

Journal Publications of Richard Bamler

Gernhardt, S., Adam, N., Eineder, M., **Bamler, R.**, Potential of Very High Resolution SAR for Persistent Scatterer Interferometry in Urban Areas, *Annals of GIS*, in press, 2010.

Auer, S., Balz, T., Becker, S., **Bamler, R.**, 3D SAR Simulation of Urban Areas Based on Detailed Building Models, *Photogrammetric Engineering and Remote Sensing*, in press, 2010.

Reinartz, P., Müller, R., Schwind, P., Suri, S., **Bamler, R.**, Orthorectification of VHR Optical satellite Data Using Geometric Accuracy From TerraSAR-X Data, *ISPRS Journal of Photogrammetry & Remote Sensing*, in press, 2010.

Zhu, X., **Bamler, R.**, High Resolution Spaceborne SAR Tomography in Urban Environment, *IEEE Trans. Geosci. Remote Sensing*, in press, 2010.

Zhu, X., **Bamler, R.**, Tomographic SAR Inversion by L_1 Norm Regularization – The Compressive Sensing Approach, *IEEE Trans. Geosci. Remote Sensing*, in press, 2010.

Auer, S., Hinz, S., **Bamler, R.**, Ray Tracing Simulation Techniques for Understanding High Resolution SAR Images, *IEEE Trans. Geosci. Remote Sensing*, vol. 48, pp. 1445-1456, 2010.

Palubinskas, G., Reinartz, P., **Bamler, R.**, Image Acquisition Geometry Analysis for the Fusion of Optical and Radar Remote Sensing Data, *International Journal of Image and Data Fusion*, vol. 1(3), pp. 271-282, 2010.

Dorigo, W., Richter, R., Baret, F., **Bamler, R.**, Wagner, W., Enhanced Automated Canopy Characterization from Hyperspectral Data by a Novel Two Step Radiative Transfer Model Inversion Approach, *Remote Sensing*, vol. 1, pp. 1139-1170, 2009.

Bamler, R., Eineder, M., Adam, N., Gernhardt, S., Zhu, X., Interferometric Potential of High Resolution Spaceborne SAR, *Photogrammetrie – Fernerkundung – Geoinformation (PGF)*, pp. 407-419, 2009.

Eineder, M., Adam, N., **Bamler, R.**, Yague-Martinez, N., Breit, H., TerraSAR-X Spotlight SAR Interferometry, *IEEE Trans. Geosci. Remote Sensing*, vol. 47(5), pp. 1524-1535, 2009.

Bamler, R., Eineder, M., The Pyramids of Gizeh Seen by TerraSAR-X – A Prime Example For Unexpected Scattering Mechanisms in SAR, *IEEE Geoscience and Remote Sensing Letters*, vol. 5(3), pp. 468-470, 2008.

Bamler, R., Meyer, F., Liebhart, W., Processing of Bistatic SAR Data From Quasi-Stationary Configurations, *IEEE Trans. Geosci. Remote Sensing*, vol. 45(11/1), pp. 3350-3358, 2007.

Hinz, S., Meyer, F., Eineder, M., **Bamler, R.**, Traffic Monitoring with Spaceborne SAR – Theory, Simulations, and Experiments, *Computer Vision and Image Understanding*, vol. 106, pp. 231-244, 2007.

Meyer, F., Hinz, S., Laika, A., Wehling, D., **Bamler, R.**, Performance Analysis of the TerraSAR-X Traffic Monitoring Concept, *ISPRS Journal of Photogrammetry and Remote Sensing*, pp. 225-242, 2006.

Meyer, F., **Bamler, R.**, Jakowski, N., Fritz, T., The Potential of Low-Frequency SAR Systems for Mapping Ionospheric TEC Distributions, *IEEE Geoscience and Remote Sensing Letters*, vol. 3(4), pp. 560-564, 2006.

Bamler, R., Eineder, M., Accuracy of Differential Shift Estimation by Correlation and Split Bandwidth Interferometry for Wideband and Delta-k SAR Systems, *IEEE Geoscience and Remote Sensing Letters*, vol. 2(2), pp. 151-155, 2005.

Bamler, R., Holzner, J., ScanSAR Interferometry for RADARSAT-2 and RADARSAT-3, *The Canadian Journal of Remote Sensing*, vol. 30, pp. 437-447, 2004.

Rabus, B., Eineder, M., Roth, A., **Bamler, R.**, The Shuttle Radar Topography Mission (SRTM) – A New Class of Digital Elevation Models Acquired by Spaceborne Radar, *ISPRS Journal of Photogrammetry & Remote Sensing*, vol. 57, pp. 241-262, 2003 (ISPRS journal U.V. Helava Best Paper Award 2002).

