequences*. The Journal of WSCG, Vol.16, ISSN: 1213-6972, pp. 65-72, February 2008.
- [84]. Robert Niese, Ayoub Al-Hamadi and Bernd Michaelis: *Nearest Neighbor Classification for Emotion Recognition in Stereo Image Sequences*, ISAST Transactions on Electronics and Signal Processing, International Society for Advanced Science and Technology, No. 1, Vol. 1, 2007, ISSN 1797-2329, pp.88-94.
- [85]. Niese R., Al-Hamadi A. and Michaelis B.: *A Novel Method for 3D Face Detection and Normalization*, JOURNAL OF MULTIMEDIA, ISSN: [1796-2048, 2007], Vol. 2, No. 5, September 2007, ACADEMY PUBLISHER.
- [86]. Al-Hamadi A.; Niese R.; Michaelis, B.: *Multi-Object Tracking In Video Using A Trisection Paradigm*; Special issues of the international journal "Pattern Recognition and Image Analysis", Vol. 17, No. 4, 2007, pp. 493-507.
- [87]. Al-Hamadi A., Niese R., Panning A. and Michaelis B.: *Toward Robust Face Analysis Method of Non-Cooperative Persons in Stereo Color Image Sequences*, Journal of Machine GRAPHICS and VISION, Vol. 15, No.3/ 4, 2006, pp. 245-254.
- [88]. El-Etriby S., Al-Hamadi A. and Michaelis B.: *Dense Depth Map Reconstruction by Phase difference-Based Algorithm under Influence of Perspective Distortion*, Journal of Machine GRAPHICS and VISION, Vol. 15, N. 3 / 4, 2006, pp. 349-361.
- [89]. Al-Hamadi A., Michaelis B.: *A Shadow Detection Filter on the Basis of Colour-Structure-Code Algorithm*, International Journal on Graphics, Vision and Image Processing, Special issue articles on: "Object Tracking and Recognition", ISSN [1687-398X], March 2006, pp. 51-57.
- [90]. Al-Hamadi A., Michaelis B.: *Hierarchical Feature-based Paradigm for Multi-object Tracking*, International Journal on Graphics, Vision and Image Processing, Special issue articles on: "Object Tracking and Recognition", ISSN [1687-398X], March 2006, pp. 39-44, 2006.
- [91]. El-Etriby S., Al-Hamadi A., Michaelis B.: *Improvement of 3-D Reconstruction by Deformable Stereo Matching using a Set of Linear Spatial Filters*, International Journal on Graphics, Vision and Image Processing, Special issue articles on "Image Retrieval and Representation", ISSN [1687-398X], March in 2006, pp. 41-46, 2006.
- [92]. Al-Hamadi A. and Michaelis B.: *An intelligent Paradigm for Multi-Objects Tracking in Crowded Environment*, Journal of Digital Information Management (JDIM) , Volume 4, Number 3, September 2006, pp. 183-190.
- [93]. Al-Hamadi A.; Niese R. and Michaelis B.: *Multi-Object Tracking in Video Using a Trisection Paradigm*; International journal "Pattern Recognition and Image Analysis": 2005, Vol. 15, No 2; 2005, pp.492-495.

III) Referierte Konferenzbeiträge

- [94]. Zaher Al Aghbari, Ayoub Al-Hamadi: *Finding K Most Significant Motifs in Big Time Series Data. International Conference on Ambient Systems, Networks and Technologies ANT/EDI40 2020: 595-601, Poland*
- [95]. Sebastian Handrich, Laslo Dinges, Ayoub Al-Hamadi, Philipp Werner, Zaher Al Aghbari: *Simultaneous Prediction of Valence/Arousal and Emotions on AffectNet, Aff-Wild and AFEW-VA. International Conference on Ambient Systems, Networks and Technologies ANT/EDI40 2020: 634-641, Poland*
- [96]. Thorsten Hempel, Ayoub Al-Hamadi: *SLAM-Based Multistate Tracking System for Mobile Human-Robot Interaction. International Conference on Image Analysis and Recognition, ICIAR (1) 2020: 368-376, Portugal*
- [97]. Philipp Werner, Ayoub Al-Hamadi, Sascha Gruss, Steffen Walter: *Twofold-Multimodal Pain Recognition with the X-ITE Pain Database. Affective Computing and Intelligent Interaction Conference ACII Workshops 2019: 290-296, Cambridge, UK*

- [98]. *Philipp Werner, Frerk Saxen, Ayoub Al-Hamadi, Hui Yu: Generalizing to Unseen Head Poses in Facial Expression Recognition and Action Unit Intensity Estimation.* international Conference on Automatic Face and Gesture Recognition FG 2019: 1-8, France
- [99]. *Frerk Saxen, Sebastian Handrich, Philipp Werner, Ehsan Othman, Ayoub Al-Hamadi: Detecting Arbitrarily Rotated Faces for Face Analysis.* International Conference on Image Processing ICIP 2019: 3945-3949, TAIPEI, Taiwan
- [100]. *Sebastian Handrich, Laslo Dinges, Frerk Saxen, Ayoub Al-Hamadi, Sven Wachsmuth: Simultaneous Prediction of Valence / Arousal and Emotion Categories in Real-time.* International Conference on Signal and Image Processing Applications ICSIPA ICSIPA 2019: 176-180
- [101]. *Sebastian von Enzberg, Ayoub Al-Hamadi: Improvement of Data-Driven 3-D Surface Quality Inspection by Deformation Simulation.* International Conference on Signal and Image Processing Applications ICSIPA 2019: 245-248, Malaysia
- [102]. *Frerk Saxen, Philipp Werner, Sebastian Handrich, Ehsan Othman, Laslo Dinges, Ayoub Al-Hamadi: Face Attribute Detection with MobileNetV2 and NasNet-Mobile.* 11th Int'l Symposium on Image and Signal Processing and Analysis ISPA 2019: 176-180, Dubrovnik, Croatia
- [103]. *Ehsan Othman, Philipp Werner, Frerk Saxen, Ayoub Al-Hamadi, Steffen Walter: Cross-Database Evaluation of Pain Recognition from Facial Video.* 11th Int'l Symposium on Image and Signal Processing and Analysis ISPA 2019: 181-186, Dubrovnik, Croatia
- [104]. *Janneke Simmering, Sebastian Meyer zu Borgsen, Sven Wachsmuth, Ayoub Al-Hamadi: Combining Static and Dynamic Predictions of Transfer Points for Human Initiated Handovers.* International Conference on Social Robotics ICSR 2019: 676-686, Madrid, Spain
- [105]. *Frerk Saxen, Philipp Werner, Ayoub Al-Hamadi: Real vs. Fake Emotion Challenge: Learning to Rank Authenticity From Facial Activity Descriptors; The IEEE International Conference on Computer Vision (ICCV), 2017, pp. 3073-3078*
- [106]. *Michal Rapczynski, Chen Zhang, Gunther Notni, Ayoub Al-Hamadi: A MULTI-SPECTRAL DATABASE FOR NIR HEART RATE ESTIMATION, IEEE International Conference on Image Processing 2018*
- [107]. *M Rapczynski, P Werner, F Saxen, A Al-Hamadi: How the Region of Interest Impacts Contact Free Heart Rate Estimation Algorithms." 2018 25th IEEE International Conference on Image Processing (ICIP) (2018): 2027-2031.*
- [108]. *Sebastian Handrich, Philipp Waxweiler, Philipp Werner, Ayoub Al-Hamadi: 3D Human Pose Estimation Using Stochastic Optimization in Real Time. ICIP 2018: 555-559*
- [109]. *Erik Lilienblum, Ayoub Al-Hamadi: Pattern Optimization for 3D Surface Reconstruction with an Active Line Scan Camera System. ICIP 2018: 3159-3163*
- [110]. *Andreas Wendemuth, Ronald Böck, Andreas Nürnberger, Ayoub Al-Hamadi, André Brechmann, Frank W. Ohl: Intention-Based Anticipatory Interactive Systems. SMC 2018: 2583-2588*
- [111]. *Philipp Werner, Sebastian Handrich, Ayoub Al-Hamadi: Facial Action Unit Intensity Estimation and Feature Relevance Visualization with Random Regression Forests, Proc. of International Conference on Affective Computing and Intelligent Interaction (ACII), USA, pp. 401-406, IEEE, 2017. ISBN: 978-1-5386-0562-2.*
- [112]. *Philipp Werner, Ayoub Al-Hamadi, Steffen Walter: Analysis of Facial Expressiveness During Experimentally Induced Heat Pain", Proc. of International Conference on Affective Computing and Intelligent Interaction Workshops and Demos (ACIIW), USA, pp. 176-180, IEEE, 2017. ISBN: 978-1-5386-0679-7.*
- [113]. *Dinges, L. and Al-Hamadi, A.: Automatic recognition of common arabic handwritten words based on ocr and n-grams, IEEE Int. Conf. Image Processing (ICIP), p. 3625-3629, 2017*
- [114]. *Werner P. and Saxen, F. and Al-Hamadi, A. : Landmark based head pose estimation benchmark and method, IEEE Int. Conf. Image Processing (ICIP), p. 3625-3629, 2017*
- [115]. *Handrich, S. and Al-Hamadi, A.: Localizing body joints from single depth images using geodetic distances and random tree walk, IEEE Int. Conf. Image Processing (ICIP), p. 146-150, 2017*

