

Publications - Georg Langs

1. Peer Reviewed Publications

1.A Journals

1. Franz Kainberger, Philipp Peloschek, **Georg Langs**, Karl Boegl, Horst Bischof. Differential diagnosis of rheumatic diseases using conventional radiography, in **Best Practice & Research Clinical Rheumatology** 18(6), pp. 783-811, Dec 2004, Elsevier, PMID: 15501183
2. Walter G. Kropatsch, Yil Haxhimusa, Zygmunt Pizlo, **Georg Langs**. Vision pyramids that do not grow to high, in **Pattern Recognition Letters** 26(3), February 2005, pp.319-338
3. Rene Donner, Michael Reiter, **Georg Langs**, Philipp Peloschek, Horst Bischof. Fast Active Appearance Model Search Using Canonical Correlation Analysis, in **IEEE Transactions on Pattern Analysis and Machine Intelligence PAMI** 28(10) October 2006, pp.1690-1694
4. Philipp Peloschek, **Georg Langs**, Alexander Valentinitich, Mile Bubalo, Thomas Schlager, C. Muller-Mang, Franz Kainberger. Quantitative imaging in rheumatoid arthritis: from scoring to measurement in **Der Radiologe** May 2006 46(5):411-416 PMID: 16670915
5. Franz Kainberger, **Georg Langs**, Philipp Peloschek, Thomas Schlager, C. Schueller-Weidekamm, Alexander Valentinitich. Computerassistierte radiologische Diagnostik arthritischer Gelenkveraenderungen in **Z Rheumatol** 2006
6. John T. Sharp, Jane Angwin, Maarten Boers, Jeff Duryea, Gabriele von Ingersleben, James R. Hall, Joost A. Kauffman, Robert Landewe, **Georg Langs**, Cedric Lukas, Jean-Francis Maillefert, H. J. Bernelot Moens, Philipp Peloschek, Vibeke Strand and Desiree van der Heijde. Computer based methods for measurement of joint space width: Update of an Ongoing OMERACT Project, in **Journal of Rheumatology** 34(4):874-883, April 2007
7. **Georg Langs**, Philipp Peloschek, Rene Donner, Horst Bischof. Multiple Appearance Models, in **Pattern Recognition** 40(9) p.2485-2495, September 2007
8. Philipp Peloschek, **Georg Langs**, Michael Weber, Johannes Sailer, Michael Reisegger, Herwig Imhof, Horst Bischof, Franz Kainberger. An automatic model-based system for joint space measurements on hand radiographs initial experience, in **Radiology** 245(3):855-862 December 2007
9. **Georg Langs**, Philipp Peloschek, Horst Bischof, Franz Kainberger. Model Based Erosion Spotting and Visualization in Rheumatoid Arthritis, in **Academic Radiology**, 14(10):1179-1188, October 2007
10. C. Lukas, J. Sharp, J. Angwin, M. Boers, J. Duryea, J. Hall, J. Kauffman, R. Landewe, **G. Langs**, H. Bernelot Moens, P. Peloschek, and D. van der Heijde. Automated measurement of joint space width in small joints of patients with rheumatoid arthritis. **Journal of Rheumatology**, 35(7):1288-1293, 2008.
11. P. Peloschek, C. Mueller-Mang, K. Friedrich, **G. Langs**, R. Donner, A. Valentinitich, F. Kainberger. Measurement instead of scoring in rheumatology: New quantitative imaging and processing methods in radiology. in **Z Rheumatol** 2008 Feb;67(1):51-7, PMID:18224328
12. **Georg Langs**, Philipp Peloschek, Horst Bischof, Franz Kainberger. Automatic Quantification of Joint Space narrowing and Erosions in Rheumatoid Arthritis. in **IEEE Transactions on Medical Imaging TMI** 2009 Jan;28(1):151-64
13. N. Fakhrai, P. Widhalm, C. Chiari, M. Weber, **G. Langs**, R. Donner, H. Ringl, M. Jantsch, and P. Peloschek. Automatic assessment of the knee alignment angle on full-limb radiographs. **Eur J Radiol**, Volume 74, Issue 1, April 2010, Pages 236-240

