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# Prof. Dr. Heinrich Müller

## Address

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## Personal Details

Birthday/ -place: 30 July 1953, Reutlingen, Germany

Nationality: German

Professor emeritus

## Academic education and degrees

1987: Habilitation and Venia Legendi, Computer Science, University of Karlsruhe, Germany

1981: PhD: Dr.rer.nat., Computer Science, University of Stuttgart, Germany

1978: MSc: Degrees in Mathematics and Computer Science (Dipl.-Math., Dipl.-Inform.), University of Stuttgart, Germany

1973 – 1978: Study of Mathematics and Computer Science, University of Stuttgart, Germany

## Scientific Honors / Awards

2019: Eurographics Medal

2002: Fellow of Eurographics, the European Association of Computer Graphics

## Professional and Academic Career

Since 2019: Professor emeritus, TU Dortmund University, Department of Computer Science

2002 – 2019: Vice-Dean of the Department of Computer Science, TU Dortmund University

1995 – 1999: Dean of the Department of Computer Science, TU Dortmund University

1992 – 2019: Professor for Computer Science, TU Dortmund University, Gerrnany, Department of Computer Science, Head of the computer graphics group

1988 – 1992: Associate Professor for Computer Science, University of Freiburg, Germany, Institute for Computer Science

1984 – 1988: Assistant Professor, University of Karlsruhe, Germany, Department of Computer Science

1981 – 1984: Research Associate, University of Karlsruhe, Germany, Department of Computer Science

1979 – 1980: Research Associate, University of Stuttgart, Department of Mathematics and Computer Science

## Research areas

Methods: Computer graphics-based modeling, simulation, and visualization of natural environments. Data analysis and visualization.

Applications: Geometric modeling and simulation in manufacturing. Image analysis, modeling and visualization in medicine and biology. Human-computer interaction.

## Publications

Co-author of more than 140 peer-reviewed scientific publications, two monographs, and two textbooks.

Co-editor of four edited volumes on Scientific Visualization (Springer, IEEE CS Press).

## Teaching

Complexity Theory (Diploma course, 1980), Computer Graphics 2 – Computational Geometry (Diploma course, 1983 – 1986), Computer Graphics (Diploma course, 1988 – 2002), Human Computer Interaction (BSc course, 2003 - 2019), Computer Graphics (MSc course, 2008 – 2019), Digital Image Processing (Diploma/BSc course, 1990 – 2010), Geometric Modeling (Diploma/MSc course, 1991 – 2017), Data Visualization (MSc course, 2004 – 2018), Vorkurs Informatik (preparatory course in computer science, 2001 – 2018).

Supervision of diploma theses (1984 – 2016: approx. 240), master's theses (2011 – 2020: approx. 25), and bachelor's theses (2011 – 2018: approx. 25).

## Further academic activities

Supervisor of one habilitation and 32 dissertations.

Co-organizer of seven Dagstuhl-Seminars between 1991 and 2007.

Co-initiator and co-organizer (together with Dr. Bernhard J. Arnolds, University Medical Center Freiburg) of a supra-regional workshop "Bildverarbeitung für die Medizin" (Image Processing for Medicine) at the University of Freiburg, March 10 – 11, 1993. This workshop and its new edition on March 14 – 15, 1996 are one of other predecessors of the later, nation-wide located ongoing conference series "German Conference on Medical Image Computing – Bildverarbeitung für die Medizin (BVM)".

Memberships in editorial boards: Lecture Notes in Informatics, Gesellschaft für Informatik (GI), Springer (Advisory Board, 2001 – 2008); Computers & Graphics, Elsevier (Editorial Advisory Board, 1997 – 2009); Computer Graphics Forum, Blackwell-Wiley (Editorial Board, 1995 – 2009); Computing, Springer (Advisory Board, 1991 – 2002); Computer Animation & Virtual Worlds, Wiley (Editorial Board, 1990 – 2024).