- [116]. Sebastian Handrich, Ayoub Al-Hamadi, Erik Lilienblum, Zuofeng Liu: Human Bodypart Classification Using Geodesic Descriptors and Random Forests, IAPR International Conference on Machine Vision Applications 2017, Japan, pp. 292-295.
- [117]. Erik Lilienblum, Sebastian Handrich, Ayoub Al-Hamadi: Low Cost Calibration of Stereo Line Scan Camera Systems, IAPR International Conference on Machine Vision Applications 2017, Japan, pp. 296-299.
- [118]. Kaoutar Jdeb, Mohammed Rziza, Tarik Ljouad, Ayoub Al-Hamadi: Comparative study of the descriptive features on the performance of re-identification, IEEE 5th International Conference on Multimedia Computing and Systems (ICMCS) ,Marrakech, 2016, pp. 655-660.
- [119]. Zhang, Lin; Walter, Steffen; Ma, Xueyao; Werner, Philipp; Al-Hamadi, Ayoub; Traue, Harald C.; Gruss, Sascha: Bio Vid Emo DB - a multimodal database for emotion analyses validated by subjective ratings. IEEE Symposium Series on Computational Intelligence: December, 2016, Athens, Greece -: IEEE, insges. 6 S.
- [120]. Saeed, Anwar; Al-Hamadi, Ayoub; Handrich, Sebastian: Advancement in the head pose estimation via depzh-based face spotting . IEEE Symposium Series on Computational Intelligence: December 6th - 9th, 2016, Athens, Greece - Piscataway, NJ: IEEE, insges. 6 S.
- [121]. Saeed, Anwar; Al-Hamadi, Ayoub; Handrich, Sebastian: A framework for joint facial expression recognition and point localization . 23rd International Conference on Pattern Recognition (ICPR): Cancún, México, December 4-8, 2016 - IEEE, S. 4125-4130
- [122]. Michal Rapczynski, Philipp Werner, Ayoub Al-Hamadi: Continuous low latency heart rate estimation from painful faces in real time. 2016 23rd International Conference on Pattern Recognition (ICPR): Cancún, México, December 4-8, 2016 - IEEE, S. 1165-1170
- [123]. Rapczynski, Michal; Werner, Philipp; Saxen, Frerk; Al-Hamadi, Ayoub: Der Einfluss von Hautfarbensegmentierung auf die kontaktfreie Schätzung von Vitalparametern, 22. Workshop Farbbildverarbeitung : Ilmenau. 22. Workshop Farbbildverarbeitung, Ilmenau, 29. - 30. Oktober, 2016, 9 S.
- [124]. Rapczynski, Michal; Zhang, Chen; Rosenberger, Maik; Al-Hamadi, Ayoub: Multispektrale Vermessung der Haut zur Verbesserung kontaktfreier Herzratenschätzung , 22. Workshop Farbbildverarbeitung : Ilmenau. 22. Workshop Farbbildverarbeitung, Ilmenau, 29. - 30. Oktober, 2016, 8 S.
- [125]. Rapczynski, Michal; Werner, Philipp; Al-Hamadi, Ayoub: Kontaktfreie kamerabasierte Messung der Herzrate in Echtzeit ; 3D SENSATION - transdisziplinäre Perspektiven. - Chemnitz : Verlag Wissenschaft und Praxis, S. 137-147, 2016; innteract conference 2016, Chemnitz, 23. - 24. Juni, 2016]
- [126]. Lilienblum, Erik, Al-Hamadi, Ayoub: Aktives Zeilensensorsystem zur kontinuierlichen 3D-Oberflächenrekonstruktion von Endlosmaterialien, 3D-NordOst 2015 : Tagungsband ; 18. Anwendungsbezogener Workshop zur Erfassung, Modellierung, Verarbeitung und Auswertung von 3D-Daten. - Berlin : GFal, Gesellschaft zur Förderung angewandter Informatik, insges. 12 S. Kongress: 3D-NordOst; 18 (Berlin) : 2015.12.03-04
- [127]. Freye, Christian; Bendicks, Christian ,Lilienblum, Erik, Al-Hamadi, Ayoub: Optical sensor tracking and 3D-reconstruction of hydrogen-induced cracking, Advanced concepts for intelligent vision systems : 16th international conference, ACIVS 2015, Catania, Italy, October, 2015 ; Springer, S. 521-529 - (Lecture notes in computer science; 9386)
- [128]. Handrich, Sebastian, Al-Hamadi, Ayoub: Full-body human pose estimation by combining geodesic distance and 3D-point cloud registration. Advanced concepts for intelligent vision systems : 16th international conference, ACIVS 2015, Catania, Italy, October, 2015 ; Springer, S. 521-529 - (Lecture notes in computer science; 9386)
- [129]. Diana Werner, Philipp Werner, Ayoub Al-Hamadi: Quantitative Analysis of Surface Reconstruction Accuracy Achievable with the TSDF Representation; Computer vision systems : 10th international conference, ICVS 2015, Copenhagen, Denmark, July, 2015 ; Springer, S. 167-176 - (Lecture notes in computer science; 9163)
- [130]. Walter, Steffen; Gruss, Sascha; Kächele, Markus; Schwenker, Friedhelm; Werner, Philipp; Al-Hamadi, Ayoub; Andrade, Adriano; Moreira, Gustavo: Data fusion for automated pain

- recognition; Pervasive Health : 9th International Conference on Pervasive Computing Technologies for Healthcare, Istanbul, Turkey, May 2015. - ICST, S. 261-264
- [131]. Rashid, Omer, Al-Hamadi, Ayoub: Utilizing the Bezier descriptors for hand gesture recognition; 2015 IEEE International Conference on Image Processing, ICIP 2015, September 27-30, 2015, Québec City, Canada. - Piscataway, NJ : IEEE, pp. 3525-3529.
- [132]. Markus Kächele, Philipp Werner, Ayoub Al-Hamadi, Günther Palm, Steffen Walter, Friedhelm Schwenke: Bio-Visual Fusion for Person-Independent Recognition of Pain Intensity; Multiple classifier systems : 12th international workshop, MCS 2015, Günzburg, Germany, June 29 - July 1, 2015 ; Springer, S. 220-230 - (Lecture notes in computer science; 9132)
- [133]. Anwar Saeed, Al-Hamadi, Ayoub; Boosted human head pose estimation using Kinect camera; 2015 IEEE International Conference on Image Processing, ICIP 2015, September 27-30, 2015, Québec City, Canada. - Piscataway, NJ : IEEE, pp. 1752-1756.
- [134]. A. Saeed, A. Al-Hamadi, and R. Niese: Regression-based Head Pose Estimation in 2D Images," in 1st International Symposium on Companion-Technology (ISCT 2015), Ulm University, Germany, pp. 161-166, Sept. 2015.
- [135]. Moftah Elzobi, Ayoub Al-Hamadi, Laslo Dings, Sherif El-Etriby: CRFs and HCRFs Based Recognition for Off-Line Arabic Handwriting. - 11th International Symposium, ISVC 2015, Las Vegas, NV, USA, December 2015, Part II. LNCS 9475, Springer 2015 ISVC (2) 2015: 337-346
- [136]. Georg Layher, Stephan Tschechne, Robert Niese, Ayoub Al-Hamadi, Heiko Neumann: Towards the Separation of Rigid and Non-rigid Motions for Facial Expression Analysis. 2015 International Conference on Intelligent Environments, IE 2015, Prague, Czech Republic, July 15-17, 2015. IEEE 2015 176-179
- [137]. Erik Lilienblum and Ayoub Al-Hamadi: A Structured Light Approach for 3d Surface Reconstruction with a Stereo Line-Scan System. IEEE International Instrumentation and Measurement Technology Conference (I2MTC) Proceedings, 2014, pp. 1171-1176.
- [138]. P. Werner, A. Al-Hamadi, R. Niese, S. Walter, S. Gruss, und H. C. Traue, "Automatic Pain Recognition from Video and Biomedical Signals", in IEEE International Conference on Pattern Recognition (ICPR), Stockholm, Sweden, August 2014, S. 4582-4587.
- [139]. P. Werner, A. Al-Hamadi, S. Walter, S. Gruss, und H. C. Traue, "Automatic Heart Rate Estimation from Painful Faces", in IEEE International Conference on Image Processing (ICIP), Paris, France, 2014, S. 1947-1951.
- [140]. S. Walter, S. Gruss, H. Traue, D. Hazer, X. Ma, P. Werner, A. Al-Hamadi, G. Moreira da Silva, and A. Andrade: Multimodal Automatic Pain Recognition via Video signals and Biopotentials. In Proceedings of the XXIV Brazilian Congress on Biomedical Engineering (CBEB), 2014.
- [141]. D. Werner, A. Al-Hamadi, und P. Werner, „Truncated Signed Distance Function: Experiments on Voxel Size“, in Image Analysis and Recognition, A. Campilho und M. Kamel (Editors), Springer International Publishing, 2014, S. 357–364.
- [142]. Frerk Saxen, Ayoub Al-Hamadi: COLOR-BASED SKIN SEGMENTATION: AN EVALUATION OF THE STATE OF THE ART. In: IEEE International Conference on Image Processing (ICIP), Paris, pp. 4467 - 4471, Okt. 2014, doi: 10.13140/2.1.2103.3927
- [143]. Michal Rapczynski, Erik Lilienblum, Sebastian von Enzberg and Ayoub Al-Hamadi: Simultaneous Multi-Camera Calibration Based on Phase-Shift Measurements on Planar Surfaces. IEEE International Instrumentation and Measurement Technology Conference (I2MTC), 2014, pp. 175-180.
- [144]. Sebastian von Enzberg and Ayoub Al-Hamadi: "A defect recognition system for automated inspection of non-rigid surfaces". International Conference on Pattern Recognition, 2014.
- [145]. Frerk Saxen, Ayoub Al-Hamadi. Superpixels for skin segmentation, Workshop Farbbildverarbeitung, pp. 153 - 159, Sep. 2014, vol. 20. doi: 10.13140/2.1.3293.3124.
- [146]. Elzobi, M.; Al-Hamadi; Al-Aghbari, Z.; Dinges, L., Saeed, A.: Gabor Wavelet Recognition Approach for Off-Line Handwritten Arabic Using Explicit Segmentation. Ryszard S. Choras (Ed.): Image Processing and Communications Challenges 5, Vol. 233: Springer International Publishing (Advances in Intelligent Systems and Computing), 2014, pp 245-254.