14. K. Friedrich, T. Mamisch, C. Plank, **G. Langs**, S. Marlovits, E. Salomonowitz, S. Trattinig, and G. Welsch. Diffusion-weighted imaging for the follow-up of patients after matrix-associated autologous chondrocyte transplantation. *Eur J Radiol*, Jan 2009.
15. O. Kubassova, M. Boesen, P. Peloschek, **G. Langs**, M. A. Cimmino, H. Bliddal, and S. Torp-Pedersen. Quantifying disease activity and damage by imaging in rheumatoid arthritis and osteoarthritis. *Ann N Y Acad Sci*, 1154:207–238, Feb 2009.
16. P Peloschek, M Boesen, R Donner, O Kubassova, E Birngruber, J Patsch, M Mayerhöfer, **G Langs**. Assessement of rheumatic diseases with computational radiology: Current status and future potential. *Eur J Radiol*. 2009 May 18. PMID: 19457632
17. Erich Birngruber, René Donner, **Georg Langs**. matVTK - 3D Visualization for MATLAB. in *Insight Journal* 2009
18. R. Donner, **G. Langs**, H. Wildenauer, H. Bischof. Generalized Sparse MRF Appearance Models in *Image and Vision Computing* 2010 (in press)
19. Sharp JT, Angwin J, Boers M, Duryea J, Finckh A, Hall JR, Kauffman JA, Landewé R, **Langs G**, Lukas C, Moens HJ, Peloschek P, Strand CV, van der Heijde D. Multiple computer-based methods of measuring joint space width can discriminate between treatment arms in the COBRA trial -- Update of an ongoing OMERACT project. *J Rheumatol*. 2009 Aug;36(8): 1825-8.
20. P. Peloschek, S. Nemeč, P. Widhalm, R. Donner, E. Birngruber, H. Thodberg, F. Kainberger, **G. Langs**. Computational radiology in skeletal radiography. *Eur J Radiol*, 72(2) Pages 252-257, 2009,
21. S. Zambanini, R. Sablatnig, H. Mayer, **G. Langs**. Automatic Image-Based Assessment of Lesion Development during Hemangioma Follow-Up Examinations. to appear in *Artificial Intelligence in Medicine* 2010
22. **G. Langs**, N. Paragios, P. Desgranges, A. Rahmouni, H. Kobeiter. Learning Deformation and Structure Simultaneously: In Situ Endograft Deformation Analysis. in *Medical Image Analysis* (2011), 15(1): 12-21
23. **G. Langs**, B. H. Menze, D. Lashkari, and P. Golland. Detecting stable distributed patterns of brain activation using gini contrast. *NeuroImage*, 56(2):497 – 507, 2011.
24. G. Kasprian, **G. Langs**, P. C. Brugger, M. Bittner, M. Weber, M. Arantes, and D. Prayer. The prenatal origin of hemispheric asymmetry: an in utero neuroimaging study. *Cerebral Cortex*, 21(5):1076–83, May 2011.
25. A. Valentinitšch, JM. Patsch, J. Deutschmann, C. Schueller-Weidekamm, H. Resch, F. Kainberger, **G. Langs**. Automated threshold-independent cortex segmentation by 3D-texture analysis of HR-pQCT scans. in *Bone* 51(3):480-487, 2012 Sep;
26. A. Valentinitšch, JM. Patsch, AJ. Burghardt, TM. Link, S. Majumdar, L. Fischer, C. Schueller-Weidekamm, H. Resch, F. Kainberger, **G. Langs**. Computational identification and quantification of trabecular microarchitecture classes by 3-D texture analysis-based clustering. to appear in *Bone*. 2013 PMID: 23313281 (accepted)
27. R. Donner, BH. Menze, H. Bischof, **G. Langs**. Global Localization of 3D Anatomical Structures by Pre-filtered Hough Forests and Discrete Optimization. to appear in *Medical Image Analysis*. 2013 (accepted)
28. F. Ganglberger, F. Schulze, L. Tirian, A. Novikov, B. Dickson, K. Bühler, and **G. Langs**, “Structure-Based Neuron Retrieval Across Drosophila Brains.,” *Neuroinformatics*, pp. 1–12, Jan. 2014.
29. E. Dittrich, T. Riklin-Raviv, G. Kasprian, R. Donner, P. C. Brugger, D. Prayer, and **G. Langs**, “A spatio-temporal latent atlas for semi-supervised learning of fetal brain segmentations and morphological age estimation.,” *Medical Image Analysis*, vol. 18, no. 1, pp. 9–21, Jan. 2014.
30. D. Markonis, M. Holzer, S. Dungs, A. Vargas, G. Langs, S. Kriewel, and H. Müller. A survey on visual information search behavior and requirements of radiologists. *Methods of information in medicine*, 51(6):539, 2012.