Memberships in boards of academic associations: Elected member of the Executive Committee der Eurographics Association (2000 – 2014); Chairman of the Eurographics Workshops, Symposia, and Working Group Board (1992– 2019); Chairman of the technical committee "Computer Graphics" of the German "Gesellschaft für Informatik (GI)" (1995 – 1998); Chairman of the specialist group "Imaging and Visualization Techniques" of the German "Gesellschaft für Informatik" (GI) (1990 – 2001).

Member of the Board of Trustees of the Informatik Centrum Dortmund e.V. (ICD) since 2004.

Membership in numerous program committees of national and international conferences, symposia, and workshops, and reviewer of numerous papers and research proposals (in particular for Deutsche Forschungsgemeinschaft (DFG)).

## Supervised dissertations, habilitation, alumni with professorships

### Dissertations

1. Stephan Abramowski: Exakte Algorithmen zur Bewegung gelenkgekoppelter Objekte zwischen festen Hindernissen, Dissertation, Fakultät für Informatik, Universität Karlsruhe (1989)
   (English title: Exact algorithms for the movement of joint-coupled objects between fixed obstacles)
2. Jörg Winckler: Visualisierung in einer verteilten Rechenumgebung, Dissertation, Fakultät für Mathematik, Universität Freiburg (1992)
   (English title: Visualization in a distributed computing environment)
3. Detlef Ruprecht: Geometrische Deformationen als Werkzeug in der Graphischen Datenverarbeitung, Dissertation, Fachbereich Informatik, Universität Dortmund (1994)
   (English title: Geometric deformations as computer graphics tool)
4. Peter Dietz: Ein Computer-Modell auf der Basis kubischer Volumina für die Approximation beliebig geformter körperlicher Objekte, Dissertation, Fachbereich Informatik, Universität Dortmund (1994)
   (English title: A computer model based on cubic volumes for approximating arbitrarily shaped physical objects)
5. Rüdiger Westermann: A Multiresolution Framework for Volume Rendering, Dissertation, Fachbereich Informatik, Universität Dortmund (1996)
6. Michael Stark: Konturapproximation in mehrdimensionalen regulären Gitterdaten, Dissertation, Fachbereich Informatik, Universität Dortmund (1996)
   (English title: Contour approximation in multidimensional regular grid data)
7. Markus Kohler: New Contributions to Vision-Based Human-Computer Interaction in Local and Global Environments, Dissertation, Fachbereich Informatik, Universität Dortmund (1999)
8. Michael Hoch: Intuitive Schnittstelle: eine neue Computerumgebung für die Planung bildkünstlerischer Prozesse, Dissertation, Fachbereich Informatik, Universität Dortmund (1999)
   (English title: Intuitive interface: a new computer environment for planning visual art processes)
9. Christian-Arved Bohn: Radiosity on Evolving Networks, Dissertation, Fachbereich Informatik, Universität Dortmund (2000)
10. Robert Garmann: New Contributions to Spatial Partitioning And Parallel Global Illumination Algorithms, Dissertation, Fachbereich Informatik, Universität Dortmund (2000)
11. Frank Weller: Geometrische Algorithmen in der Flächenrückführung, Dissertation, Fachbereich Informatik, Universität Dortmund (2000)
    (English title: Geometric algorithms in surface reconstruction)
12. André Hinkenjann: Effiziente Lösungsverfahren für Sichtbarkeitsprobleme in der realitätsnahen Bildsynthese, Dissertation, Fachbereich Informatik, Universität Dortmund (2000)
    (English title: Efficient solution methods for visibility problems in realistic image synthesis)
13. Robert Mencl: Reconstruction of Surfaces from Unorganized Three-Dimensional Point Clouds, Dissertation, Fachbereich Informatik, Universität Dortmund (2001)
14. Georg Pietrek: Verfahren zur verbesserten Approximation von Lichtverteilungen in der fotorealistischen Bildsynthese, Dissertation, Fachbereich Informatik, Universität Dortmund (2001)

(English title: Methods for improved approximation of light distributions in photorealistic image synthesis)