- [147]. Freye, C., Bendicks, C., Lilienblum, E., Al-Hamadi, A.: Multiple Camera Approach for SLAM Based Ultrasonic Tank Roof Inspection., *Image Analysis and Recognition, LNCS 8815, Springer, 2014, 453-460*
- [148]. M. Heuer, A. Al-Hamadi, M.-M. Meinecke, E. Schneider, H. Rohling, P. Sorowka: Wireless Communication Techniques for Half-Automated Evaluation of Automotive Active Pedestrian Safety Systems; *International Symposium on Certification of GNSS Systems & Services, Dresden, Germany 08 - 09 July 2014, pp. 4-13*
- [149]. Janne Häkli, Kai Nummila, Marc.-M. Meinecke, Michael Heuer, A. Al-Hamadi, Herrmann Rohling, Peter Sorowka: Active Pedestrian Safety and Road Surface Estimation - An Overview of the ARTRAC Initiative; *10th ITS European Congress, Helsinki, Finland June 2014, Pp. 1-9*
- [150]. M. Heuer, A. Al-Hamadi, A. Rain, M.-M. Meinecke, H. Rohling; Pedestrian Tracking with Occlusion Using a 24 GHz Automotive Radar, *IRS 2014, 15th International Radar Symposium, Juni, Gdansk, Poland, pp. 73-76*
- [151]. M. Heuer, A. Al-Hamadi, A. Rain, M.-M. Meinecke; Detection and Tracking Approach Using an Automotive Radar to Increase Active Pedestrian Safety 2014 *IEEE Intelligent Vehicles Symposium (IV); June 8-11, 2014. Dearborn, Michigan, USA, PP. 890-893*
- [152]. Enzberg, Sebastian, Al-Hamadi Ayoub; A defect recognition system for automated inspection of non-rigid surfaces, *22nd international Conference on Pattern Recognition, 24-28 August 2014, Stockholm, Sweden IEEE, pp. 1812-1816*
- [153]. Ljouad, T.; Al-Hamadi, A.; Amine; A., Rziza, M.: Projection of the Modified Cuckoo Search Metaheuristic into the Multiple Pedestrian Tracking Problem, *International Conference on Metaheuristics and Nature Inspired Computing, October 27-31, 2014, Marrakesh, Morocco, Conference CD*
- [154]. Sebastian von Enzberg, Ayoub Al-Hamadi: *Variables B-Spline-Modell zur 3D-Oberflächenprüfung*". In *Proceedings of Workshop 3D-NordOst, 2013.*
- [155]. Robert Niese, Philipp Werner, Ayoub Al-Hamadi: *Accurate, Fast and Robust Realtime Face Pose Estimation using Kinect Camera*, *IEEE International Conference on Systems, Man, and Cybernetics (SMC 2013), 13-16 October, 2013 in Manchester UK.*
- [156]. Bendicks, Christian; Lilienblum, Erik; Freye, Christian; Al-Hamadi, Ayoub *Tracking of a handheld ultrasonic sensor for corrosion control on pipe segment surfaces In: Advanced concepts for intelligent vision systems. Springer, S. 342-353, (LNCS; 8192): ACIVS 2013; 15 (Poznań).10.28-31*
- [157]. Handrich, Sebastian; Al-Hamadi, Ayoub: *Upper-body pose estimation using geodesic distances and skin-color: In Advanced concepts for intelligent vision systems. - Cham [u.a.]: Springer, S. 150-161, 2013 - (LNCS; 8192)Kongress: ACIVS 2013; 15 (Poznań) : 2013.10.28-31*
- [158]. Ahmad, Omer Rashid; Al-Hamadi, Ayoub: *A new approach for hand augmentation based on patch modelling*, In: *Advanced concepts for intelligent vision systems. - Cham [u.a.] : Springer, S. 162-171, 2013 - (LNCS; 8192)Kongress: ACIVS 2013; 15 (Poznań) : 2013.10.28-31*
- [159]. Behrens, Stephanie; Al-Hamadi, Ayoub; Niese, Robert; Redweik, Eicke: *Automatic user-specific avatar parametrisation and emotion mapping*, In: *Advanced concepts for intelligent vision systems, Springer, S. 192-202, 2013 - (LNCS; 8192)Kongress: ACIVS 2013; 15 (Poznań) : 2013.10.28-31*
- [160]. Tornow, Michael; Al-Hamadi, Ayoub; Borrmann, Vinzenz: *A multi-agent mobile robot system with environment perception and HMI capabilities*, *2013 IEEE International Conference on Signal & Image Processing Applications (ICSIPA 2013). insges. 6 S.*
- [161]. Heuer, Michael; Al-Hamadi, Ayoub; Meinecke, Marc-Michael: *An observation model for high resolution radar data in the context of an automotive pedestrian safety system*, *International Radar Symposium - IRS 2013; Vol. 1. - Göttingen : Cuvillier, insges. 6 S .Kongress: IRS; 14 (Dresden) : 2013.06.19-21*
- [162]. Stephanie Behrens, Ayoub Al-Hamadi, Eicke Redweik, Robert Niese: *Automatic Realtime User Performance-driven Avatar Animation*, *IEEE International Conference on Systems, Man, and Cybernetics (SMC 2013), 13-16 October, 2013 in Manchester UK.*