1.B Full Papers in Peer Reviewed Conference Proceedings

1. Yll Haximusa, Roland Glantz, Mamar Saib, **Georg Langs** and Walter G. Kropatsch, Reduction Factors of Pyramids on Undirected and Directed Graphs, in Proceedings of the Computer Vision Winter Workshop **CVWW** 2002, Bad Aussee, Austria, pp 29 - 38
2. **Georg Langs**, Horst Bischof and Walter G. Kropatsch, Hierarchical Top Down Enhancement of Robust PCA, in Proceedings of the 9th workshop on Syntactical and Structural Pattern Recognition, **SSPR** 2002, Windsor, Canada, Lecture Notes in Computer Science LNCS2396, pp 234 - 242, Springer Verlag
3. **Georg Langs** and Horst Bischof, Focusing Visual Attention in Mobile Robot Navigation, in Proceedings of the 26th Workshop of the Austrian Association of Pattern Recognition, **AAPR** 2002, Graz, Austria, pp. 95 - 102, Oldenburg Verlag
4. Yll Haximusa, Roland Glantz, Maamar Saib, **Georg Langs** and Walter G. Kropatsch, Logarithmic Tapering Graph Pyramid, in Proceedings of the 24th **DAGM** Symposium 2002, Zuerich, Switzerland, Lecture Notes in Computer Science LNCS2449 pp. 117 - 124, Springer Verlag
5. **Georg Langs**, Philipp Peloschek and Horst Bischof, Locating Joints in Hand Radiographs - Towards Automated Radiograph Analysis in Rheumatoid Arthritis Therapy, in Proceedings of Computer Vision Winter Workshop **CVWW** 2003, Valtice, Czech Republic, pp.97-102
6. **Georg Langs**, Philipp Peloschek and Horst Bischof, ASM Driven Snakes in Rheumatoid Arthritis Assessment, in Proceedings of 13th Scandinavian Conference on Image Analysis, **SCIA** 2003, Goeteborg, Schweden, Lecture Notes in Computer Science LNCS 2749, pp. 454-461, Springer Verlag
7. Paul Kammerer, **Georg Langs**, Robert Sablatnig and Ernestine Zolda, Stroke Segmentation in Infrared Reflectograms, in Proceedings of 13th Scandinavian Conference on Image Analysis, **SCIA** 2003, Goeteborg, Schweden, Lecture Notes in Computer Science LNCS 2749, pp. 1138-1145, Springer Verlag
8. **Georg Langs**, Philipp Peloschek and Horst Bischof, Determining Position and Fine Shape Detail in Radiological Anatomy, in Proceedings of 25th Pattern Recognition Symposium, **DAGM** 2003, Magdeburg, Germany, Lecture Notes in Computer Science, LNCS 2781, pp. 232-239, Springer Verlag
9. Paul Kammerer, **Georg Langs**, Robert Sablatnig and Ernestine Zolda, Stroke Boundary Analysis for Identification of Drawing Tools, in Proceedings of 8th Iberoamerican Congress on Pattern Recognition, **CIARP** 2003, Havana, Cuba, Lecture Notes in Computer Science, pp. 402-409, Springer Verlag
10. **Georg Langs**, Petia Radeva, Francesc Carreras Explorative Building of 3D Vessel Tree Models in Proceedings of the 28th Workshop of the Austrian Association of Pattern Recognition, **AAPR** 2004 Hagenberg, Austria, pp.117-124 (Best Paper Award AAPR 2004)
11. **Georg Langs**, Petia Radeva, David Rotger, Francesc Carreras Building and Registering Parameterized 3D Models of Vessel Trees for Visualization during Intervention in Proceedings of the IEEE International Conference on Pattern Recognition **ICPR** 2004, Cambridge, UK Vol. 3 pp.726-729
12. Rene Donner, **Georg Langs**, Michael Reiter, Horst Bischof. CCA-based Active Appearance Model Search in Proceedings of Computer Vision Winter Workshop **CVWW** 2005 , pp.73-82
13. **Georg Langs**, Philipp Peloschek, Horst Bischof. MDL-based Splitting of PCA Models in Proceedings of Computer Vision Winter Workshop **CVWW** 2005 , pp.13-22
14. Sebastian Zambanini, **Georg Langs**, Robert Sablatnig. Segmentation and Surveying of Cutaneous Hemangiomas in Proceedings of Computer Vision Winter Workshop **CVWW** 2005 , pp.103-112