- Holzner, J., **Bamler, R.**, Burst-Mode and ScanSAR Interferometry, IEEE Trans. Geosci. Remote Sensing, vol. 40, pp. 1917-1934, 2002.
- Lang, O., Igel, H., Rabus, B., Dech, S., **Bamler, R.**, Einsatz interferometrischer Radarfernerkundung zur Erfassung von Naturkatastrophen, Petermanns Geographische Mitteilungen, 145, 2001/6, pp. 28-35, 2001.
- Bamler, R.**, Principles of Synthetic Aperture Radar, Surveys in Geophysics, vol. 21, pp. 147-157, 2000.
- Bamler, R.**, Dech, S., Runge, H., Eineder, M., Roth, A., Meisner, R., SRTM: Mit der Shuttle Radar Topography Mission die Erde neu vermessen, Petermanns Geographische Mitteilungen 2000/3, pp. 14-17, 2000.
- Hanssen, R., **Bamler, R.**, Evaluation of Interpolation Kernels for SAR Interferometry, IEEE Trans. Geosci. Remote Sensing, vol. 37, pp. 319-321, 1999.
- Davidson, G.W., **Bamler, R.**, Multiresolution Phase Unwrapping for SAR Interferometry, IEEE Trans. Geosci. Remote Sensing, vol. 37, pp.163-174, 1999.
- Bamler, R.**, Hartl, P., Synthetic Aperture Radar Interferometry, Inverse Problems, vol.14, pp. R1-R54, 1998.
- Bamler, R.**, Adam, N., Davidson, G.W., Just, D., Noise-Induced Slope Distortion in 2-D Phase Unwrapping by Linear Estimators with Application to SAR Interferometry, IEEE Trans. Geosci. Remote Sensing, vol. 36, pp. 913-921, 1998.
- Bamler, R.**, Eineder, M., ScanSAR Processing Using Standard High Precision SAR Algorithms, IEEE Trans. Geosci. Remote Sensing, vol. 34, pp. 212-218, 1996.
- Moreira, J., Schwäbisch, M., Fornaro, G., Lanari, R., **Bamler, R.**, Just, D., Steinbrecher, U., Breit, H., Eineder, M., Francheschetti, G., Geudtner, D., Rinkel, H.: X-SAR Interferometry: First Results, IEEE Trans. Geosci. Remote Sensing, vol. 33, pp. 950-956, 1995.
- Zink, M., **Bamler, R.**, X-SAR: Calibration and Data Quality, IEEE Trans. Geosci. Remote Sensing, vol. 33, pp. 840-847, 1995.
- Bamler, R.**, Optimum Look Weighting for Burst-Mode and ScanSAR Processing, IEEE Trans. Geosci. Remote Sensing, vol. 33, pp. 722-725, 1995.
- Raney, R. K., Runge, H., **Bamler, R.**, Cumming, I.G., Wong, F. H., Precision SAR Processing Using Chirp Scaling, IEEE Trans. Geosci. Remote Sensing, vol. 32, pp. 786-799, 1994.
- Just, D., **Bamler, R.**, Phase Statistics of Interferograms with Applications to Synthetic Aperture Radar, Appl. Optics, vol. 33, pp. 4361-4368, 1994.
- Bamler, R.**, A Comparison of Range-Doppler and Wavenumber Domain SAR Focussing Algorithms, IEEE Trans. Geosci. Remote Sensing, vol. 30, pp. 706-713, 1992.
- Bamler, R.**, Runge, H., PRF-Ambiguity Resolving by Wavelength Diversity, IEEE Trans. Geosci. Remote Sensing, vol. 29, pp. 997-1003, 1991.
- Bamler, R.**, Doppler Frequency Estimation and the Cramér-Rao Bound, IEEE Trans. Geosci. Remote Sensing, vol. 29, pp. 385-390, 1991.
- Bamler, R.**, Can One See the Ewald Sphere?, Appl. Optics, vol. 27, pp. 2012-2016, 1988.
- Bamler, R.**, Glünder, H., Holographic Recording on Polaroid's Polapan CT, Optics Comm., vol. 56, pp. 321-324, 1986.
- Lebreton, G., **Bamler, R.**, Glünder, H., Platzer, H., Imaging on Thermoplastic Films: A New Recording Technique for a Real-Time Coherent Light Valve, Appl. Optics, vol. 24, pp. 450-453, 1985.
- Bamler, R.**, Hofer-Alfeis, J., Multidimensionale Faltung mit analog-optischer Rechentechnik (in Russian), Autometria, vol. 2, pp. 26-30, 1983.
- Bamler, R.**, Glünder, H., The Wigner Distribution Function of Two-Dimensional Signals: Coherent Optical Generation and Display, Optica Acta, vol. 30, pp. 1789-1803, 1983.
- Bamler, R.**, Hofer-Alfeis, J., 2D Linear Space-Variant Processing by Coherent Optics: A Sequence Convolution Approach, Optics Comm., vol. 43, pp. 97-102, 1982.

Bamler, R., Hofer-Alfeis, J., Three- and Four-Dimensional Filter Operations by Coherent Optics, *Optica Acta*, vol. 29, pp. 747-757, 1982.