- [163]. Sebastian Handrich and Ayoub Al-Hamadi: *A Robust Method for Human Pose Estimation based on Geodesic Distance Features* ; IEEE International Conference on Systems, Man, and Cybernetics (SMC 2013), 13-16 October , 2013 in Manchester UK, in Press.
- [164]. Michael Tornow, Ayoub Al-Hamadi, and Vinzenz Borrmann: *Gestic-Based Human Machine Interface for Robot Control*; IEEE International Conference on Systems, Man, and Cybernetics (SMC 2013), 13-16 October, 2013 in Manchester UK.
- [165]. Philipp Werner, Ayoub Al-Hamadi, Robert Niese, Steffen Walter, Sascha Gruss, und Harald C. Traue: *Towards Pain Monitoring: Facial Expression, Head Pose, a new Database, an Automatic System and Remaining Challenges*, *British Machine Vision Conference*, 2013. In press.
- [166]. Erik Lilienblum, Ayoub Al-Hamadi, Bernd Michaelis: *A Coded 3d Calibration Method for Line-Scan Cameras*. 35th German Conference on Pattern Recognition (GCPR) 2013, September 3-6, Saarbrücken, Springer series on Lecture Notes in Computer Science (LNCS) Vol. 8142, In press.
- [167]. Moftah Elzobi, Ayoub Al-Hamadi, Laslo Dings and Mahmoud Elmezain: *A Hidden Markov Model-based Approach with an Adaptive Threshold Model for Off-line Arabic Handwriting Recognition*, 12th International Conference on Document Analysis and Recognition (ICDAR 2013), Washington, DC, USA, August 25-28, 2013.
- [168]. Moftah Elzobi, Ayoub Al-Hamadi, Zaher Al Aghbari, and Laslo Dings: *Gabor Wavelet Recognition Approach for Off-line Handwritten Arabic Using Explicit Segmentation*, 5th International Conference on Image Processing and Communications (IPC 2013), Bydgoszcz, Poland, September 11-13, 2013. In press.
- [169]. Laslo Dinges, Ayoub Al-Hamadi and Moftah Elzobi: *M. An Approach for Arabic Handwriting Synthesis based on Active Shape Models*, International Conference on Document Analysis and Recognition (ICDAR), 2013
- [170]. Laslo Dinges, Ayoub Al-Hamadi and Moftah Elzobi: *A Locale Group Based Line Segmentation Approach for Non Uniform Skewed and Curved Arabic Handwritings*, International Conference on Document Analysis and Recognition (ICDAR), 2013
- [171]. S. Walter, S. Gruss, J.-W. Tan, H. Ehleiter, H. Traue, Ph. Werner, A. Al-Hamadi, S. Crawcour, A. O. Andrade and G. Moreira Da Silva: *Advancement and Systematic Validation of an Automated Pain Recognition System*; *IEEE International Conference on Cybernetics, Lausanne Switzerland, 13-15 June 2013*.
- [172]. Ingo Siegert, Michael Glodek, Axel Panning, Gerald Krell, Friedhelm Schwenker, Ayoub Al-Hamadi and Andreas Wendemuth: *Using Speaker Group Dependent Modelling to Improve Fusion of Fragmentary Classifier Decisions*; *IEEE International Conference on Cybernetics, Lausanne Switzerland, 13-15 June 2013*.
- [173]. Anwar Saeed, Ayoub Al-Hamadi and Robert Niese: *The Effectiveness of using Geometrical Features for Facial Expression Recognition*; *IEEE International Conference on Cybernetics, Lausanne Switzerland, 13-15 June 2013, pp.122-127* .
- [174]. Zaher Al Aghbari, Ayoub Al-Hamadi: *Simple and Compact Indexing for Efficient KNN Search in High Dimensional Feature Space*, International Conference on Intelligent Systems and Applications, Venice, Italy, Apr. 21-26, 2013.
- [175]. Zaher Al Aghbari, Ayoub Al-Hamadi: *Fast Search of Sequences of Multiple Moving Objects* , International Conference on Management and Artificial Intelligence, Bangkok, Thailand, Apr. 7-8, 2012.
- [176]. Battrawy, Ramy; Schnitzlein, Markus; Nowack, Dietmar; Krell, Gerald; Al-Hamadi, Ayoub: *Sharpness improvement of warped document images for top view book scanners*; In: The 8th International Conference on Signal-Image Technology & Internet-Based Systems. - Piscataway, NJ : IEEE, S. 818-824, 2012;
- [177]. Rashid, Omer; Al-Hamadi, Ayoub: *Flow modeling and skin-based gaussian pruning to recognize gestrural actions using HMM* In: ICPR 2012. - IEEE Computer Society, S. 3488-3491 Kongress: ICPR; 21 (Tsukuba, Japan) : 2012.11.11-15.
- [178]. Heuer, Michael; Al-Hamadi, Ayoub; Meinicke, Mark-Michael; Mende, Ralph: *Requirements on automotive radar systems for enhanced pedestrian protection* ; In: International Radar Symposium IRS-2012. - IEEE, S. 45-48: IRS; (Warsaw, Poland).

- [179]. Sadek, Samy; Al-Hamadi, Ayoub; Michaelis, Bernd; Sayed, Usama: *Human action recognition via affine moment invariants*; In: ICPR 2012. - IEEE Computer Society, S. 218-221 Kongress: ICPR; 21 (Tsukuba, Japan) : 2012.11.11-15
- [180]. Saeed, Anwar; Al-Hamadi, Ayoub; Niese, Robert: *Neutral-independent geometric features for facial expression recognition*; 4th International Conference of Soft Computing and Pattern Recognition (SoCPaR). - Piscataway, NJ : IEEE, S. 79-83: SoCPaR; (Brunei) : 2012
- [181]. Saxen, Frerk; Rashid, Omer; Al-Hamadi, Ayoub; Adler, Simon; Kernchen, Alexa; Mecke, Rüdiger: *Image-based gesture recognition for user interaction with mobile companion-based assistance systems*; 2012 4th International Conference of Soft Computing and Pattern Recognition (SoCPaR). - Piscataway, NJ : IEEE, S. 200-203: SoCPaR; (Brunei): 2012.[Beitrag CD-ROM]
- [182]. Panning, Axel; Siegert, Ingo; Al-Hamadi, Ayoub; Wendemuth, Andreas; Rösner, Dietmar; Frommer, Jörg; Krell, Gerald; Michaelis, Bernd: *Multimodal affect recognition in spontaneous HCI environment*; 2012 IEEE International Conference on Signal Processing, Communications and Computing (ICSPCC 2012). insges. 6 p ; (Hong Kong) : 2012.08.12-15
- [183]. Handrich, S. & Al-Hamadi, A.: *Multi Hypotheses Based Object Tracking in HCI environments. Internat. Conference Image Processing*: IEEE, ICIP 2012, pp. 1981-1984; USA.
- [184]. Dinges, Laslo; Al-Hamadi, Ayoub; Elzobi, Moftah: *An active shape model based approach for Arabic handwritten character recognition*, 2012 11th International Conference on Signal Processing, ICSP 2012. - Piscataway, NJ : IEEE, insges. 4 S. Kongress: ICSP; 11 (Beijing): 2012.10.21-25.
- [185]. Saeed, Anwar; Al-Hamadi, Ayoub; Niese, Robert; Elzobi, Moftah: *Effective geometric features for human emotion recognition*, In: 2012 11th International Conference on Signal Processing, ICSP 2012. - Piscataway, NJ: IEEE, insges. 4 S. Kongress: ICSP; 11 (Beijing) : 2012.10.21-25.
- [186]. Panning, Axel; Al-Hamadi, Ayoub; Michaelis, Bernd: *Facial feature point detection using simplified Gabor wavelets and confidence-based grouping*, 2012 IEEE International Conference on Systems, Man, and Cybernetics (SMC 2012). - Piscataway, NJ : IEEE, S. 2687-2692 Kongress: SMC 2012; (Seoul, Korea) : 2012.10.14-17
- [187]. O. Rashid and A. Al-Hamadi: *Flow Modeling and Skin-based Gaussian Pruning to Recognize Gestural Actions using HMM*, International Conference on Pattern Recognition (ICPR 2012), Tsukuba Science City, Japan, 9-15 Nov, 2012 (in print).
- [188]. O. Rashid and A. Al-Hamadi: *Recognizing Gestural Actions*, IEEE International Conference on Systems, Man, and Cybernetics (IEEE SMC 2012), Seoul, Korea, 14-17 Oct, 2012.
- [189]. Mahmoud Elmezain Ayoub Al-Hamadi: *LDCRFs-Based Hand Gesture Recognition*, IEEE International Conference on Systems, Man, and Cybernetics (IEEE SMC 2012), Seoul, Korea, 14-17 Oct, 2012 , pp. 2670-2675
- [190]. Sadek, S., Al-Hamadi, A., Michaelis, B. and Sayed, U.: *An SVM approach for activity recognition based on chord-length function shape features*, ICIP 2012, - Piscataway, NJ : IEEE, S. 765-768 Kongress: ICIP 2012; (Orlando, Fla.) : 2012.09.30-10.03.
- [191]. Sadek, S., Al-Hamadi, A., Michaelis, B. and Sayed, U.: *Human action recognition via affine moment invariants*, *International conference for pattern recognition 2012, CPR 2012*.
- [192]. Philipp Werner; Ayoub Al-Hamadi; Robert Niese: *Pain Recognition and Intensity Rating based on Comparative Learning*, ICIP 2012, - Piscataway, NJ : IEEE, S. 2313-2316 Kongress: ICIP 2012; (Orlando, Fla.) : 2012.09.30-10.03
- [193]. Robert Niese, Ayoub Al-Hamadi, Bernd Michaelis: *A New Multi-camera Based Facial Expression Analysis Concept*. 9th International Conference Image Analysis and Recognition, ICIAR 2012, Aveiro, Portugal, June, 2012. Part II, LNCS 7325 Springer, pp 64-71.
- [194]. Sebastian Handrich, Ayoub Al-Hamadi, Omer Rashid Ahmed: *Improving of Gesture Recognition Using Multi-hypotheses Object Association*. 5th International Conference on Image and Signal Processing -, ICISP 2012, Agadir, Morocco, June 28-30, 2012. LNCS 7340 Springer 2012, ISBN 978-3-642-31253-3, pp. 539-546, pp. 298-306
- [195]. Anwer Saeed, Ayoub Al-Hamadi, Michael Heuer: *Speaker Tracking Using Multi-modal Fusion Framework*. 5th International Conference on Image and Signal Processing -, ICISP 2012, Agadir, Morocco, June, 2012. LNCS 7340 Springer, pp. 539-546

