

Publications

Articles

- [1] Claus Peter Heußel, Jutta Kappes, Romy Hantusch, Simon Hartlieb, Oliver Weinheimer, Hans-Ulrich Kauczor, and Ralf Eberhardt. Contrast enhanced CT-scans are not comparable to non-enhanced scans in emphysema quantification. *European Journal of Radiology*, (accepted), 2009.
- [2] Claus Peter Heußel, Felix Herth, Jutta Kappes, Romy Hantusch, Simon Hartlieb, Oliver Weinheimer, Hans-Ulrich Kauczor, and Ralf Eberhardt. Fully-Automatic Quantitative Assessment of Emphysema in Computed Tomography – Comparison with Pulmonary Function Testing and Normal Values. *European Radiology*, (accepted), 2009.
- [3] Tobias Achenbach, Oliver Weinheimer, Christoph Düber, and Claus Peter Heußel. Influence of Pixel Size on Quantification of Airway Wall Thickness in Computed Tomography. *Journal of Computer Assisted Tomography*, (accepted), 2009.
- [4] Ralf Eberhardt, Claus Peter Heußel, M. Kreuter, Oliver Weinheimer, and F. J. Herth. Bronchoscopic lung volume reduction in patients with severe homogeneous lung emphysema: a pilot study. *Dtsch. Med. Wochenschr.*, 134:506–510, 2009. <http://dx.doi.org/10.1055/s-0029-1208076>.
- [5] Oliver Weinheimer, Tobias Achenbach, Carsten Bletz, Christoph Düber, Hans-Ulrich Kauczor, and Claus Peter Heußel. About Objective 3-D Analysis of Airway Geometry in Computerized Tomography. *IEEE Trans. Med. Imaging*, 27(1):64–74, 2008. <http://dx.doi.org/10.1109/TMI.2007.902798>.
- [6] Tobias Achenbach, Oliver Weinheimer, Alexander Biedermann, Sabine Schmitt, Daniela Freudenstein, Edula Gouthma, Richard Peter Kunz, Roland Buhl, Christoph Dueber, and Claus Peter Heußel. MDCT assessment of airway wall thickness in COPD patients using a new method: correlations with pulmonary function tests. *European Radiology*, 18:2731–2738, 2008. <http://dx.doi.org/10.1007/s00330-008-1089-4>.
- [7] Ralf Schulze, U. Heil, O. Weinheimer, D. Gross, D. Bruellmann, E. Thomas, U. Schwanecke, and Elmar Schoemer. Accurate registration of random radiographic projections based on three spherical references for the purpose of few-view 3D reconstruction. *Med Phys*, 35:546–555, 2008. <http://dx.doi.org/10.1118/1.2829865>.
- [8] Julia Ley-Zaporozhan, Sebastian Ley, Roland Unterhinninghofen, Oliver Weinheimer, Yasuo Saito, Hans-Ulrich Kauczor, and Gabor Szabo. Quantification of Lung Volume at Different Tidal Volumes and Positive End-Expiratory Pressures in a Porcine Model by Using Retrospective Respiratory Gated 4D-Computed Tomography. *Investigative Radiology*, 43(6):461–469, 2008. <http://dx.doi.org/10.1097/RLI.0b013e318169000e>.
- [9] J. Ley-Zaporozhan, S. Ley, O. Weinheimer, S. Iliyushenko, S. Erdugan, R. Eberhardt, A. Fuxa, J. Mews, and H. U. Kauczor. Quantitative analysis of emphysema in 3D using MDCT: influence of different reconstruction algorithms. *Eur J Radiol*, 65:228–234, 2008. <http://dx.doi.org/10.1016/j.ejrad.2007.03.034>.
- [10] Julia Ley-Zaporozhan, Sebastian Ley, Ralf Eberhardt, Oliver Weinheimer, Christian Fink, Michael Puderbach, Monika Eichinger, Felix Herth, and Hans-Ulrich Kauczor. Assessment of the relationship between lung parenchymal destruction and impaired pulmonary perfusion on a lobar level in patients with emphysema. *European Journal of Radiology*, 63:76–83, 2007. <http://dx.doi.org/10.1016/j.ejrad.2007.01.020>.

