

Curriculum vitæ

Personal information

First name / Surname
Address(es)
Telephone(s)
Email(s)
Nationality(-ies)
Date of birth
Gender

Dr. Manuel Werlberger

Mainaustrasse 28, 8008 Zürich, Switzerland
+41 (0)78 947 96 29
manuel@werlberger.org
Austrian
1982-07-22
male



Occupational field

Researcher, Algorithm Designer and/or Software Engineer with strong connection to computer vision applications.

Skills & Expertise

Image Processing; Video Processing; Motion Analysis; Computer Vision; Computer Graphics; Software Engineering and Development; GPGPU/Cuda Programming; Algorithm Design; Optimization; Agile Methodologies; Mobile Devices; Scientific Writing;

Work experience

since 10/2014 *Postdoctoral Researcher*, Robotics and Perception Group, University of Zürich, Switzerland
08/2012-09/2014 *Senior Software Engineer / Computer Vision Expert*, Dacuda AG, Zürich, Switzerland
07/2011 *Guest Researcher* at the Computer Vision Group, University of Freiburg, Germany
06/2008-06/2012 *Research Assistant* and Ph.D. Student at the Institute for Compute Graphics and Vision, Graz University of Technology
10/2007-01/2008 *Study Assistant* at the Institute for Compute Graphics and Vision, Graz University of Technology
07/2005-10/2006 *Software Engineer* at AviBit data processing GmbH, Graz
10/2004-01/2005 *Study Assistant* at the Institute for Applied Information Processing and Communications, Graz University of Technology

Education

2008-2012
Title of qualification awarded Doctoral School of Computer Science, Graz University of Technology, Austria
Thesis title Dr.techn. (Ph.D.), with distinction
Convex Approaches for High Performance Video Processing
Supervisors: Prof. Dr. Horst Bischof and Prof. Dr. Thomas Brox, Advisor: Ass.-Prof. Dr. Thomas Pock

2006-2008
Title of qualification awarded Master Studies of Telematics, Graz University of Technology, Austria
Thesis title Dipl.-Ing. (M.Sc.), with distinction
Globally Optimal TV-L1 Shape Prior Segmentation
Supervisor: Prof. Dr. Horst Bischof, Advisor: Dr. Thomas Pock

2001-2006
Title of qualification awarded

Bachelor Studies of Telematics, Graz University of Technology, Austria
Bakk.techn. (B.Sc.)

1992-2000
1988-1992

Bundesrealgymnasium Wörgl
Volksschule Kundl

Languages

Mother tongue(s)

Other language

*Self-assessment
European level^(*)*

English

German

English

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production		Writing	
C2	Proficient user	C2	Proficient user	C2	Proficient user	C2	Proficient user	C1	Proficient user

^(*) Common European Framework of Reference (CEF) level

Scientific activities and further education

Reviewing activities

Journals: PAMI, IJCV, JMIV, etc.
Conferences: CVPR, ECCV, EMMCVPR, SSVM, etc.

02-05/2014
10/2013
03/2010
08/2009
07/2006

Entrepreneurship course "venture challenge" at ETH Zürich
Gründung Kompakt, ETH Zürich, Switzerland
Volleyball Referee (C)
Vision and Sport Summer School, Zürich, Switzerland
Summer School on Image Processing, Szeged, Hungary

Personal interests

Sports

Aside my interest in image processing and IT systems I am mainly involved into sports. From 2003 till 2012 I was playing in a volleyball team. In addition, I am interested into photography, music and traveling.

CrossFit, Volleyball, Mountaineering, Skiing, Snowboarding, Cycling, Running, etc.

Annexes

List of presentations

List of publications

Additional information (e.g. on projects) can be found on <http://www.werlberger.org>