15. Christian Leubner: A Framework for Segmentation and Contour Approximation in Computer-Vision Systems, Dissertation, Fachbereich Informatik, Universität Dortmund (2002)
16. Markus Kukuk: A Model-Based Approach to Intraoperative Guidance of Flexible Endoscopy, Dissertation, Fachbereich Informatik, Universität Dortmund (2003)
17. Jörg Ayasse: Discrete Displacement Fields: A Versatile Representation of Geometry for Simulation in Computer-Aided Manufacturing, Dissertation, Fachbereich Informatik, Universität Dortmund (2003)
18. Christian Brockmann: Remote Vision Based Multi Gesture Interaction in Natural Indoor Environments, Dissertation, Fachbereich Informatik, Universität Dortmund (2006)
19. Christian Wortmann: Algorithmische Analyse von rohrförmigen Flächen für das Reverse Engineering, Dissertation, Fakultät für Informatik, TU Dortmund (2008)
    (English title: Algorithmic analysis of tubular surfaces for reverse engineering)
20. Frank Weichert: Klassifikation morphologischer und pathologischer Strukturen in koronaren Gefäßen auf Basis intravaskulärer Ultraschallaufnahmen zur klinischen Anwendung in einem IVB-System. Dissertation, Fakultät für Informatik, TU Dortmund (2010)
    (English title: Classification of morphological and pathological structures in coronary vessels based on intravascular ultrasound images for clinical application in an IVB system)
21. David Fiedler: Beiträge zur Analyse, Modellierung und Kalibrierung von Kameras und 3D-Tiefensensoren, Dissertation, Fakultät für Informatik, TU Dortmund (2014)
    (English title: Contributions to the analysis, modeling, and calibration of cameras and 3D depth sensors)
22. Kai Engel: Evolutionäre Segmentierung dreidimensionaler Formen unter Verwendung von Satelliten-Seeds, Dissertation, Fakultät für Informatik, TU Dortmund (2015)
    (English title: Evolutionary segmentation of three-dimensional shapes using satellite seeds)
23. Alexander Kout: Geometric and algorithmic aspects of automatic path planning with relation to spray deposition processes, Dissertation, Fakultät für Informatik, TU Dortmund (2015)
24. Thomas Wiederkehr: Effiziente, GPU-basierte Simulation thermischer Spritzprozesse, Dissertation, Fakultät für Informatik, TU Dortmund (2015)
    (English title: Efficient, GPU-based simulation of thermal spraying processes)
25. Lars Walczak: Approximation anatomischer Strukturen und biomedizinischer Prozesse zur rechnergestützten Untersuchung der Hämodynamik in Aneurysmen, Dissertation, Fakultät für Informatik, TU Dortmund (2016)
    (English title: Approximation of anatomical structures and biomedical processes for computer-aided investigation of hemodynamics in aneurysms)
26. Dominic Siedhoff: A parameter-optimizing model-based approach to the analysis of low-SNR image sequences for biological virus detection, Dissertation, Fakultät für Informatik, TU Dortmund (2016)
27. Daniel Hegels: Optimierung thermischer Verhältnisse bei der Bahnplanung für das thermische Spritzen mit Industrierobotern, Dissertation, Fakultät für Informatik, TU Dortmund (2017)
    (English title: Optimization of thermal conditions in path planning for thermal spraying with industrial robots)
28. Denis Fisseler: Contributions to computer-aided analysis of cuneiform tablet fragments, Dissertation, Fakultät für Informatik, TU Dortmund (2019)

29. Sebastian Skibinski: Extraction, localization, and fusion of collective vehicle data, Dissertation, Fakultät für Informatik, TU Dortmund (2019)
30. Jan Eric Lenssen: Differentiable algorithms with data-driven parameterization in 3D vision, Fakultät für Informatik, TU Dortmund (2022)
31. Marcel Gaspar: Bahnplanung mittels impliziter Methoden für spanende und beschichtende Fertigungsverfahren, Fakultät für Informatik, TU Dortmund (2022)
    (English title: Path planning using implicit methods for machining and coating manufacturing processes)
32. Adrian Böckenkamp: Efficient, collision-free multi-robot navigation in an environment abstraction framework, Fakultät für Informatik, TU Dortmund (2023)