- [11] S. Ley, J. Ley-Zaporozhan, R. Unterhinninghofen, Y. Saito, M. Fabel-Schulte, O. Weinheimer, J. P. Schenk, G. Szabo, and H. U. Kauczor. Investigation of retrospective respiratory gating techniques for acquisition of thin-slice 4D-Multidetector-computed Tomography (MDCT) of the lung: Feasibility study in a large animal model. *Exp. Lung Res.*, 32:395–412, 2006. <http://dx.doi.org/10.1080/01902140601044812>.
- [12] C. P. Heußel, T. Achenbach, C. Buschsieweke, J. Kuhnigk, O. Weinheimer, G. Hammer, C. Düber, and Hans-Ulrich Kauczor. Quantifizierung des Lungenemphysems in der Mehrschicht-CT mittels verschiedener Softwareverfahren: Quantification of Pulmonary Emphysema in Multislice-CT Using Different Software Tools. *Fortschr Röntgenstr (Röfo)*, 178:987–998, 2006. <http://dx.doi.org/10.1055/s-2006-926823>.
- [13] Julia Zaporozhan, Sebastian Ley, Oliver Weinheimer, Ralf Eberhardt, Ionnis Tsakaris, Yasuhiro Noshi, Felix Herth, and Hans-Ulrich Kauczor. Multi-detector CT of the Chest: Influence of Dose Onto Quantitative Evaluation of Severe Emphysema A Simulation Study. *Journal of Computer Assisted Tomography*, 30:460–468 2006. <http://www.ncbi.nlm.nih.gov/pubmed/16778622>.
- [14] Julia Zaporozhan, Sebastian Ley, Ralf Eberhardt, Oliver Weinheimer, S. Iliyushenko, Felix Herth, and Hans-Ulrich Kauczor. Paired inspiratory/expiratory volumetric thin-slice CT scan for emphysema analysis: comparison of different quantitative evaluations and pulmonary function test. *Chest*, 128:3212–3220, 2005. <http://dx.doi.org/10.1378/chest.128.5.3212>.
- [15] Ralf Schulze, Oliver Weinheimer, D. D. Brüllmann, F. Röder, B. d’Hoedt, and Elmar Schoemer. Software for automated application of a reference-based method for a posteriori determination of the effective radiographic imaging geometry. *Dentomaxillofac Radiol*, 34:205–211, 2005. <http://dx.doi.org/10.1259/dmfr/56357032>.
- [16] Tobias Achenbach, Oliver Weinheimer, Christian Buschsieweke, Claus Peter Heußel, Manfred Thelen, and Hans-Ulrich Kauczor. Fully automatic detection and quantification of emphysema on thin section MD-CT of the chest by a new and dedicated software. *RöFo: Fortschritte auf dem Gebiet der Röntgenstrahlen und der bildgebenden Verfahren*, 176:1409–1415, 2004. <http://dx.doi.org/10.1055/s-2004-813530>.

Proceedings

- [1] [Oliver Weinheimer](#), Tobias Achenbach, and Düber, Christoph. Fully Automated Extraction of Airways from CT Scans Based on Self-Adapting Region Growing. In M. Brown, M. de Bruijne, B. van Ginneken, A. Kiraly, J.M. Kuhnigk, C. Lorenz, J.R. McClelland, K. Mori, A.P. Reeves, and J. Reinhardt, editors, Proc. of Second International Workshop on Pulmonary Image Analysis (in conjunction with MICCAI 2009), 2009.
- [2] [Oliver Weinheimer](#), Tobias Achenbach, Claus Peter Heußel, Manfred Thelen, and Thomas Uthmann. Analyse von Bronchien in der Multislice-CT. In Thomas Tolxdorff, Jürgen Braun, Heinz Handels, Alexander Horsch, and Hans-Peter Meinzer, editors, *Bildverarbeitung für die Medizin 2004, Algorithmen - Systeme - Anwendungen, Proceedings des Workshops vom 29. bis 30. März 2003 in Berlin*, volume 116 of *CEUR Workshop Proceedings*, pages 120–124. CEUR-WS.org, 2004. <http://sunsite.informatik.rwth-aachen.de/Publications/CEUR-WS/Vol-116/p120.pdf>.
- [3] [Oliver Weinheimer](#), Tobias Achenbach, Christian Buschsieweke, Claus Peter Heußel, Thomas Uthmann, and Hans-Ulrich Kauczor. Quantification and Characterization of Pulmonary Emphysema in Multislice-CT: A Fully Automated Approach. In Petra Perner and Rüdiger W. Brause and Hermann-Georg Holzhütter, editors, *Medical Data Analysis, 4th International Symposium, ISMDA 2003, Berlin, Germany, October 9-10, 2003, Proceedings*, volume 2868 of *Lecture Notes in Computer Science*. Springer, 2003. <http://dx.doi.org/10.1007/b14289>.

Theses

- [1] [Oliver Weinheimer](#). *Über das Vermessen tubulärer Strukturen in der Computertomographie: Dissertation*. PhD thesis, Johannes Gutenberg-Universität, Mainz, 2007. <http://d-nb.info/987063219>.
- [2] [Oliver Weinheimer](#). *Bildsegmentierung in Thorax-CT-Bildern auf der Basis gegebener Landmarks: Diplomarbeit*. Master thesis, Johannes Gutenberg-Universität, Mainz, 2001.