List of Presentations

- 2014-05-27:** Project presentation of the startup idea “workout3D” in the entrepreneurship course “venture challenge” at ETH Zürich.
- 2013-06-13 – 14:** Product presentation and aligning customer requirements at *Blackberry and QNX, Waterloo and Ottawa, Canada*
- 2012-11-12 – 23:** Product presentation and aligning customer requirements at *Samsung Mobile, Suwon, Korea*
- 2012-06-29:** Convex Approaches for High Performance Video Processing. *Ph.D. Defense, Graz University of Technology*
- 2011-12-08:** Variational Optical Flow with Application to Video Restoration. *Disney Tech Talk / Visual Computing Lunch; Disney Research/ETH, Zürich, Switzerland*
- 2011-11-23:** Variational Optical Flow. *Dagstuhl Seminar “Efficient Algorithms for Global Optimization Problems in Computer Vision”, Dagstuhl, Germany*
- 2011-07-27:** Optical Flow Guided TV-L1 Video Interpolation and Restoration. *EMMCVPR, St. Petersburg, Russia*
- 2011-07-22:** Tutorial: Introduction to Cuda programming. *Computer Vision Group, Freiburg, Germany*
- 2011-07-12:** Variational Methods with Application to Optical Flow. *Computer Vision Group, Freiburg, Germany*
- 2011-06-30:** Tutorial: Variational Methods for Computer Vision. *GPU Summerschool, Grenoble, France*
- 2010-05-28:** Motion Estimation with Non-Local Total Variation Regularization. *Poster spotlight talk and poster presentation, CVPR 2010, St. Francisco, USA*
- 2009-12-04:** Recent Developments on Optical Flow. *vdQA project review at FFG headquarters, Vienna*

List of Publications

- [Wer12] Manuel Werlberger, *Convex approaches for high performance video processing*, Ph.D. thesis, Institute for Computer Graphics and Vision, Graz University of Technology, Graz, Austria, June 2012.
- [UWPB12] Markus Unger, Manuel Werlberger, Thomas Pock, and Horst Bischof, *Joint motion estimation and segmentation of complex scenes with label costs and occlusion modeling*, IEEE Computer Society Conference on Computer Vision and Pattern Recognition (CVPR), 2012.
- [WPUB11] Manuel Werlberger, Thomas Pock, Markus Unger, and Horst Bischof, *Optical Flow Guided TV-L1 Video Interpolation and Restoration*, Proceedings Energy Minimization Methods in Computer Vision and Pattern Recognition, Lecture Notes in Computer Science, Springer, July 2011, pp. 273–286.
- [WUPB11] Manuel Werlberger, Markus Unger, Thomas Pock, and Horst Bischof, *Efficient Minimization of the Non-Local Potts Model*, Proceedings International Conference on Scale Space and Variational Methods in Computer Vision, Lecture Notes in Computer Science, Springer, May 2011.
- [LGS⁺11] Christian Leistner, Martin Godec, Samuel Schulter, Amir Saffari, Manuel Werlberger, and Horst Bischof, *Improving classifiers with unlabeled weakly-related videos*, Proceedings IEEE Computer Society Conference on Computer Vision and Pattern Recognition, June 2011.
- [UWSB10] Martin Urschler, Manuel Werlberger, Eva Scheurer, and Horst Bischof, *Robust optical flow based deformable registration of thoracic ct images*, Proceedings MICCAI Workshop Medical Image Analysis in the Clinic: A Grand Challenge, Lecture Notes in Computer Science, Springer, September 2010.
- [UPWB10] Markus Unger, Thomas Pock, Manuel Werlberger, and Horst Bischof, *A convex approach for variational super-resolution*, Proceedings German Association for Pattern Recognition (DAGM), Lecture Notes in Computer Science, vol. 6376, Springer, September 2010, pp. 313–322.
- [WPB10] Manuel Werlberger, Thomas Pock, and Horst Bischof, *Motion estimation with non-local total variation regularization*, IEEE Computer Society Conference on Computer Vision and Pattern Recognition, June 2010.

- [SWM⁺10] Jakob Santner, Manuel Werlberger, Thomas Mauthner, Wolfgang Paier, and Horst Bischof, *FlowGames*, IEEE 1st Int. Workshop on Computer Vision for Computer Games (CVCG) in conjunction with IEEE CVPR 2010, June 2010.
- [WTP⁺09] Manuel Werlberger, Werner Trobin, Thomas Pock, Andreas Wedel, Daniel Cremers, and Horst Bischof, *Anisotropic huber-l1 optical flow*, Proceedings of the British Machine Vision Conference (BMVC), September 2009.
- [WPUB09] Manuel Werlberger, Thomas Pock, Markus Unger, and Horst Bischof, *A variational model for interactive shape prior segmentation and real-time tracking*, International Conference on Scale Space and Variational Methods in Computer Vision (SSVM), Lecture Notes in Computer Science, Springer, June 2009, pp. 200–211.
- [Wer08] Manuel Werlberger, *Globally optimal tv-l1 shape prior segmentation*, Master's thesis, Graz University of Technology, May 2008.