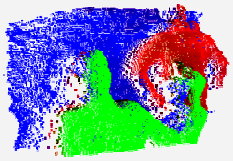
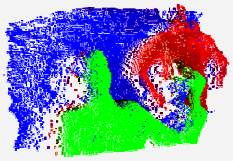


Kurzprofil
Prof. Dr.-Ing. Reinhard Koch

Geburtsdatum	22. 09. 1958
Abitur 1977	Gymnasium Carolinum, Osnabrück
Studium 1977-1985	Dipl-Ing. Elektrotechnik, Universität Hannover, 1977-1981, 1982-1985 Master of Science, Physical Science, Fort Hays State University, Hays, KS., USA, 1981-1982
Prüfungen	Master of Science, Mai 1982, Fort Hays State University, (GPA 3.84) Diplomingenieur Elektrotechnik, Sept. 1985, Universität Hannover Doktoringenieur, Fakultät für Maschinenwesen, Sept. 1996,Universität Hannover (mit Auszeichnung bestanden)
Promotion, 1996	Thema: Automatische Oberflächenmodellierung starrer 3D-Objekte aus stereoskopischen Rundum-Ansichten (bei Prof. Dr.-Ing. C.-E. Liedtke, Hannover)
1985-1988	Entwicklungsingenieur im Bereich Prozesskommunikation bei der Fa. VDO Mess- und Regeltechnik, Hannover
1988-1996	wissenschaftlicher Mitarbeiter am Institut für Theoretische Nachrichtentechnik und Informationsverarbeitung der Universität Hannover
1996-1999	wissenschaftlicher Assistant und Leiter der Arbeitsgruppe *Reconstruction and Recognition* am Zentrum für Sprach- und Bildverarbeitung der Katholieke Universiteit Leuven, Belgien
Seit Oktober 1999	Professur (C3) für Multimediale Informationsverarbeitung im Institut für Informatik der Christian-Albrechts-Universität zu Kiel
Lehrgebiete:	• Multimedia-Technologie • Computer Vision und 3D-Bildverarbeitung • 3D-Computergraphik • Augmented und Mixed Reality (AR/MR)
Forschungs- u. Arbeitsgebiete:	• Rekonstruktion von 3D-Szenen aus Bildfolgen • Echtzeit-Bildverarbeitung, Kamerakalibrierung, Poseschätzung • 3D-Objektverfolgung, Mensch-Computer-Interaktion
Aktuelle Vorhaben:	• Markerlose Trackingverfahren für Mixed und Augmented Reality • 3D-Umgebungsmodellierung aus unkalibrierten Kamerabildfolgen • Schätzung menschlicher Bewegungen über Bildverarbeitung • Detektion und Verfolgung bewegter Objekte aus Bildfolgen • Schnelle Stereoschätzung auf GPU-Hardware zur Echtzeit-Qualitätssicherung
Weiteres:	• Mitglied im Technischen Komitee der DAGM seit 2004 • Mitglied in Programm-Kommitees: DAGM (seit 2000), VMV (seit 02), SSIAI (seit 02), CVMP (seit 04), CAIP 2005, ICIP 2005 • Gutachter für: IEEE PAMI, IEEE TCSVT, IEEE IE, IJSP, SIGGRAPH 2000, 2005, ECCV 1998, ICCV 1997, JMIV, JJVC, JIG, IEE VISP, Springer LNCS, Buchbegutachtungen
Weitere Informationen	http://www.mip.informatik.uni-kiel.de/



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Prof. Dr.-Ing. Reinhard Koch

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4. M. Pollefeys, L. Van Gool, M. Vergauwen, F. Verbiest, K. Cornelis, J. Tops, R. Koch: Visual Modeling with a Hand-held Camera. Int. Journal Computer vision (IJCV) 59(3), 207-232, Kluver 2004.
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6. M. Pollefeys, R. Koch and L. Van Gool: Self-Calibration and Metric Reconstruction in spite of Varying and Unknown Internal Camera Parameters. International Journal Computer Vision, Special Marr Price Issue 32(1), 7-25 (1999).
7. R. Koch: 3-D Modeling of Objects from Image Sequences. in: B. Jaehne, H. Haussecker, P. Geissler(eds.): Handbook of Computer Vision and Applications. Academic Press, 1999.
8. R. Koch, L. Van Gool (eds.): 3D Structure from Multiple Images of Large-Scale Environments. Proceedings of the SMILE workshop, Freiburg, Germany. LNCS 1506, Springer, June 1998.
9. R. Koch: Automatische Oberflächenmodellierung starrer, dreidimensionaler Objekte aus stereoskopischen Rundum-Ansichten. (Ph.-D. Thesis, Universität Hannover, Sept. 1996). In: Fortschritt-Berichte VDI, Reihe 10, Nr. 499, VDI-Verlag Düsseldorf, 1997.
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12. R. Koch: Dynamic 3D Scene Analysis through Synthesis Feedback Control. IEEE Trans. Patt. Anal. Mach. Intell., Special issue on analysis and synthesis, Vol. 15 (6), pp. 556-568, June 1993.