Habilitation

Frank Weichert: Explikation und ubiquitäre Durchdringung Kontext-sensitiver adaptiver Sensoreinheiten in kollaborativen und semantisch divergenten Szenarien, Kumulative Habilitationsschrift, Fakultät für Informatik, TU Dortmund, 2019
(English title: Explanation and ubiquitous penetration of context-sensitive adaptive sensor units in collaborative and semantically divergent scenarios)

Alumni with professorships

Prof. Dr. Christian-Arved Bohn,
FH Wedel University of Applied Sciences, Wedel, Germany

Prof. Dr. Robert Garmann,
Hochschule Hannover University of Applied Sciences and Arts, Hannover, Germany

Prof. Dr. André Hinkenjann,
Hochschule Bonn-Rhein-Sieg University of Applied Sciences, Sankt Augustin, Germany

Prof. Dr. Markus Kukuk,
Fachhochschule Dortmund University of Applied Sciences and Arts, Dortmund, Germany

Prof. Dr. Jan Eric Lenssen,
Universität des Saarlandes, Saarland University, Saarbrücken, Germany

Prof. Dr. Christian Leubner,
Fachhochschule Südwestfalen University of Applied Sciences, Hagen, Germany

Prof. Dr. Michael Stark,
Fachhochschule Dortmund University of Applied Sciences and Arts, Dortmund, Germany

Prof. Dr. Rüdiger Westermann,
TUM Technische Universität München, Munich, Germany

Prof. Dr. Jörg Winckler,
Hochschule Heilbronn University of Applied Sciences, Heilbronn, Germany

## Publications

### Dissertation

Müller, Heinrich: Zur Struktur und Komplexität diskreter Optimierungsprobleme, die durch erbliche Eigenschaften auf endlichen Mengensystemen gegeben sind. University of Stuttgart, Germany, 1981, pp. 1-130 (Supervisor: Prof. Dr. Walter Knödel, Stuttgart)

(English title: On the structure and complexity of discrete optimization problems given by hereditary properties on finite set systems)

### Habilitation

Müller, Heinrich, Realistische Computergraphik: Algorithmen, Datenstrukturen und Maschinen. University of Karlsruhe, 1987 (Reviewers: Prof. Dr. Kurt Mehlhorn, Saarbrücken, Prof. Dr. Thomas Ottmann, Karlsruhe, Prof. Dr. Alfred Schmitt, Karlsruhe)

(English title: Realistic Computer Graphics: Algorithms, Data Structures, and Machines)

### Monographs

1. Müller, Heinrich, Realistische Computergraphik: Algorithmen, Datenstrukturen und Maschinen. Informatik-Fachberichte 163, Springer 1988, ISBN 3-540-18924-6
   (English title: Realistic Computer Graphics: Algorithms, Data Structures, and Machines)
2. Leister, Wolfgang, Müller, Heinrich, Stößer, Achim, Fotorealistische Computeranimation, Springer Berlin Heidelberg (1991)
   (English title: Photorealistic Computer Animation)

### Textbooks

1. Müller, Heinrich, Weichert, Frank, Vorkurs Informatik – Der Einstieg ins Informatikstudium, Springer Vieweg (editions 2023, 2017, 2015, 2013, 2011, 2005)
   (English title: Preparatory Course in Computer Science – Getting Started in Computer Science Studies)
2. Abramowski, Stephan, Müller, Heinrich, Geometrisches Modellieren, BI-Wiss.-Verl., Mannheim (1991)
   (English title: Geometric Modeling)