- [196]. Anwar Saeed, Robert Niese, Ayoub Al-Hamadi, and Bernd Michaelis: *Solving the hand-hand overlapping for gesture application*, in Image Processing and Communications Challenges 3, Ryszard Choras, Ed., vol. 102 of Advances in Intelligent and Soft Computing, pp. 343–350. Springer Verlag, 2011.
- [197]. Saeed M. Badran; AbdelAziz M. Al-Bassiouni; Hassan M. H. Mustafa, Ayoub Al-Hamadi: *Modeling of phonics reading methodology using neural networks (Mathematical formulation approach)*; IEEE 2011 International Conference on e-Education, Entertainment and e-Management (ICEEE 2011), Jakarta, pp. 310-316.
- [198]. Axel Panning, Ayoub Al-Hamadi, Bernd Michaelis: *A Color Based Approach for Eye Blink Detection in Image Sequences*, In IEEE International Conference on Signal and Image Processing Applications (ICSIPA 2011), pp. 40-45, 2011
- [199]. A. Saeed, R. Niese, A. Al-Hamadi, and B. Michaelis: *Hand-face-touch Measure: a Cue for Human Behavior Analysis*. In IEEE International Conference on Intelligent Computing and Intelligent Systems (ICIS 2011), Guangzhou, China, pp. 605-609, 2011.
- [200]. A. Saeed, R. Niese, A. Al-Hamadi, and B. Michaelis: *Coping with Hand-Hand Overlapping in Bimanual Movements*. In IEEE International Conference on Signal and Image Processing Applications (ICSIPA 2011), pp. 238-243; 2011.
- [201]. Saira Saleeem Pathan, Ayoub Al-Hamadi, Omer Rashid, and Bernd Michaelis: *Learning A Priori Threshold to Initialize Flow-based Adaptive Mixture Model For Dynamic Scene Segmentation*, in Intelligent Computing and Intelligent Systems, Guangzhou, China, vol. 3, pp. 691-695, 2011.
- [202]. Omer Rashid, Ayoub Al-Hamadi and Bernd Michaelis: *Robust Hand Posture Recognition with Micro and Macro Level Features using Kinect*, in Intelligent Computing and Intelligent Systems, Guangzhou, China, vol. 3, pp. 631-635, 2011.
- [203]. Laslo Dinges, Moftah Elzobi, Ayoub Al-Hamadi, and Zaher Aghbari: *Synthizing handwritten arabic text using active shape models*, in Image Processing and Communications Challenges 3, Ryszard Choras, Ed., vol. 102 of Advances in Intelligent and Soft Computing, pp. 401–408. Springer Verlag, Berlin / Heidelberg, 2011.
- [204]. Michael Heuer, Ayoub Al-Hamadi, Bernd Michaelis and Andreas Wendemuth: *Multi-modal Fusion with Particle Filter for Speaker Localization and Tracking*; IEEE International Conference on Multimedia Technology (ICMT 2011), July, Hangzhou/China, pp. 6450-6453.
- [205]. Georg Layher, Hendrik Liebau, Robert Niese, Ayoub Al-Hamadi, Bernd Michaelis, Heiko Neumann: *Robust Stereoscopic Head Pose Estimation in Human-Computer Interaction and a Unified Evaluation Framework*. Image Analysis and Processing – ICIAP 2011; LNCS, Volume 6978/2011, 227-236, DOI: 10.1007/978-3-642-24085-0_24.
- [206]. Robert Niese, Ayoub Al-Hamadi, Michael Heuer, Bernd Michaelis, Bogdan Matuszewski: *Machine Vision-based Recognition of Emotions using the Circumplex Model of Affect*; IEEE International Conference on Multimedia Technology (ICMT 2011), July 2011 Hangzhou/China, pp. 6424-6427
- [207]. Elzobi,M., Al-Hamadi,A., Al Aghbari,Z.: *Off-line Handwritten Arabic Words Segmentation Based on Structural Features and Connected Components Analysis*; [J19],19thInternational Conference on Computer Graphics, Visualization and Computer Vision'2011, January 31 - February 3, 2011, Plzen, Czech Republic,online Version.
- [208]. M. Elmezain, A. Al-Hamadi, B. Michaelis: *Robust Methods for Hand Gesture Spotting and Recognition Using Hidden Markov Models and Conditional Random Fields*, IEEE International Symposium on Signal Processing and Information Technology, Dec. 2010. Luxor, Egypt, pp. 131-136.
- [209]. S. Sadek, A. Al-Hamadi, M. Elmezain, B. Michaelis, U. Sayed: *Human Activity Recognition via Temporal Moment Invariants*, IEEE International Symposium on Signal Processing and Information Technology, December 15-18, 2010. Luxor, Egypt, pp.79-84.
- [210]. S. Sadek, A. Al-Hamadi and B. Michaelis and U. Sayed: *Human Activity Recognition: A Scheme Using Multiple Cues*, 6th International Symposium on Visual Computing, Nov 29- Dec1, 2010. Las Vegas, USA, pp. 574-583.

- [211]. Rashid, A. Al-Hamadi and B. Michaelis: *Utilizing Invariant Descriptors for Finger Spelling American Sign Language Using SVM*, 6th International Symposium on Visual Computing, Nov 29- Dec1, 2010. Las Vegas, USA, pp. 253-263
- [212]. Saira Saleem Pathan, Ayoub Al-Hamadi, Bernd Michaelis: *Crowd Behavior Detection by Statistical Modeling of Motion Patterns*, International Conference on Soft Computing and Pattern Recognition, 2010, Cergy Pontoise/Paris, France, pp 81-86.
- [213]. Robert Niese, Ayoub Al-Hamadi, Bernd Michaelis and Heiko Neumann: *Integration of Geometric and Dynamic Features for Facial Expression Recognition in Color Image Sequences*", International Conference on Soft Computing and Pattern Recognition, 2010, Cergy Pontoise/Paris, France, pp 237-240.
- [214]. Jörg Appenrodt, Sebastian Handrich, Ayoub Al-Hamadi, and Bernd Michaelis: *Multi Stereo Camera Data Fusion for Fingertip Detection in Gesture Recognition Systems*, International Conference on Soft Computing and Pattern Recognition, 2010, Cergy /Paris, France, pp 35-40.
- [215]. Omer Rashid, Ayoub Al-Hamadi, Bernd Michaelis: *Integration of Gesture and Posture Recognition Systems for Interpreting Dynamic Meanings using Particle Filter* , International Conference on Soft Computing and Pattern Recognition, 2010, Cergy /Paris, France, pp 47-50.
- [216]. Samy Sadek, Ayoub Al-Hamadi, Bernd Michaelis, and Usama Sayed: *An Efficient Method for Real-Time Activity Recognition*, International Conference on Soft Computing and Pattern Recognition, 2010, Cergy Pontoise/Paris, France, pp 69-74.
- [217]. Saira Saleem Pathan, Ayoub. Al-Hamadi and B. Michaelis: *Incorporating Social Entropy for Crowd Behavior Detection Using SVM*, 6th International Symposium on Visual Computing, Nov 29- Dec1, 2010. Las Vegas, USA, pp. 153-162.
- [218]. Saira Saleem Pathan, Ayoub Al-Hamadi, and Bernd Michaelis: *Using Conditional Random Field For Crowd Behavior Analysis*", in International Workshop on Video Event Categorization, Tagging and Retrieval (VECTaR 2010) in conjunction with *Asian Conference on Computer Vision (ACCV), Queenstown, New Zealand, November 8-12 2010*.
- [219]. Omer Rashid Ahmed, Ayoub Al-Hamadi, and Bernd Michaelis: *Interpreting Dynamic Meaning by Integrating Gesture and Posture Recognition System*", in International Workshop on Video Event Categorization, Tagging and Retrieval (VECTaR 2010) in conjunction with *Asian Conference on Computer Vision (ACCV), Queenstown, New Zealand, November 2010*.
- [220]. Samy Sadek, Ayoub Al-Hamadi, Bernd Michaelis, and Usama Sayed: *Towards Robust Human Action Retrieval in Video, British Machine Vision Conference 2010 (BMVC10)*, Aberystwyth, 31st August-3rd December, 2010, pp. 1-11.
- [221]. Elzobi, M.; Al-Hamadi, A.; Michaelis B.: *A structural features based segmentation for off-line handwritten Arabic text*; 5th International Symposium on Image/Video Communication over Fixed and Mobile Networks, ISIVC 2010 . - IEEE, ISBN 978-1-424-45997-1, insges. 4 S. Kongress: ISIVC 2010; 5 (Rabat, Marocco) : 2010.09.30-10.02
- [222]. Panning, A.; Al-Hamadi, A.; Michaelis, B.; Neumann H.: *Colored and anchored active shape models for tracking and form description of the facial features under image-specific distrurbances*; 5th International Symposium on Image/Video Communication over Fixed and Mobile Networks, ISIVC 2010 . - IEEE, ISBN 978-1-424-45997-1, insges. 4 S. 5 (Rabat, Marocco)
- [223]. Krippel, Martin; Al-Hamadi, Ayoub; Michaelis, Bernd; Brechmann, André: *Neural correlates of voluntary facial movements; Organization for Human Brain Mapping: Annual meeting of the Organization for Human Brain Mapping*. - San Diego, Calif. : Academic Press, insges. 4 S.; Abstract unter URL, 2010 Kongress: Annual Meeting of the Organization for Human Brain Mapping; 16 (Barcelona): 2010.06.06-10
- [224]. Panning, Axel; Al-Hamadi, Ayoub; Michaeli: *Towards completely rotated simplified gabor wavelets for fast facial feature point detection*: 2010 17th IEEE International Conference on Image Processing , , IEEE, ISBN 978-1-424-47993-1, S.4509-4512,ICIP; 17 (Hong Kong) : 2010.09.26-29.
- [225]. Ammar M. Hassan, Ayoub Al-Hamadi, Bernd Michaelis, Yassin M. Y. Hasan, Mohamed A. A. Wahab: *Variable block-size image authentication with localization and self-recovery*: 2010 IEEE International Conference on Image Processing, pp.1445-1448 ICIP; 17 (Hong Kong).