15. **Georg Langs**, Philipp Peloschek, Horst Bischof. Optimal Sub-Shape Models by Minimum Description Length in Proceedings of IEEE Intl. Conference on Computer Vision and Pattern Recognition **CVPR** 2005 , pp.310-315
16. Rene Donner, **Georg Langs**, Michael Reiter, Horst Bischof. Fast Active Appearance Model Search based on CCA and its application to hand radiographs to appear in Proceedings of Joint Hungarian-Austrian Conference on Image Processing and Pattern Recognition **HACIPPR** 2005, Veszprem, Hungary
17. **Georg Langs**, Philipp Peloschek, René Donner, Horst Bischof. A Clique of Active Appearance Models by Minimum Description Length in Proceedings of the British Machine Vision Conference **BMVC** 2005, Oxford, UK, pp. 859-868
18. Reinhard Beichel, Horst Bischof, **Georg Langs**, Milan Sonka. A Robust Matching Algorithm for Active Appearance Models, in **Bildverarbeitung fur die Medizin** 2005, Springer Verlag
19. **Georg Langs**, Philipp Peloschek, René Donner, Horst Bischof. Annotation Propagation by MDL Based Correspondences in Proceedings of Computer Vision Winter Workshop **CVWW** 2006 pp.11-16
20. Michael Reiter, René Donner, **Georg Langs**, Horst Bischof. Estimation of Face Depth Maps from Color Textures using Canonical Correlation Analysis in Proceedings of Computer Vision Winter Workshop **CVWW** 2006 pp.17-21 ,
21. Michael Reiter, René Donner, **Georg Langs**, Horst Bischof. Predicting Near Infrared Face Texture from Color Face Images using Canonical Correlation Analysis in Proceedings of the Workshop of Austrian Association for Pattern recognition **AAPR** 2006, pp. 161-168
22. **Georg Langs**, Philipp Peloschek, Rene Donner, Michael Reiter, Horst Bischof. Active Feature Models, in Proceedings of the International Conference on Pattern Recognition **ICPR** 06 Vol. 1, pp.417-420
23. Michael Reiter, Rene Donner, **Georg Langs**, Horst Bischof. 3D and Infrared Face Reconstruction from RGB data using Canonical Correlation Analysis in Proceedings of the International Conference on Pattern Recognition **ICPR** 06 Vol. 1, pp.425-428
24. Sebastian Zambanini, **Georg Langs**, Robert Sablatnig, Harald Mayer, K. Donath. Automatic Surveying of Cutaneous Hemangiomas, in Proceedings of the International Conference on Pattern Recognition **ICPR** 06 Vol. 1, pp.1022-1025
25. Alexander Valentinitzsch, Thomas Schlager, **Georg Langs**, Philipp Peloschek Approaches for administration of DICOM-data for computerized applications, in Proceedings of **EuroPACS** 2006
26. **Georg Langs**, Philipp Peloschek, Horst Bischof, Franz Kainberger Automatic Detection of Erosions in Rheumatoid Arthritis Assessment, in Proceedings of **MICCAI Joint Disease Workshop** 2006, pp. 33-40
27. James Cheong, Nathan Faggian, **Georg Langs**, David Suter, F. Cicuttini A Comparison of Model-Based Methods for Knee Cartilage Segmentation, in Proc. of **VISAPP07**, 2007
28. Sebastian Zambanini, **Georg Langs**, Robert Sablatnig, Harald Mayer Automatic Robust Registration of Cutaneous Hemangiomas for Follow up Examinations in Proceedings of **AAPR07**, 2007, p. 121-128
29. Lech Szumilas, Rene Donner, Allan Hambury, **Georg Langs**. Local Structure Detection with Orientation-invariant Radial Configuration, in Proc. of **CVPR07**, 2007
30. Rene Donner, Branislav Micusik, **Georg Langs**, Lech Szumilas, Horst Bischof Sparse MRF Appearance Models for Fast Anatomical Structure Localisation, in Proc. of **BMVC07**, 2007
31. **Georg Langs**, Rene Donner, Philipp Peloschek, Horst Bischof. Robust Autonomous Model Learning from 2D and 3D Data Sets in Proc. of **MICCAI07**, 2007
32. Rene Donner, Branislav Micusik, **Georg Langs**, Lech Szumilas, Horst Bischof Object Localization based on Markov Random Fields and Symmetry Interest Points in Proc. of **MICCAI07**, 2007

