
Curriculum Vitae

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Dipl.-Ing. Helmut Grabner

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Personal Data

Born	January 4, 1979, Leoben, Austria
Citizenship	Austria
Marital status	Single

Education

2004 - date	PhD-Study (Computer Science) <i>Institute for Computer Graphics and Vision at Graz University of Technology, Austria</i> Thesis title: On-line Boosting and Vision Thesis supervisor: Prof. Dr. Horst Bischof
2003 - 2004	Master-Study (Computer Science, Telematics) <i>Institute for Computer Graphics and Vision at Graz University of Technology, Austria, with distinction</i>

	Thesis title: Autoerkennung mit AdaBoost (Cardetection with AdaBoost)
	Thesis supervisor: Prof. Dr. Horst Bischof
1999 - 2003	Bachelor-Study (Computer Science, Telematics) <i>Institute for Computer Graphics and Vision at Graz University of Technology, Austria</i>
1993 - 1998	HTBLuVA Graz - Gösting (BULME) computer engineering, with distinction.
1989 - 1993	Hauptschule (extended elementary school), Graz.
1985 - 1989	Volksschule (primary school), Graz.

Employment

02/2006 - date	Research and teaching assistant <i>Institute for Computer Graphics and Vision at Graz University of Technology, Austria</i>
12/2004 - 01/2006	Project-scientist <i>Institute for Computer Graphics and Vision at Graz University of Technology, Austria</i> involved in the projects VITUS II, ETRADA-V and MISTRAL
1999 - 2004	Engineering as freelancer by Hage, Adres, Anton Paar, Lumitech, SDS and Liebherr
10/1998 - 05/1999	Military service (Aufklärungsbataillon 1, Gratkorn)

Teaching Experience

2007-date	Research and teaching assistant <i>Institute for Computer Graphics and Vision at Graz University of Technology, Austria</i> Courses: Computer Vision 1, Computer Vision 2, Coordinator of Bachelor and Master-Projects
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Research Interest

My research focuses on machine learning methods especially on-line learning and there applications in computer vision. Such as fast and robust object tracking and recognition as well as improving classifiers for object detection by on-line unsupervised learning.

Service

Program committee for IEEE Conference on Computer Vision and Pattern Recognition 2007, IEEE International Conference on Computer Vision 2007 and European Conference on Computer Vision 2008. Organizer of the Computer Vision Winter Workshop 2007. Regular reviewer for IEEE Transaction on Pattern Analysis and Machine Intelligence and Pattern Recognition.

Publications

Journals

- [1] H. Grabner, T.T. Nguyen, B. Gruber, and H. Bischof. On-line boosting-based car detection from arial images. *ISPRS Journal of Photogrammetry & Remote Sencing*, 63(3):382–396, 2007.

Major Conferences

- [1] H. Grabner, C. Leistner, and H. Bischof. Semi-supervised on-line boosting for robust tracking. In *Proceedings European Conference on Computer Vision (ECCV)*, 2008.
- [2] A. Saffari, H. Grabner, and H. Bischof. SERBoost: Boosting with expectation regularization. In *Proceedings European Conference on Computer Vision (ECCV)*, 2008.
- [3] C. Leistner, H. Grabner, and H. Bischof. Semi-supervised boosting using visual similarity learning. In *Proceedings IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2008.
- [4] M. Grabner, H. Grabner, and H. Bischof. Learning features for tracking. In *Proceedings IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2007.
- [5] H. Grabner, P.M. Roth, and H. Bischof. Eigenboosting: Combining discriminative and generative information. In *Proceedings IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2007.
- [6] H. Grabner and H. Bischof. On-line boosting and vision. In *Proceedings IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, volume 1, pages 260–267, 2006.

Other Reviewed Conferences and Workshops

- [1] H. Grabner, J. Sochman, H. Bischof, and J. Matas. Training sequential on-line boosting class for visual tracking. In *Proceedings International Conference on Pattern Recognition*, 2008.