- [226]. S. Pathan, A. Al-Hamadi, G. Krell, B. Michaelis: *Resolving Data-Association uncertainty in Multi-object Tracking through Qualitative Modules*, VISAPP 2010 - International Conference on Computer Vision Theory and Applications, France, pp. 461-466,
- [227]. G. Krell, R. Niese, A. Al-Hamadi, B. Michaelis: *Suppression of Uncertainties at Emotional Transitions Facial Mimics Recognition in Video with 3-D Model*, VISAPP 2010 - International Conference on Computer Vision Theory and Applications, France, pp. 537-542,
- [228]. M. Elmezain, A. Al-Hamadi, B. Michaelis: *A Robust Method for Hand Gesture Segmentation and Recognition Using Forward Spotting Scheme in Conditional Random Fields*, International Conference on Pattern Recognition (ICPR), Aug. 23-26, 2010. Istanbul, Turkey, pp.4392-4395.
- [229]. S. Sadek, A. Al-Hamadi, U. Sayed, B. Michaelis: *Real-time Automatic Traffic Accident Recognition Using HFG*, International Conference on Pattern Recognition (ICPR), Aug. 23-26, 2010. Istanbul, Turkey, 3348-3351.
- [230]. M. Steer, A. Al-Hamadi, B. Michaelis: *Audio-Visual Data Fusion using a Particle Filter in the Application of Face Recognition*, International Conference on Pattern Recognition (ICPR), Aug. 23-26, 2010. Istanbul, Turkey, pp.4392-4395.
- [231]. Ammar M. Hassan, Ayoub Al-Hamadi, Yassin M. Hasan, Bernd Michaelis: *Secure: Self-Recovery Image Authentication Using Randomly-Sized Blocks*, International Conference on Pattern Recognition (ICPR 2010). Istanbul, Turkey, pp. 1445-1448.
- [232]. Panning,A., Al-Hamadi,A., Michaelis,B.: *Active Shape Models on adaptively refined mouth emphasizing color images*, International Conference on Computer Graphics, Visualization and Computer vision , WSCG, 2010. Plzen, CZ. pp. 221-229
- [233]. Hassan,A.M., Al-Hamadi,A., Hasan,Y.M.Y., Wahab,M.A.A., Michaelis,B.: *Image Authentication using Robust Image Hashing with Localization and Self-Recovery*. International Conference on Computer Graphics, Visualization and Computer vision , WSCG, 2010. Plzen, CZ, pp. 251-259
- [234]. M. Elmezain, A. Al-Hamadi, B. Michaelis,: *Discriminative Models-Based Hand Gesture Recognition*, The International Conference on Machine Vision (ICMV), IEEE, December 28-30, 2009. Dubai, UAE, pp. 123-127.
- [235]. M. Elmezain, A. Al-Hamadi, B. Michaelis: *Improving Hand Gesture Recognition Using 3D Combined Features* The International Conference on Machine Vision (ICMV), December 28-30, 2009. Dubai, IEEE, pp.128-132.
- [236]. S. Sadek, A. Al-Hamadi, U. Sayed, B. Michaelis: *A Robust Neural System for Objectionable Image Recognition*, The International Conference on Machine Vision (ICMV), December 28-30, 2009. Dubai, IEEE, pp. 32-37.
- [237]. A. M. Hassan, A. Al-Hamadi, B. Michaelis, Y. M. Y. Hassan, M. A. A. Wahab: *Semi-Fragile Image Authentication Using Robust Image Hashing with Localization*; The International Conference on Machine Vision (ICMV), December 2009. Dubai, IEEE, pp.133-138.
- [238]. M. Elmezain, A. Al-Hamadi, B. Michaelis: *Hand Gesture Spotting Based on 3D Dynamic Features Using Hidden Markov Models*, International Symposium on Signal Processing, Image Processing and Pattern Recognition (SIP 2009), LNCS/CCIS Series indexed by EI, December 2009. Jeju Island, Korea, pp. 9-16.
- [239]. J. Appenrodt, A. Al-Hamadi, M. Elmezain, B. Michaelis: *Data Gathering for Gesture Recognition Systems Based on Mono Color-, Stereo Color- and Thermal Cameras*, The International Symposium on Signal Processing, Image Processing and Pattern Recognition (SIP 2009), LNCS/CCIS Series, Jeju Island, pp. 78-86.
- [240]. Ammar M. Hassan, Yassin M. Y. Hasan , Ayoub Al-Hamadi, Mohamed A. A. Wahab, Bernd Michaelis: *A Novel Public Key Self-embedding Fragile Watermarking Technique for Image Authentication*, The IEEE International Conference on Image Processing (ICIP), November, 2009. Egypt, pp. 1261-1264.
- [241]. M. Elmezain, A. Al-Hamadi, B. Michaelis: *A Robust Method for Hand Tracking Using Mean-shift Algorithm and Kalman Filter in Stereo Color Image Sequences*, The International Conference on Computer Vision, Image and Signal Processing (CVISP), November,, 2009. Bali, Indonesia, pp. 355-359.

- [242]. Ammar M. Hassan, Yassin M. Y. Hasan, Ayoub Al-Hamadi, Mohamed A. A. Wahab, Bernd Michaelis: *Secure Block-based Video Authentication With Localization and Self-recovery*, International Conference on Signal and Image Processing, Amsterdam, Sept., 2009. Netherlands, pp. 97-102.
- [243]. S. Sadek, A. Al-Hamadi, B. Michaelis, U. An Efficient Approach for Region-based Image Classification and Retrieval, The International Symposium on Signal Processing, Image Processing and Pattern Recognition (SIP), LNCS/CCIS Series, Dec., 2009. Jeju Island, Korea; pp.56-64.
- [244]. S. Sadek, A. Al-Hamadi, B. Michaelis and U. Sayed: *An Efficient Method for Noisy Cell Image Segmentation Using Generalized α -Entropy*, International Symposium on Signal Processing, Image Processing and Pattern Recognition (SIP 2009), Jeju Island, Korea, LNCS, pp. 33-40, 2009, Springer.
- [245]. S. Sadek, A. Al-Hamadi, A. Pannig, B. Michaelis, U. Sayed: *Cubic-splines Neural Network- Based System for Image Retrieval*, The IEEE International Conference on Image Processing (ICIP), November 7-11, 2009. Egypt, pp. 273-276.
- [246]. S. Sadek, A. Al-Hamadi, B. Michaelis, U. Sayed: *A New Method for Image Classification Based on Multi-level Neural Networks*, International Conference on Signal and Image Processing, Amsterdam, Sept., 2009. Netherlands, pp. 197-200.
- [247]. S. Sadek, A. Al-Hamadi, A. Pannig, B. Michaelis, U. Sayed: *A New Approach to Image Segmentation via Fuzzification of Rènyi Entropy of Generalized Distributions*, International Conference on Image, Signal & Vision Computing (ICISVC), August 2009. Singapore, pp. 326-331
- [248]. M. Elmezain, A. Al-Hamadi, B. Michaelis: *Hand Trajectory-Based Gesture Spotting and Recognition Using HMM*, IEEE International Conference on Image Processing (ICIP), November 7-11, 2009. Egypt, pp. 3577-3580.
- [249]. M. Elmezain, A. Al-Hamadi, B. Michaelis: *Spatio-Temporal Feature Extraction-Based Hand Gesture Recognition for Isolated American Sign Language and Arabic Numbers*, The 6th IEEE International Symposium on Image and Signal Processing and Analysis (ISPA), September 6-18, 2009. Salzburg, Austria, pp. 254-259.
- [250]. O. Rashid, Ayoub Al-Hamadi, Bernd Michaelis, "Towards the Integration of Gesture and Posture Recognition Using HMM and SVM ", IEEE International Conference on Intelligent Computing and Intelligent Systems (ICIS), November 20-22, 2009. China.
- [251]. S. Sadek, Ayoub Al-Hamadi, Bernd Michaelis, "An Image Classification Approach Using Multilevel Neural Networks", IEEE International Conference on Intelligent Computing and Intelligent Systems (ICIS), November 2009. China. pp. 180-183.
- [252]. O. Rashid, Ayoub Al-Hamadi, Bernd Michaelis, "Posture Recognition using Combined Statistical and Geometrical Feature Vectors based on SVM ", International Conference on Image, Signal and Vision Computing (ICISVC 2009), WASET, August, 2009. Singapore, pp. 332-339.
- [253]. S. Pathan, A. Al-Hamadi, M. Elmezain, B. Michaelis, "Feature-supported Multi-hypothesis Framework for Multi-object Tracking using Kalman Filter", International Conference on Computer Graphics, Visualization and Computer Vision, WSCG, pp. 197-202, Feb., 2009. Plzen, CZ.
- [254]. S. Pathan, A. Al-Hamadi, B. Michaelis,: *OIF- An Online Inferential Framework for Multi-object Tracking with Kalman Filter*, Computer Analysis of Image and Patterns, CIAP 2009; LNCS 5702, Münster, Germany, 2009, pp. 1087-1095.
- [255]. S. Pathan, A. Al-Hamadi, B. Michaelis,: *Multi-Object Tracking Using Semantic Analysis and Kalman Filter*, Proc. of the 6th International Symposium on Image and Signal Processing and Analysis (2009), IEEE, Salzburg Austria 2009; pp. 271-275.
- [256]. Pathan, S.; Al-Hamadi, A.; and Michaelis: *Intelligent Feature-guided Multi-object Tracking Using Kalman Filter*, The 2nd IEEE International Conference on Computer, Control & Communication (IEEE-IC4 2009), February 17-18, 2009. – Karachi.