### Edited volumes

1. Brunnett, Guido, Hamann, Bernd, Müller, Heinrich, Linsen, Lars, Geometric Modeling for Scientific Visualization, Springer (2004)
2. Hagen, Hans, Brunnett, Guido, Müller, Heinrich, Roller, Dieter, Dagstuhl-Seminar 1997, Effiziente Methoden der geometrischen Modellierung und der wissenschaftlichen Visualisierung, Vieweg+Teubner Verlag Wiesbaden (1999)
   (English title: Efficient Methods of Geometric Modeling and Scientific Visualization)
3. Nielson, Gregory M., Hagen, Hans, Müller, Heinrich, Scientific Visualization, Overviews, Methodologies, and Techniques, IEEE Computer Society (1997)
4. Hagen, Hans, Müller, Heinrich, Nielson, Gregory M., Focus on Scientific Visualization, Springer (1993)

Proceedings

Göbel, Martin, Müller, Heinrich, Urban, Bodo, Visualization in Scientific Computing (Proceedings of the 5th Eurographics Workshop on Visualization in Scientific Computing), Springer, Wien (1995)

Dagstuhl Seminar Reports

1. Gross, Markus, Müller, Heinrich, Seidel, Hans-Peter, Shum, Harry, 07171 Abstracts Collection – Visual Computing – Convergence of Computer Graphics and Computer Vision. In Visual Computing - Convergence of Computer Graphics and Computer Vision. Dagstuhl Seminar Proceedings, Volume 7171, pp. 1-18, Schloss Dagstuhl – Leibniz-Zentrum für Informatik (2008) https://doi.org/10.4230/DagSemProc.07171.1
2. Gross, Markus, Manocha, Dinesh, Müller, Heinrich, Seidel, Hans-Peter, Hierarchical Methods in Computer Graphics (Dagstuhl Seminar 03271). Dagstuhl Seminar Report 384, pp. 1-6, Schloss Dagstuhl – Leibniz-Zentrum für Informatik (2003) https://doi.org/10.4230/DagSemRep.384
3. Cohen, Michael, Müller, Heinrich, Puech, Claude, Seidel, Hans-Peter, Image Synthesis and Interactive 3D Graphics (Dagstuhl Seminar 00251). Dagstuhl Seminar Report 278, pp. 1-34, Schloss Dagstuhl – Leibniz-Zentrum für Informatik (2001) https://doi.org/10.4230/DagSemRep.278
4. Gross, Markus, Müller, Heinrich, Schröder, Peter, Seidel, Hans-Peter, Hierarchical Methods in Computer Graphics (Dagstuhl Seminar 98211). Dagstuhl Seminar Report 212, pp. 1-23, Schloss Dagstuhl – Leibniz-Zentrum für Informatik (1998) https://doi.org/10.4230/DagSemRep.212
5. Hanrahan, Patrick M., Müller, Heinrich, Puech, Claude. Rendering (Dagstuhl Seminar 9624). Dagstuhl Seminar Report 148, pp. 1-24, Schloss Dagstuhl – Leibniz-Zentrum für Informatik (1996) https://doi.org/10.4230/DagSemRep.148
6. Hagen, Hans, Müller, Heinrich, Nielson, Gregory M., Scientific Visualization (Dagstuhl Seminar 9421). Dagstuhl Seminar Report 90, pp. 1-26, Schloss Dagstuhl – Leibniz-Zentrum für Informatik (1994) https://doi.org/10.4230/DagSemRep.90
7. Hagen, Hans, Müller, Heinrich, Scientific Visualization (Dagstuhl Seminar 9135). Dagstuhl Seminar Report 19, pp. 1-20, Schloss Dagstuhl – Leibniz-Zentrum für Informatik (1991) https://doi.org/10.4230/DagSemRep.19