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- [2] C. Leistner, P. Roth, H. Grabner, H. Bischof, A. Stratzer, and B. Rinner. Visual on-line learning in distributed camera networks. In *Proceedings International Conference on Distributed Smart Cameras*, 2008.
 - [3] G. Schall, H. Grabner, M. Grabner, P. Wohlhart, D. Schmalstieg, and H. Bischof. 3d tracking in unknown environments using on-line keypoint learning for mobile augmented reality. In *In Proceedings Workshop on Visual Localization for Mobile Platforms*, 2008.
 - [4] P. Roth, H. Grabner, C. Leistner, M. Winter, and H. Bischof. Interatctive learning a person detector: Fewer clicks - less frustration. In *Proceedings Workshop of the Austrian Association for Pattern Recognition*, 2008.
 - [5] H. Grabner, C. Leistner, and H. Bischof. Time dependent on-line boosting for robust backgroundmodeling. In *Proceedings International Conference on Computer Vision Theory and Applications*, 2007.
 - [6] H. Grabner, P.M. Roth, and H. Bischof. Is pedestrian detection realy a hard task? In *Proceedings IEEE International Workshop on Performance Evaluation of Tracking and Surveillance*, 2007.
 - [7] St. Kluckner, G. Pacher, H. Grabner, H. Bischof, and J. Bauer. A 3d teacher for car detection in aerial images. In *Proceedings ICCV Workshop on 3D Representation for Recognition*, 2007.
 - [8] M. Grabner, H. Grabner, J. Pehserl, P. Korica-Pehserl, and H. Bischof. Flea, do you remember me? In *Proceedings Asian Conference on Computer Vision (ACCV)*, pages 657–666, 2007.
 - [9] T.T. Nguyen, H. Grabner, B. Gruber, and H. Bischof. On-line boosting for car detection from aerial images. In *Proceedings IEEE International Conference on Research, Innovation and Vision for the Future*, 2007.
 - [10] H. Grabner, M. Grabner, and H. Bischof. Real-time tracking via on-line boosting. In *Proceedings British Machine Vision Conference*, volume 1, pages 47–56, 2006.
 - [11] M. Grabner, H. Grabner, and H. Bischof. Real-time tracking with on-line feature selection. In *Video Proceedings in conjunction with IEEE Conference on Computer Vision and Pattern Recognition*, 2006.
 - [12] H. Grabner, P.M. Roth, M. Grabner, and H. Bischof. Autonomous learning a robust background model for change detection. In *Proceedings IEEE International Workshop on Performance Evaluation of Tracking and Surveillance*, pages 39–46, 2006.
 - [13] M. Grabner, H. Grabner, and H. Bischof. Fast approximated SIFT. In *Proceedings Asian Conference on Computer Vision (ACCV)*, pages 918–927, 2006.

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- [14] M. Kpesi, M. Neffe, T. Van Pham, M. Grabner, H. Grabner, and A. Juffinger. Audio-visual feature extraction for semi-automatic annotation of meetings. In *Proceedings IEEE International Workshop on Multimedia Signal Processing*, 2006.
 - [15] P.M. Roth, H. Grabner, D. Skočaj, H. Bischof, and A. Leonardis. On-line conservative learning for person detection. In *Proceeding IEEE Workshop on Visual Surveillance and Performance Evaluation of Tracking and Surveillance*, 2005.
 - [16] P.M. Roth, H. Grabner, D. Skočaj, H. Bischof, and A. Leonardis. Conservative visual learning for object detection with minimal hand labeling effort. In *Proceedings German Association for Pattern Recognition*, pages 293–300, 2005.
 - [17] H. Grabner, C. Beleznai, and H. Bischof. Improving adaboost detection rate by wobble and mean shift. In *Proceedings Computer Vision Winter Workshop*, pages 23–32, 2005.

Books /Editor

- [1] M. Grabner and H. Grabner. editors. In *Proceedings Computer Vision Winter Workshop*, 2007.

Technical Reports

- [1] M. Grabner, H. Grabner, and H. Bischof. Fast visual object identification and categorization. NIPS Workshop in Interclass Transfer, 2005.

Others

- [1] H. Grabner and C. Beleznai. History of computer vision. *OCG Journal*, 3:28–29, 2008.
- [2] H. Schwabach, M. Harrer, A. Walzl, H. Bischof, A. Tacke, G. Zoffmann, C. Beleznai, B. Strobl, H. Grabner, and G. Fernandez. Vitus: Video based image analysis for tunnel safety. In *International Conference on Tunnel Safety and Ventilation*, 2006.
- [3] H. Grabner. Autodetektion mit AdaBoost. Master’s thesis, Graz University of Technology, 2004.