

Prof. Dr.-Ing.

Darius Burschka

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Born May 25, 1966

Career

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| 2005- now | Associate Professor (W2)
Department of Informatics
Technische Universität München, München, Germany |
| 2005-2003 | Assistant Research Professor
Department of Computer Science
Johns Hopkins University, Baltimore, USA |
| 2003-1999 | Associate Research Scientist
Computational Interaction and Robotics Lab
Johns Hopkins University, Baltimore, USA |
| 1999-1999 | Postdoctoral Asspociate
Center for Computational Vision and Control
Yale University, New Haven, USA |

Education

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| 1998 | Doctor of Engineering degree Department of Electical Engineering, Technische Universität München, München, Germany; Doctoral Thesis: "Vision-based Exploration of Indoor Environments with a Binocular Stereo System" |
| 1992 | Dipl.-Ing. degree from Department of Electrical Engineering, Technische Universität München, München, Germany; Thesis: "Model-based Prediction of Sensor Data for Active Sensors at an Example of the Microwave Radar Sensor" |

Research Interests

My principle areas of research are sensors for mobile systems and Human Computer Interfaces. The focus of my research is on vision-based navigation and three-dimensional reconstruction from sensor data.

Honours

- Best paper award from the MICCAI, 2005

Activities/Competence

- Committee member of the IAPR *Special Hardware and Software Environments*
- Editor Special Issue on “Special Hardware and Software Environments”, 2005
- Organizer of the tutorial *Principles and practice of real-time tracking on consumer hardware* at VR 2003 in Los Angeles.
- Reviewer Computer Vision and Pattern Recognition (CVPR)
- Committee Member for Best Paper Award ICRA2001
- Committee Member for Best ICRA Vision Paper Award 2003, 2006
- Member of IEEE, since 1999

Most Important Relevant Publications (Selected)

- [1] Myron Z. Brown, Darius Burschka, and Gregory D. Hager. Advances in Computational Stereo. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 25(8):993–1008, 2003.
- [2] D. Burschka and G. Hager. Dynamic composition of tracking primitives for interactive vision-guided navigation. In *Proc. of SPIE 2001, Mobile Robots XVI*, pages 114–125, November 2001.
- [3] D. Burschka and G. Hager. Scene Classification from Dense Disparity Maps in Indoor Environments. In *Proc. ICPR*, 2002.
- [4] D. Burschka and G. Hager. Stereo-Based Obstacle Avoidance in Indoor Environments with Active Sensor Re-Calibration. In *International Conference on Robotics and Automation*, pages 2066–2072, 2002.
- [5] D. Burschka and G.D. Hager. Vision-Based 3D Scene Analysis for Driver Assistance. *ICRA*, 2005.
- [6] Darius Burschka, Jeremy Geiman, and Gregory D. Hager. Optimal Landmark Configuration for Vision-Based Control of Mobile Robots. In *Proc. of International Conference on Robotics and Automation (ICRA)*, pages 3917–3922, September 2003.
- [7] Darius Burschka and Gregory D. Hager. Principles and Practice of Real Time Tracking on Consumer Hardware . In *Tutorial 1 at IEEE VR2003: Recent Methods for Image-Based Modeling and Rendering*, pages 55–66, March 2003.
- [8] Darius Burschka and Gregory D. Hager. V-GPS(SLAM): – Vision-Based Inertial System for Mobile Robots. In *Proc. of ICRA*, pages 409–415, April 2004.
- [9] Darius Burschka, Ming Li, Russell Taylor, and Gregory D. Hager. Scale-Invariant Registration of Monocular Stereo Images to 3D Surface Models. In *Proceedings of IROS*, pages 2581–2586, 2004.
- [10] Darius Burschka and Ming Li and Russell Taylor and Gregory D. Hager and Masaru Ishii. Scale-Invariant Registration of Monocular Endoscopic Images to CT-Scans for Sinus Surgery. *Medical Image Analysis*, 9(5):413–439, October 2005. Best Paper Award at MICCAI 2005.