Scientific Papers

1. Franke, Kai, Müller, Heinrich, Procedural generation of 3D karst caves with speleothems. Computers & Graphics. Volume 102, pp. 533-545 (2022) https://doi.org/10.1016/j.cag.2021.10.002.
2. Wilkes, Ben, Vatolkin, Igor, Müller, Heinrich, Statistical and Visual Analysis of Audio, Text, and Image Features for Multi-Modal Music Genre Recognition. Entropy 23, no. 11: 1502 (2021) https://doi.org/10.3390/e23111502.
3. Tillmann, Wolfgang, Schaak, Christopher, Zajaczkowski, Jonas, Müller, Heinrich, Hegels, Daniel, Gaspar, Marcel, Kuhlenkötter, Bernd, Störkle, Denis Daniel, Investigation of a procedure for the simulation-based optimisation of robot paths for thermal spraying. Thermal Spray Bulletin, Volume 12, Issue 2, pp. 89-97 (2019)
4. Stoller, Daniel, Vatolkin, Igor, Müller, Heinrich, Intuitive and efficient computer aided music rearrangement with optimised processing of audio transitions. Journal of New Music Research 47 (5), pp. 416-437 (2018)
5. Tillmann, Wolfgang, Schaak, Christopher, Zajaczkowski, Jonas, Müller, Heinrich, Hegels, Daniel, Gaspar, Marcel, Kuhlenkötter, Bernd, Störkle, Denis Daniel, Investigation into the properties of HVOF-sprayed WC-Co coatings on plane and complex surfaces, manufactured with an evolution-based path planning method. Thermal Spray Bulletin, Volume 11, Issue 2, pp, 95 - 102 (2018)

6. Fey, Matthias, Lenssen, Jan Eric, Weichert, Frank, Müller, Heinrich, SplineCNN: Fast Geometric Deep Learning with Continuous B-Spline Kernels. In: Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR), pp. 869-877 (2018)
7. Shpacovitch, Victoria, Sidorenko, Irina, Lenssen, Jan Eric, Temchura, Vladimir, Weichert, Frank, Müller, Heinrich, Überla, Klaus, Zybin, Alexander, Schramm, Alexander, Hergenröder, Roland, Application of the PAMONO-sensor for Quantification of Microvesicles and Determination of Nano-particle Size Distribution. Sensors, Volume 17, Issue 2, pp. 1-14 (2017)
8. Shaik, Nayabrasul, Liebig, Thomas, Kirsch, Christopher, Müller, Heinrich, Dynamic Map Update of Non-static Facility Logistics Environment with a Multi-robot System. In: KI 2017: Advances in Artificial Intelligence (KI 2017). LNAI, volume 10505, Springer-Verlag, pp. 249-261 (2017)
9. Skibinski, Sebastian, Weichert, Frank, Müller, Heinrich, Parametric Fusion of Complex Landmark Observations Present Within the Road Network by Utilizing Bundle-Adjustment-based Full-SLA. In: FUSION 2016, pp. 917-926 (2016)
10. Skibinski, Sebastian, Weichert, Frank, Müller, Heinrich, Selected Aspects Important from the Applied Point of View to the Fusion of Collective Vehicle Data. In: IEEE International Conference on Multisensor Fusion and Integration for Intelligent Systems - MFI 2016, pp. 148-155 (2016)