33. **Georg Langs**, Nikos Paragios, Hicham Kobeiter, Rene Donner Motion Analysis of Endovascular Stent-Grafts by MDL Based Registration in Proc. of **MMBIA07**, 2007
34. **Georg Langs**, Nikos Paragios. Modeling the structure of multivariate manifolds: Shape Maps. in Proc. of **CVPR'08**, 2008
35. Salma Essafi, **Georg Langs**, Nikos Paragios. Sparsity, Redundancy, Optimal Image Support: an axiomatic approach to knowledge-based segmentation. in Proc. of **CVPR'08**, 2008
36. Yuan Han, **Georg Langs**, Nikos Paragios. Group-wise MDL based registration of small animals in video sequences. in Proc. of IEEE **ISBI'08**, 2008
37. Peter Widhalm, **Georg Langs**, René Donner, Negar Fakhrai, Philipp Peloschek, Robert Sablatnig. Estimation of Fit Confidence in Active Shape Model Search for the Reliable Measurement of Knee Alignment. in Proc. of **AAPR'08**, 2008
38. **Georg Langs**, Dimitris Samaras, Nikos Paragios, Jean Honorio, Nelly~Alia-Klein, Dardo Tomasi, Nora D. Volkow, Rita Z. Goldstein. Task-Specific Functional Brain Geometry from Model Maps. in **Proceedings of MICCAI'08**, 2008
39. Ahmed Besbes, Nikos Paragios, Nikos Komodakis, **Georg Langs**. Shape Priors and Discrete MRFs for Knowledge-based Segmentation. to appear in *Proceedings of IEEE CVPR'09*
40. Radhouène Neji, Nikos Paragios, Gilles Fleury, Jean-Philippe Thiran, **Georg Langs**. Classification of Tensors and Fiber Tracts Using Mercer-Kernels Encoding Soft Probabilistic Spatial and Diffusion Information. to appear in *Proceedings of IEEE CVPR'09*
41. Aristeidis Sotiras, Nikos Komodakis, **Georg Langs**, Nikos Paragios, Atlas-based Deformable Mutual Population segmentation. to appear in *Proceedings of IEEE ISBI'09*
42. Salma Essafi, **Georg Langs**, Jean Francois Deux, Alain Rahmouni, Guillaume Bassez, Nikos Paragios. Wavelet-Driven Knowledge-Based MRI Calf Muscle Segmentation. to appear in *Proceedings of IEEE ISBI'09*
43. Radhouene Neji, **Georg Langs**, Jean François Deux, Mezri Maatouk, Alain Rahmouni, Guillaume Bassez, Gilles Fleury, Nikos Paragios. Unsupervised Classification of Skeletal Fibers using Diffusion Maps. to appear in *Proceedings of IEEE ISBI'09*
44. Eva Dittrich, Radhouène Neji, Tilman Schmoll, Sabine Schriefl, Christian Ahlers, Rainer A. Leitgeb, **Georg Langs**. Detection of Capillary Vessels in Optical Coherence Tomography Based on a Probabilistic Kernel. in Proceedings of **MIUA 2009**.
45. Ernst Schwartz, **Georg Langs**, Johannes Holfeld, Roman Gottardi, Christian Loewe, Philipp Peloschek, Martin Czerny. Segmentation and Deformation Analysis of the Aorta in Gated CTA sequences in a MDL Framework. in Proceedings of **MIUA 2009**.
46. René Donner, Horst Wildenauer, Horst Bischof, **Georg Langs**. Weakly Supervised Group-Wise Model Learning based on Discrete Optimization. in Proceedings of **MICCAI 2009**
47. Salma Essafi, **Georg Langs**, Nikos Paragios. Left Ventricle Segmentation Using Diffusion Wavelets and Boosting. in Proceedings of **MICCAI 2009**
48. Salma Essafi, **Georg Langs**, Nikos Paragios Hierarchical 3D Diffusion Wavelet Shape Priors. in Proceedings of **ICCV 2009**
49. Lukas Fischer, René Donner, Franz Kainberger, **Georg Langs**. Automatic Region Template Generation for Shape Particle Filtering based Image Segmentation. in Proc. of **MICCAI Workshop on Probabilistic Models for Medical Image Analysis 2009**.
50. **Georg Langs**, Gregor Kasprian, Peter C. Brugger, and Daniela Prayer. Quantitative Morphometry of Fetal Cortical Hemispheres and their Asymmetry. in Proc. **MICCAI'09 Workshop on Image Analysis of the Developing Brain**. 2009
51. Alexander Valentinitisch, Janina Patsch, Dirk Mueller, Franz Kainberger, **Georg Langs**. Texture Analysis in Quantitative Osteoporosis Assessment: Characterizing Microarchitecture. to appear in **Proc. of ISBI'10**, 2010