- [257]. Axel Panning, Robert Niese, Ayoub Al-Hamadi and Bernd Michaelis: *A new Adaptive Approach for Histogram based Mouth Segmentation*, PROCEEDINGS OF WORLD ACADEMY OF SCIENCE, ENGINEERING AND TECHNOLOGY, VOLUME 56, pp. 779-784, AUGUST 2009, ISSN: 2070-3724.
- [258]. Niese R.; Al-Hamadi, A.; Michaelis, B.: *Analysis of Feature Space for a 2d/3d Vision based Emotion Recognition Method*, Int'l Conference on Computer Vision, Image and Signal Processing (CVISP 2009), Bali, pp. 349-354.
- [259]. A. Panning, A. Al-Hamadi und B. Michaelis, "*Adaptive farbbasierte Mundsegmentierung*", 15 Workshop FarbBV 2009, Berlin, pp. 115-124.
- [260]. Al-Hamadi, A.; Pathan, S.; Homberg, U. Michaelis, B: *Multi-Object Tracking Based on Particle Filter and Data Association in Color Image Sequences*; International Conference on Computer Vision and Graphics 2008; Nov. 10-12, Warsaw, Springer Verlag, LNCS 5337, pp.133-142.
- [261]. Al-Hamadi, A.; Niese R.; Pathan S., Aziz, F., Michaelis, B: *Geometric and Optical Flow Based Method for Facial Expression Recognition in Color Image Sequences*; International Conference on Computer Vision and Graphics 2008; Nov. 10-12, Warsaw, Springer Verlag. LNCS 5337, 228-238.
- [262]. Hassan M. Hassan, Ayoub Al-Hamadi: *On Comparative Evaluation of Thorndike's Psycho-Learning Experimental Work Versus an Optimal Swarm Intelligent System*; IEEE International Conference on Computational Intelligence for Modelling Control and Automation - CIMCA'2008, Vienna, Austria, December 2008, pp.1083-1088.
- [263]. Ahmad, M.A.; Krell, G.; Al-Hamadi, A.; Hadhoud, Mohiy; Michaelis, B.: *Spatially scalable wavelet-based intra-frame video codec using subband interpolation*. 4th International Symposium on Image/Video Communications (ISIVC), Spain, pp 55-60, 2008
- [264]. Elmezain, M.; Al-Hamadi, A.; Appenrodt, J.; Michaelis, B.: *A Hidden Markov Model-Based Isolated and Meaningful Hand Gesture Recognition*, The Fifth International Conference on Computer Vision, Image and Signal Processing (CVISP2008), PWASET, Vol. 31, ISSN 1307-6884, pp. 394-401, Juli 25-27, 2008. - Prague, CZ.
- [265]. Elmezain, M.; Al-Hamadi, A.; Appenrodt, J.; Michaelis, B.: *A Hidden Markov Model-Based Continuous Gesture Recognition System for Hand Motion Trajectory*, 19th International Conference on Pattern Recognition (ICPR 2008), Dec. 8-11, 2008. – Tampa, Florida, USA. pp. 519-522.
- [266]. Niese, Robert; Al-Hamadi, Ayoub; Aziz, F.; Michaelis, Bernd: *Robust Facial Expression Recognition Based on 3-d Supported Feature Extraction and SVM Classification*. In IEEE International Conference on Face and Gesture Recognition (FG2008), 2008.
- [267]. H.M.Hassan, A. Al-Hamadi, and Saleh Al-Saleem: *Comparison Between Swarm Intelligence Optimization and Behavioral Learning Concepts Using Artificial Neural Networks (An over view)*", 14th International Conference on Information Systems Analysis and Synthesis: ISAS 2008 June 29th - July 2nd, 2008 – Orlando, Florida, USA.
- [268]. H.M.Hassan, Ayoub Al-Hamadi: *A Comparative Analogy Between Swarm Smarts Intelligence and Neural Network Systems.*", to be published at WSSEC08 conference, Workshop on Evolutionary Computing and Lecture Series by Pioneers Derry/Londonderry, Northern Ireland, UK, 18-22 August 2008.
- [269]. Krell Gerald; Al-Hamadi Ayoub, Michaelis Bernd: *Multi-error Correction of Image Forming Systems Maintaining Colors*; 7th IEEE International Symposium on Signal Processing and Information Technology (ISSPIT 2007); Cario; pp. 1221-1226
- [270]. Elmezain Mahmoud; Al-Hamadi Ayoub, Krell Gerald, Michaelis Bernd: *Gesture Recognition for Alphabets from Hand Motion Trajectory Using Hidden Markov Models*; 7th IEEE International Symposium on Signal Processing and Information Technology (2007); Cario, pp. 1209-1214
- [271]. Hassan M. Hassan; Al-Hamadi Ayoub, Al-Saleem Saleh: *Towards Evaluation of Phonics Method for Teaching of Reading Using Artificial Neural Networks (A Cognitive Modelling Approach)*; 7th IEEE International Symposium on Signal Processing and Information Technology (ISSPIT 2007); Cario, pp. 870-877.

- [272]. Hassan M.; Al-Hamadi Ayoub, Al-Mohaia Fahad: *On Quantifying Learning Creativity Using Artificial Neural Networks (A Neuro-physiological Cognitive Approach)*; National Conference on Applied Cognitive Psychology, Nov., 2007, Kolkata
- [273]. Hassan M. Hassan, Ayoub Al-Hamadi, Bernd Michaelis: *Evaluation of Memorization Brain Function Using a Spatio-Temporal Artificial Neural Network (ANN) Model*, The 4th International Conference on Cybernetics and Information Technologies, Systems and Applications: CITSA 2007, Orlande, Florida, USA.
- [274]. A. Al-Hamadi, U. Homberg, R. Niese and B. Michaelis: *Efficient Tracking Approach of Multiple Interacting Objects Using Data Association*. 22nd Int. Symp. on Computer and Information Sciences, IEEE, 2007 Ankara, (CD).
- [275]. Panning, A.; Al-Hamadi, A.; Niese, R.; Michaelis B.: *Facial Expression Recognition Approach based on Haar-Like Feature Detection*, 7th Open German/Russian Workshop on Pattern Recognition and Image Understanding, Ettlingen, CD, 2007.
- [276]. Mostafa Ahmad, A. Al-Hamadi, G. Krell and B. Michaelis.: *Very Low Bit Rate Video CODEC Based on Wavelet Filters*, International Conference on Computational Science and Its Applications, 2007, Malaysia, (published by IEEE-CS), pp. 65-71.
- [277]. Niese R., Al-Hamadi A. and Michaelis B.: *Real-time Capable Method for Facial Expression Recognition in Color and Stereo Vision*, International Conference on Computational Science and Its Applications, Malaysia, LNCS 4705, Springer Verlag, 2007. pp.397-408.
- [278]. Sherif El-Etriby, Ayoub Al-Hamadi and Bernd Michaelis: *Dense stereo correspondence with slanted surface using phase-based algorithm*. IEEE International Symposium on Industrial Electronics, June 2007. pp. 1807-1813.
- [279]. Mostafa Ahmad, A. Al-Hamadi, G. Krell and B. Michaelis: *Enhancing the visual quality in hybrid filters wavelet-based low bit-rate video codec*. In Proceedings of 6th International Conference of Measurement of Audio and Video Quality in Networks- MESAQIN 2007, Prague, June 2007. CD, ISBN [978-80-01-03734-8].
- [280]. R. Niese, A. Al-Hamadi and B. Michaelis: *A Stereo and Color-based Method for Face Pose Estimation and Facial Feature Extraction*, ICPR 2006 (IEEE), 18th International Conference on Pattern Recognition, Hong Kong, pp. 299- 302.
- [281]. A. Al-Hamadi, A. Panning, R. Niese and B. Michaelis: *A Model-based Image Analysis Method for Extraction and Tracking of Facial Features in Video Sequences*, 4th International Multi-Conference on Computer Science and Information Technology CSIT 2006, IEEE, Amman, Vol. (3), pp. 499-509.
- [282]. Sherif El-Etriby, Ayoub Al-Hamadi, Bernd Michaelis: *Phase-Based Disparity Estimation with Implicit Foreshortening-Correction*, 4th International Multi conference on Computer Science and Information Technology 2006, IEEE, Amman, Vol.(3), pp.510-520.
- [283]. A. Al-Hamadi, B. Michaelis: *An Intelligent Paradigm for Multi-Objects Tracking in Crowded Environment*, 4th International Multi-Conference on Computer Science and Information Technology CSIT 2006, Amman, Vol. (3), pp. 488-498.
- [284]. Ayoub K. Al-Hamadi, Bernd Michaelis: *Suppression of Cast Shadows for Improved Object Discrimination in Video Sequences*; IEEE International Conference on Computational Intelligence for Modelling Control and Automation-CIMCA'2005, Vienna, pp.518-524.
- [285]. Ayoub K. Al-Hamadi, Bernd Michaelis: *Robust Multi-Object Tracking Under a Wide Range of Real-World Conditions*; IEEE International Conference on Computational Intelligence for Modelling Control and Automation -CIMCA'2005, Vienna, Austria, pp. 815-821.
- [286]. Sherif El-Etriby, Ayoub Al-Hamadi, Bernd Michaelis: *Improvement the Accuracy of 3-D Reconstruction Considering Distortion in Stereovision using a Set of Linear Spatial Filters*; IEEE International Conference on Computational Intelligence for Modelling Control and Automation - CIMCA'2005, Vienna, Austria, pp.654-660.
- [287]. Ayoub K. Al-Hamadi, Bernd Michaelis, Karsten Kube: *A Shadow Detection Filter on the Basis of Colour-Structure-Code Algorithm*, International Congress for global Science and Technology, Conference on Graphics, Vision and Image Processing (GVIP-05), Cairo 2005, pp. 428-433.