11. Shpacovitch, Victoria, Temchura, Vladimir, Matrosovich, Mikhail, Hamacher, Joachim, Skolnik, Julia, Libuschewski, Pascal, Siedhoff, Dominic, Weichert, Frank, Marwedel, Peter, Müller, Heinrich, et al., Application of Surface Plasmon Resonance Imaging Technique for the Detection of Single Spherical Biological Submicron-particles. Analytical Biochemistry, Volume 486, pp. 62–69 (2015)
12. Wiederkehr, Thomas, Müller, Heinrich, Hegels, Daniel, Tillmann, Wolfgang, Hagen, Leif, Fast Coating Deposition Simulation for Path Planning and Iterative Net-Shape Optimization on Complex Workpiece. In: ITSC 2015 - International Thermal Spray Conference 2015, ASM International, pp. 390-397 (2015)
13. Skibinski, Sebastian, Terhorst, Jana Hackmann, Weichert, Frank, Müller, Heinrich, Large-Scale Fusion of Collective, Areal Vehicle Data. In: IEEE International Conference on Multisensor Fusion and Integration, pp. 152-159 (2015)
14. Prasse, Christian, Stenzel, Jonas, Böckenkamp, Adrian, Rudak, Bartholomäus, Lorenz, Kersten, Weichert, Frank, Müller, Heinrich, ten Hompel, Michael, New Approaches for Singularization in Logistic Applications using Low Cost 3D Sensors. Sensing Technology: Current Status and Future Trends IV: Smart Sensors, Measurement and Instrumentation, Volume 12, pp. 191-215 (2015)
15. Hegels, Daniel, Wiederkehr, Thomas, Müller, Heinrich, Simulation Based Iterative Post-optimization of Paths of Robot Guided Thermal Spraying. Robotics and Computer Integrated Manufacturing, Volume 35, pp. 1-15 (2015)
16. Wiederkehr, Thomas, Müller, Heinrich, Efficient Large-Scale Coating Microstructure Formation Using Realistic CFD Models. Journal of Thermal Spray Technology, 24, pp. 283–295 (2015)
17. Siedhoff, Dominic, Libuschewski, Pascal, Weichert, Frank, Zybin, Alexander, Marwedel, Peter, Müller, Heinrich, Modellierung und Optimierung eines Biosensors zur Detektion viraler Strukturen. In: Bildverarbeitung für die Medizin, Springer-Verlag, pp. 108-113 (2014)
18. Libuschewski, Pascal, Kaul, Dennis, Siedhoff, Dominic, Weichert, Frank, Müller, Heinrich, Wiedfeld, Christian, Marwedel, Peter, Multi-Objective Computation Offloading for Mobile Biosensors via the LTE Network. In: Proceedings of the 4th International Conference on Wireless Mobile Communication and Healthcare: MobiHealth 2014, November 3-5, Athen, Greece (2014)
19. Kout, Alexander, Müller, Heinrich, Quantitative improvement of tool impact paths defined by isolines of scalar functions on triangular mesh workpiece surfaces, The