52. Ernst Schwartz, Roman Gottardi, Johannes Holfeld, Christian Loewe, Martin Czerny, **Georg Langs**. Evaluating deformation patterns of the thoracic Aorta in gated CTA sequences. in **Proc. of ISBI'10**, 2010
53. **Georg Langs**, Yanmei Tie, Laura Rigolo, Alexandra Golby, Polina Golland. Functional Geometry Alignment and Localization of Brain Areas. to appear in **Adv. in Neural Information Processing Systems NIPS** 2010.
54. René Donner, Helmut Steiner, Horst Bischof, **Georg Langs**. Localization of 3D Anatomical Structures Using Random Forests and Discrete Optimization. in Proc. of MCV - MICCAI 2010
55. **Georg Langs**, Gregor Kasprian, Eva Dittrich, Mario Bittner, Peter Brugger, Daniela Prayer. Group-wise Spatio-Temporal Registration and Segmentation of Fetal Cortical Surface Development. in Proc. STIA - MICCAI 2010
56. Burner, A. and Donner, R. and Mayerhoefer, M. and Kainberger, F. and **Langs G**. Texture Bags: Anomaly Retrieval in Medical Images based on Local 3D-Texture Similarity. Proc. of the MICCAI 2011 MCBR-CDS 2011, Toronto, Canada.
57. **Langs, G.** and Lashkari, D. and Sweet, A. and Tie, Y. and Rigolo, L. and Golby, A. and Golland, Learning an Atlas of a Cognitive Process in Its Functional Geometry. Proc. Information Processing in Medical Imaging 2011, pp.135-146
58. E. Dittrich, T. Riklin-Raviv, G. Kasprian, P. Brugger, D. Prayer and **G. Langs**. Learning a spatio-temporal latent atlas for fetal brain segmentation. Proceedings of the MICCAI 2011 Workshop on Image Analysis of Human Brain Development (IAHBD 2011), Toronto, Canada.
59. Haas, S. and Donner, R. and Burner, A. and Holzer, M. and **Langs G**. Superpixel-based Interest Points for Effective Bags of Visual Words Medical Image Retrieval. Proc. of the MICCAI 2011 MCBR-CDS 2011, Toronto, Canada.
60. Ernst Schwartz, Johannes Holfeld, Marzin Czerny, **Georg Langs**. Visualizing changes in vessel wall dynamics due to stent-grafting in the aortic arch. In Proc. IEEE ISBI'12, 2012
61. René Donner, Georg Langs. Fast Anatomical Structure Localization Using Top-down Image Patch Regression. In Proc. of MICCAI 2012 Workshop on Medical Computer Vision.
62. Mark Ison, Eva Dittrich, René Donner, Gregor Kasprian, Daniela Prayer, **Georg Langs**. Fully Automated Brain Extraction and Orientation in Raw Fetal MRI. In Proc of MICCAI 2012 Workshop on Perinatal and Paediatric Imaging.
63. Ernst Schwartz, Johannes Holfeld, Martin Czerny, Christian Loewe, **Georg Langs**. Towards Predicting the Effects of Stent-Grafting on the Motion of the Thoracic Aorta. In Proc. of MICCAI 2012 STENT Workshop on Computer Assisted Stenting
64. M. Dorfer, R. Donner, and G. Langs, "Constructing an un-biased whole body atlas from clinical imaging data by fragment bundling," in proceedings of Medical Image Computing and Computer-Assisted Intervention - MICCAI 2013, 2013, pp. 219–226.
65. D. Markonis, R. Donner, M. Holzer, T. Schlegl, S. Dungs, S. Kriewel, **G. Langs**, and H. Mueller. A visual information retrieval system for radiology reports and the medical literature. In Proc. of Conf. on MultiMedia Modeling, 2013
66. **G. Langs**, A. Hanbury, B. Menze, and H. Müller. Visceral: Towards large data in medical imaging— challenges and directions. In Medical Content-Based Retrieval for Clinical Decision Support 2012, pages 92–98. Springer Berlin Heidelberg, 2013.
67. Niraj Aswani, Thomas Beckers, Erich Birngruber, Célia Boyer, Andreas Burner, Jakub Bystron, Khalid Choukri, Sarah Cruchet, Hamish Cunningham, Jan Dědek, Ljiljana Dolamic, René Donner, Sebastian Dungs, Ivan Eggel, Antonio Foncubierta-Rodríguez, Norbert Fuhr, Adam Funk, Alba García Seco de Herrera, Arnaud Gaudinat, Georgi Georgiev, Julien Gobeill, Lorraine Goeuriot, Paz Gómez, Mark Greenwood, Manfred Gschwandtner, Allan Hanbury, Jan Hajič, Jaroslava Hlaváčová, Markus Holzer, Gareth Jones, Blanca Jordan, Matthias Jordan, Klemens Kaderk, Franz Kainberger, Liadh Kelly, Sascha Kriewel, Marlene Kritz, **Georg Langs**, Nolan Lawson, Dimitrios Markonis, Ivan Martinez, Vassil Momtchev, Alexandre Masselot, Hélène Mazo, Henning Müller, João Palotti, Pavel Pecina, Konstantin Pentchev, Deyan Peychev, Natalia Pletneva, Diana Pottecher, Angus Roberts, Patrick Ruch, Alexander Sachs, Matthias Samwald, Priscille Schneller, Veronika Stefanov, Miguel A. Tinte, Zdeňka Urešová, Alejandro