- [288]. Ayoub K. Al-Hamadi, Bernd Michaelis: *Hierarchical Feature-based Paradigm for Multi-object Tracking*, International Congress for Global Science and Technology, Conference on Graphics, Conference on Graphics, Vision and Image Processing (GVIP-05), Cairo, pp. 434-439.
- [289]. Sherif El-Etriby, Ayoub Al-Hamadi, Bernd. Michaelis: *Improvement of 3-D Reconstruction by Deformable Stereo Matching using a Set of Linear Spatial Filters*, ICGST International Congress for global Science and Technology, Conference on Graphics, Conference on Graphics, Vision and Image Processing, ISSN [1687-398X], pp. 445-450.
- [290]. Niese R.; Calow R.; Al-Hamadi A. Michaelis B.: *Automatische 3D-Gesichtserfassung in Farbstereosequenzen*, 8. Anwendungsbezogener Workshop zur Erfassung, Modellierung, Verarbeitung und Auswertung von 3D-Daten, 3D-NordOst 2005, Berlin, pp. 53-60.
- [291]. Michealis B., Niese R., Al-Hamadi A.: *Emotionsbewertung durch 3D Gesichtserfassung*, Methoden und Verfahren zur Entwicklung, Bewertung und Anwendung von Systemen zur Mensch-Maschine-Interaktion; Workshop IFF, Magdeburg Februar 2005, pp.18-26.
- [292]. Kube K., Herzog A., Michaelis B., Al-Hamadi A., de Lima A., Voigt T.: *Spike-timing-dependent-plasticity in 'small world' networks*, ESANN'2005,, Bruges/Belgium, pp. 601-606.
- [293]. Al-Hamadi, A.; Niese R.; Michaelis, B: *Feature-based Correspondence Analysis in Color Image Sequences*; International Conference on Computer Vision and Graphics 2004; September 22-24, Warsaw, Poland; Springer Verlag, pp. 179-187.
- [294]. Al-Hamadi, A.; Niese R. ; Michaelis, B: *Multi-Object Tracking In Video Using A Trisection Paradigm*; 7th International Conference on Pattern Recognition and Image Analysis: New information technologies; PRIA-7-2004; October 18-23; St. Petersburg; pp. 599-602.
- [295]. Al-Hamadi, A.; Niese R. ; Michaelis, B: *A Fast and Robust Approach for the Segmentation of Moving objects*; International Conference on Computer Vision and Graphics 2004; September 22-24, Warsaw, Poland; pp. 13-20.
- [296]. Al-Hamadi, A.; Niese R. ; Michaelis, B: *A robust approach for contour extraction and tracking of moving objects in video sequences*; International Conference on Signal Processing, Pattern Recognition, and Applications; 2003, Rhodes/Greece; pp. 336-341; [ISBN:0-88986-363-6].
- [297]. Al-Hamadi, A.; Michaelis, B.; Niese R.: *Towards Robust segmentation and tracking of moving objects in video sequences*; 3rd IEEE-EURASIP; 3rd International Symposium on Image and Signal Processing and Analysis ISPA 03, 2003, Rome, Italy, pp. 645-651.
- [298]. Calow R., Michaelis B., Ayoub Al-Hamadi: *Solutions for model-based analysis of human gait*; 25th DAGM Pattern Recognition Symposium, 2003, pp.540-547; Springer Verlag; LNCS2781.
- [299]. Al-Hamadi, A.; Niese, R.; Michaelis, B.: *Hierarchische merkmalsbasierte Bewegungsanalysemethode für Videosequenzen*. Proc. 9th German Workshop on Color Image Processing, FarbBV '03, Esslingen, 2003, pp. 27-34.
- [300]. Al-Hamadi, A.; Niese R.; Michaelis, B.: *Another paradigm for the solution of the correspondence problem in motion analysis*; CIARP '2003 8th Iberoamerican Conference on Pattern Recognition (IAPR); Springer Verlag, Havana; pp.95-103.
- [301]. Al-Hamadi, A.; Michaelis, B.; Mecke R.: *Improvement of fail safe characteristics in motion analysis using colour information*; CIARP '2003 8th Iberoamerican Conference on Pattern Recognition (IAPR); Springer Verlag, Havana; pp.104-112.
- [302]. Al-Hamadi, A.; Michaelis B.: *Object-adapted intensity-based motion analysis in video*; ICAPR '2003 Fifth International Conference on Advances in Pattern Recognition; Dec 10-13, 2003; Calcutta, India; pp. 410-413.
- [303]. Al-Hamadi, A.; Michaelis, B.: *Robust Method for Detection and Motion Estimation of Objects in Colour Video Sequences using Multi-Channel-Matching*. IASTED-Visualization, Imaging and Image Processing; Malaga, Spain, 2002; pp. 633-638-.
- [304]. Al-Hamadi, A.; Michaelis, B.: *Adaptive Tracking of Moving Objects in Colour Video Sequences*. 12th Portuguese Conference on Pattern Recognition, RECPAD 2002, Aveiro, Portugal, June 27-28, 2002; P.05; [ISBN 972-780-067-9].
- [305]. Al-Hamadi, A.; Michaelis, B.: *Intensity-based method for tracking of objects in colour video sequences under the influence of non-cooperative situations*. IASTED, International Conference

- on Signal Processing, Pattern Recognition and Applications; Crete, Greece, June, 2002; pp. 62-67, [ISBN: 0-88986-338-5].
- [306]. Al-Hamadi, A.; Michaelis, B.: *Fulfillment of the Demand for Robustness and Flexibility in the Motion Analysis Systems by Adaptive Color Space Transformation*. First European Conference on Color in Graphics, Imaging and Vision, CGIV 2002, Poitiers, France, April, pp. 540-544.
- [307]. Al-Hamadi A.: *Improvement of fail-safe characteristics in the motion analysis in monocular colour image sequences by adaptive colour space transformation*; PhD. Thesis; University of Magdeburg, Germany; September 2001.
- [308]. Al-Hamadi, A.; Michaelis, B.; Mecke, R.: *Bewegungsanalyse in Farbbildsequenzen unter Berücksichtigung von nichtkooperativen Messsituationen*; Fachtagung Informationstechnik, März 2001, Uni-Magdeburg, [ISBN 3-930385-29-5], pp. 147-152.
- [309]. Al-Hamadi, A.; Michaelis, B.; Mecke, R.: *Verbesserte Störsicherheit bei der Bewegungsbestimmung durch adaptive Farbraumtransformation*; Proceedings in Artificial Intelligente 9; Dynamische Perzeption; Ulm, 2000; infix; pp.167-170; [ISBN 3-89838-020-3].
- [310]. Al-Hamadi, A.; Hofmeister, H.; Michaelis, B.; Brückner, B.; Mecke, R.: *Automatisierte Objektselektion und -verfolgung in einem adaptiven Farbraum*; 6th German Workshop on Color Image Processing; 2000, GFal Berlin; pp.27-34; [ISBN: 3-9807029-4-4].
- [311]. Al-Hamadi, A.; Mecke, R.; Michaelis, B.: *Verbesserte Bewegungsbestimmung durch adaptive Farbraumtransformation*; Proc. 5th German Workshop on Colour Image Processing; Ilmenau, 1999, pp. 75-82; [ISSN 1432-3346].
- [312]. Mecke, R.; Al-Hamadi, A.; Michaelis, B.: *A Robust Method for Block-Based Motion Estimation in RGB-Image Sequences*. 14th International Conference on Pattern Recognition; ICPR 98, Volume I, Brisbane, Australia, 1998, pp. 663-667.