International Journal of Advanced Manufacturing Technology, Volume 70, Issue 1-4, pp. 237-255 (2014)

20. Siedhoff, Dominic, Fichtenberger, Hendrik, Libuschewski, Pascal, Weichert, Frank, Sohler, Christian, Müller, Heinrich, Signal/background classification of time series for biological virus detection. In: Pattern Recognition (GCPR 2014), Lecture Notes in Computer Science 8753, pp. 388-398 (2014)
21. Kout, Alexander, Müller, Heinrich, Tool-adaptive Offset Paths on Triangular Mesh Workpiece Surfaces. Computer-Aided Design, Volume 50, pp. 61-73 (2014)
22. Wiederkehr, Thomas, Müller, Heinrich, Acquisition and Optimization of Three-dimensional Spray Footprint Profiles for Coating Simulations, Journal of Thermal Spray Technology, Volume 22, Issue 6, pp. 1044-1052 (2013)
23. Hegels, Daniel, Müller, Heinrich, Evolutionary Path Generation for Reduction of Thermal Variations in Thermal Spray Coating. In: GECCO 2013 (Genetic and Evolutionary Computation Conference), pp. 1277-1284 (2013)
24. Tillmann, Wolfgang, Hollingsworth, Peter, Baumann, Ingor, Flossbach, Sebastian, Müller, Heinrich, Wiederkehr, Thomas, Influence of the Substrate's Shape Complexity On the Coating Properties Produced by HVOF Spraying of Fine WC-12Co (2-10 micrometer) powders. In: ITSC 2013 (International Thermal Spray Conference), Busan, Korea, 13.-15 May, pp. 707-711 (2013)
25. Prasse, Christian, Stenzel, Jonas, Rudak, Bartholomäus, Weichert, Frank, Müller, Heinrich, ten Hompel, Michael, Low Cost Contour Check of Loading Units using PMD Sensors, In: International Conference on Sensing Technology, ICST 2013, pp. 477-482 (2013)
26. Timm, Constantin, Weichert, Frank, Marwedel, Peter, Müller, Heinrich, Design Space Exploration Towards a Realtime and Energy-Aware GPGPU-based Analysis of Biosensor Data, Computer Science - Research and Development, Springer Berlin / Heidelberg, Volume 27, Issue 4, pp. 309-317 (2012)
27. Wiederkehr, Thomas, Kluseman, Benjamin, Müller, Heinrich, Svendsen, Bob, Fast, curvature-based prediction of rolling forces for porous media based on a series of detailed simulations, Advances in Engineering Software, Volume 42, pp. 142–150 (2011)
28. Weichert, Frank, Timm, Constantin, Gaspar, Marcel, Zybin, Alexander, Gurevich, Evgeny L., Müller, Heinrich, Marwedel, Peter, GPGPU-basierte Echtzeitdetektion von Nanoobjekten mittels Plasmonen-unterstützter Mikroskopie. In: Bildverarbeitung für die Medizin, Springer-Verlag, pp. 39-43 (2011)
29. Timm, Constantin, Libuschewski, Pascal, Siedhoff, Dominic, Weichert, Frank, Müller, Heinrich, Marwedel, Peter, Improving Nanoobject Detection in Optical Biosensor Data. In: Proceedings of the 5th International Symposium on Bio- and Medical Information and Cybernetics (BMIC 2011), Volume 2, pp. 236-240 (2011)
30. Timm, Constantin, Weichert, Frank, Müller, Heinrich, Marwedel, Peter, Multi-Objective Local Instruction Scheduling for GPGPU Applications. In: Proceedings of International Conference on Parallel and Distributed Computing and Systems (PDCS 2011), ACTA Press (2011)
31. Richter, Daniel, Müller, Heinrich, Nadler, Kai, Brümmer, Andreas, A new approach to three-dimensional intermesh clearance calculation. In: International Conference on Compressors and their Systems, Woodhead Publishing Limited, Cambridge, UK, pp. 441-454 (2011)
32. Weichert, Frank, Schröder, Andreas, Landes, Constantin, Shamaa, Ali, Awad, Said Kamel, Walczak, Lars, Müller, Heinrich, Wagner, Mathias, Computation of a Finite Element-Conformal Tetrahedral Mesh Approximation for Simulated Soft Tissue Deformation using a Deformable Surface Model. Journal of Medical & Biological Engineering & Computing, Springer, Volume 48, Issue 6, pp. 597-610 (2010)

33. Walczak, Lars, Weichert, Frank, Schröder, Andreas, Landes, Constantin, Müller, Heinrich, Wagner, Mathias, Einfluss von Formvariationen auf Finite Elemente Simulationen bei muskulären Strukturen. In: Bildverarbeitung für die Medizin, Springer-Verlag, pp. 182-186 (2010)
34. Weichert, Frank, Schröder, Andreas, Landes, Constantin, Walczak, Lars, Müller, Heinrich, Wagner, Mathias, Finite Element Simulation of Skeletal Muscular Structures Obtained from Images of Histological Serial Sections. Journal of Biomechanics, Elsevier, Volume 43, Issue 8, pp. 1483-1487 (2010)
35. Wiederkehr, Thomas, Kluseman, Benjamin, Gies, David, Müller, Heinrich, Svendsen, Bob, An Image Morphing Method for 3d Reconstruction and FE-Analysis of Pore Networks in Thermal Spray Coatings. Computational Materials Science, Volume 47, Issue 4, pp. 881–889 (2010)
36. Weichert, Frank, Fiedler, David, Hegenberg, Jens, Müller, Heinrich, Prasse, Christian, Roidl, Moritz, ten Hompel, Michael, Marker-Based Tracking in Support of RFID Controlled Material Flow Systems. Journal of Logistics Research, Springer, Volume 2, Issue 1, pp. 13-21 (2010)
37. Weichert, Frank, Gaspar, Marcel, Zybin, Alexander, Gurevich, Evgeny, Görtz, Alexander, Timm, Constantin, Müller, Heinrich, Marwedel, Peter, Plasmonen-unterstützte Mikroskopie zur Detektion von Viren. In: Bildverarbeitung für die Medizin, Springer-Verlag, pp. 76-80 (2010)
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