- Vargasand Dina Vishnyakova. Khresmoi – multilingual semantic search of medical text and images, in Proceedings of MedInfo 2013, Copenhagen, Denmark, 2013
68. Satrajit Ghosh, Anisha Keshavan, Georg Langs. Predicting Treatment Response from Resting State fMRI Data: Comparison of Parcellation Approaches. In Proceedings of Conference on Pattern Recognition in Neuroimaging
69. A. Hanbury, H. Müller, **G. Langs**, and B. H. Menze. Cloud-based evaluation framework for big data. In The Future Internet, pages 104–114. Springer Berlin Heidelberg, 2013.

2. Book Chapters

1. Philipp Peloschek, **Georg Langs**. Computer Assisted Quantification, in *Medical Radiology Diagnostic Imaging: Measurements in Musculoskeletal Radiology* Springer, 1st edition, Victor N. Cassar-Pullicino, A. Mark Davies (Editors), 300 pages, Publisher: Springer; (November 2008) ISBN-10: 354043853X (in press)
2. **Georg Langs**, Philipp Peloschek, Horst, Bischof, Franz Kainberger. Rheumatoid Arthritis Quantification using Appearance Models. *Handbook of Biomedical Imaging* by Nikos Paragios, James Duncan, et al. (Editors) Springer; 1 edition (November 2008) ISBN-10: 038709748, (in press)

3. Thesis

1. **Georg Langs**, Automatic Quantification of Destructive Changes caused by Rheumatoid Arthritis Master Thesis, supervision: Horst Bischof, May 2003, published as PRIP technical report PRIP-TR-79
2. **Georg Langs**, Autonomous Learning of Appearance Models in Medical Image Analysis, Doctoral Thesis, supervision Horst Bischof, May 2007.

4. Books

1. Bjoern Menze, **Georg Langs**, Zhuowen Tu, Antonio Criminisi (Eds.). *Medical Computer Vision: Recognition Techniques and Applications in Medical Imaging*. LNCS, Springer.
2. **Georg Langs**, Irina Rish, Moritz Grosse-Wentrup, Brian Murphy. *Machine Learning and Interpretation in Neuroimaging. Lecture Notes on Artificial Intelligence Surveys of the State of the Art*. LNCS 7263, Springer, 2012