Begutachtete Konferenzen und Workshops

1. J.-M. Frahm, K. Köser, D. Grest, R. Koch: Markerless Augmented Reality with Light Source Estimation for Direct Illumination. Proceedings IEE CVMP Conference, London, 2005.
2. D. Grest, R. Koch; Multi-Camera Person Tracking in a Cluttered Interaction Environment. Proceedings CAIP'05, Paris, 2005.
3. D. Grest, J. Woetzel and R. Koch: Nonlinear Body Pose Estimation from Depth Images. Proc. of DAGM 2005, Springer LNCS 2005.
4. D. Grest, D. Herzog and R. Koch: Human Model Fitting from Monocular Posture Images. Proc. of VMV 2005, Nov. 2005, Erlangen, Germany.
5. B. Streckel, R. Koch: Lens Model Selection for Visual Tracking. Proceedings DAGM Symposium, Vienna, Sept. 2005, Springer LNCS, 2005.
6. B. Streckel, R. Koch: Lens Model Selection for a Markerless AR Tracking System. Proceedings ISMAR, Vienna 2005.
7. R. Koch, J.-F. Evers-Senne, J.-M. Frahm, and K. Köser: 3D Reconstruction and Rendering from Image Sequences, Proceedings WIAMIS Workshop 2005, Montreux, Switzerland, April 13-15, 2005.
8. F. Woelk, I. Schiller, R. Koch: An Airborne Bayesian Color Tracking System. IEEE Intelligent Vehicles Symposium IV05, Las Vegas, USA, June 5-7, (2005).
9. F. Woelk, S. Gehrig, R. Koch: A Monocular Collision Warning System. 2nd Canadian Conference on Computer and Robot Vision CRV05, Victoria, Canada, May 9-11 (2005).
10. R. Koch, K. Köser, B. Streckel, J.-F. Evers-Senne: Markerless Image-based 3D Tracking for Real-Time Augmented Reality. Special Session on Augmented Reality, 5th International Workshop on Image Analysis for Multimedia Interactive Services WIAMIS 2005, Montreux, Switzerland, April 13-15, (2005).
11. R. Koch: Analysis by Synthesis in 3D Reconstruction from Images. 12th Tübinger Wahrnehmungskonferenz

TWK05, Tübingen, Febr. 25-27, (2005).
12. Daniel Grest and Reinhard Koch: Realtime Multi-Camera Person Tracking for Immersive Environments. Proc. Workshop on Multimedia Signal Processing, Sienna, Italy, Oct. 2004.
13. J. Woetzel and Reinhard Koch: Multi-camera real-time depth estimation with discontinuity handling on PC graphics hardware. 17th International Conference on Pattern Recognition (ICPR 2004), Cambridge, United Kingdom, August. 2004.
14. Woelk, Felix and Reinhard Koch: Fast Monocular Bayesian Detection of Independently Moving Objects by a Moving Observer. Proceedings DAGM, Tübingen, Sept. 2004, Springer LNCS 2004.
15. Frahm, Jan-Michael and Reinhard Koch: Pose Estimation with a Multi-Camera Rig. Proceedings DAGM, Tübingen Sept. 2004, Springer LNCS, 2004.
16. F. Woelk, S. Gehrig , R. Koch "A Monocular Image Based Intersection Assistant", Proceedings IEEE Intelligent Vehicles Symposium, Parma, Italy, June 2004.
17. Woetzel, Jan and Koch, Reinhard: Real-time multi-stereo depth estimation on GPU with approximative discontinuity handling. Proc. of the 1st European Conference on Visual Media Production (CVMP 2004), London, United Kingdom,March 2004.
18. Jan-Friso Evers Senne and Jan Woetzel and Reinhard Koch, Modelling and Rendering of Complex Scenes with a Multi-Camera Rig. Proc. of the 1st European Conference on Visual Media Production (CVMP 2004), London, United Kingdom, March 2004.
19. Jan-Michael Frahm and Reinhard Koch, Camera Calibration and 3D Scene Reconstruction from image sequence and rotation sensor data. Proc. of VISION, MODELING, AND VISUALIZATION (VMV), pp. 79-83, Munich, Germany, Nov. 2003.
20. Daniel Grest and Jan-Michael Frahm and Reinhard Koch: A Color Similarity Measure for Robust Shadow Removal in Real Time. Proc. of Vision, Modeling and Visualization (VMV), Munich, Germany, Nov. 2003.
21. Evers-Senne, J.-F. and Koch, R: Image Based Rendering from Handheld Cameras using Quad Primitives. Proc. of Vision, Modeling and Visualization (VMV), Munich, Germany, Nov. 2003.
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25. J.-M. Frahm and Reinhard Koch: Robust Camera Calibration from Images and Rotation. Proceedings of DAGM, pp. 249-256, Springer LNCS, Magdeburg, Germany, Sept. 2003.
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34. M. Pollefeys, R. Koch and L. Van Gool: A simple and efficient rectification method for general motion. Proceedings Int. Conference Computer Vision, Corfu, Greece, 1999.
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52. Koch, R.: 3D Modeling of Human Heads from Stereoscopic Image Sequences. Proceedings Conference of the German Pattern Recognition Society 96 (Deutsche Arbeitsgemeinschaft Mustererkennung), Heidelberg, Germany, Sept. 1996.
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55. Koch, R.: 3-D Surface Reconstruction from Stereoscopic Image Sequences. Proceedings International Conference of Computer Vision ICCV '95, Cambridge, MA., USA, June 1995.
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57. Toenjes, R., Grau, O., Koch, R.: Analyse durch Synthese Modellierung von 3D Objekten in Stereobildfolgen. Proceedings Workshop of Visual Computing, Darmstadt, Germany, 1994.
58. Koch, R.: Model-based 3D Scene Analysis from Stereoscopic Image Sequences. 2nd Workshop on 3DTV, Rennes, France, Nov. 1993.
59. Koch, R.: Automatic Reconstruction of Buildings from Stereoscopic Image Sequences. Computer Graphics Forum Vol. 12 (3), Proceedings of Eurographics '93, Barcelona, Spain, Sept. 1993.
60. Koch, R: Model-Based 3D Scene Analysis from Stereoscopic Image Sequences, International Archives of Photogrammetry and Remote Sensing, Vol. 29, ISPRS Conference '92, Washington, D.C., USA, August 1992.
61. Koch, R: Adaptation of a 3D Facial Mask to Human Faces in Videophone Sequences using Model Based Image Analysis. Proceedings Picture Coding Symposium PCS '91, pp. 285 - 288, Tokyo, Japan, Sept. 1991.
62. Liedtke, C.-E., Busch, H., Koch, R.: Shape Adaptation for Modelling of 3D Objects in Natural Scenes. CVPR Conference on Computer Vision and Pattern Recognition, Hawaii, USA, 1991.

63. Koch, R., Liedtke, C.-E.: 3D-Modelling of Natural Scenes from Image Sequences for Stereoscopic Reconstruction. Proceedings 3DTV Workshop, Darmstadt, Germany, Sept. 1990.

64. Koch, R.: Automatic Modelling of Natural Scenes for Generating Synthetic Movies. In: Vandoni, C.E. and Duce, D.A. (ed.) EUROGRAPHICS Association, pp. 215 -224, Elsevier Science Publishers B.V. (North-Holland), 1990.
65. Liedtke, C.-E., Busch, H., Koch, R.: Automatic Modelling of 3D Moving Objects from a TV Image Sequence. Proceedings of SPIE Vol. 1260, Sensing and Reconstruction of Three-Dimensional Objects and Scenes, pp. 230 - 239, Santa Clara, CA., USA, Feb. 1990.
66. Koch, R., Busch, H.: A Hierarchical Strategy for Analysing Motion, Shape, and Colour of Three-dimensional Objects from an Image Sequence. Proceedings 2nd International Workshop on 64 KBit/s Coding of Moving Video, Hannover, Germany, Sept. 1989.

Auszeichnungen und Preise

1982: Mitglied der American Physics Honor Society Sigma Pi Sigma

1995: Preis der Deutschen AG Mustererkennung (DAGM '95) für den Beitrag: U. Rost und R. Koch, Rekonstruktion von Schleifpapieroberflächen für die Qualitätskontrolle.

1996: ECVNet Technology Innovation Award des ECVNet Consortiums bei der International Conference on Pattern Recognition '96, für das Produkt Sphinx der DIMENSION GbR.

1996: Preis der Deutschen AG Mustererkennung (DAGM '96) für den Beitrag: R. Koch: 3D Modeling of Human Heads from Stereoscopic Image Sequences.

1997: OLYMPUS Preis 1997 der Olympus Europa Stiftung 'Wissenschaft für Leben' während der DAGM '97, für die Beiträge zur automatischen 3D Oberflächenmodellierung aus stereoskopischen Bildsequenzen.

1998: David Marr Award bei der International Conference of Computer Vision ICCV '98 für den Beitrag: M. Pollefeys, R. Koch, L. Van Gool: Self-Calibration and Metric Reconstruction in spite of Varying Internal Camera Parameters.

1999: Hauptpreis der Deutschen AG Mustererkennung (DAGM '99) für die Beiträge: R. Koch, M. Pollefeys and L. Van Gool: Robust Calibration and 3D Geometric Modeling from Large Collections of Uncalibrated Images, sowie: B. Heigl, R. Koch, M. Pollefeys, J. Denzler and L. Van Gool: Plenoptic Modeling and Rendering from Image Sequences taken by Hand-held Camera.

2005: Best Student Paper Award for: F. Woelk, I. Schiller, R. Koch: An Airborne Bayesian Color Tracking System. IEEE Intelligent Vehicles Symposium IV05, Las Vegas, USA, June 5-7, (2005).