

# CURRICULUM VITAE Marc Pollefeys

March 29, 2007

Associate Professor  
Computer Science Department  
University of North Carolina – Chapel Hill  
Campus Box 3175, Sitterson Hall  
Chapel Hill, NC 27599-3175 USA  
Phone: (919) 962-1845  
Fax: (919) 962-1799  
Email: Marc.Pollefeys@cs.unc.edu

## Personal information

Born May 1, 1971, in Anderlecht(Belgium)  
Belgian nationality, US permanent resident

## Education

1999 Ph.D. Electr. Eng. K.U.Leuven (greatest distinction with the congratulations of the board)  
1994 M.S. Electr. Eng. K.U.Leuven

## Professional experience

2/2007 - 4/2007 Visiting Associate Professor  
Computer Science Department, Stanford University  
7/2005 - Associate Professor  
Computer Science Department, University of North Carolina – Chapel Hill  
7/2002 - 6/2005 Assistant Professor  
Computer Science Department, University of North Carolina – Chapel Hill  
10/1999-8/2002 Post-doctoral researcher and research team leader (see projects and grants K.U.Leuven, p.5)  
Center for Processing of Speech and Images, Dept. of Electrical Engineering, K.U.Leuven  
9/1994-9/1999 Research Assistant  
Center for Processing of Speech and Images, Dept. of Electrical Engineering, K.U.Leuven

## Awards

**2005 Packard Fellowship**  
**2003 NSF CAREER award**  
2001 CIPA Best Poster Award  
1999 BARCO Scientific Prize (for Ph.D. dissertation)  
1999 DAGM prize (best paper award)  
**1998 David Marr prize in Computer Vision (best paper award ICCV)**  
1989 Third prize in Flemish Mathematical Olympiades

## Professional activities

- **Member editorial board**  
*International Journal on Computer Vision (IJCV)*, 2006-present.  
*Transactions on Pattern Analysis and Machine Intelligence (PAMI)*, 2005-present.  
*Foundations and Trends in Computer Graphics and Computer Vision*, 2003-present.
- **Editor**  
*3D Structure from Multiple Images*, Marc Pollefeys, Luc Van Gool, Andrew Zisserman, Andrew Fitzgibbon (Eds.), Lecture Notes in Computer Science, Vol. 2018, Springer-Verlag.  
*Special Issue of the International Journal on Computer Vision (IJCV) on Vision and Modelling of*

*Dynamic Scenes*, Andrew Fitzgibbon, Marc Pollefeys, Luc Van Gool, Andrew Zisserman (Eds.), Vol. 68, Nr. 1.

*3D Imaging for Safety and Security*, Anreas Koschan, Marc Pollefeys, Mongi Abidi (Eds.), Kluwer/Springer, (in preparation).

- **Conference organizer**

General/Program Chair for 3D Data Processing Visualization and Transmission (3DPVT) 2006  
Workshop Chair for IEEE Conf. on Computer Vision and Pattern Recongition (CVPR) 2005

- **Workshop organizer**

*Workshop on Visual Representations and Modeling of Large-Scale environments (VRML)*, J.-M. Frahm, M. Pollefeys, F. Dellaert, J. Kosecka, 2007.

*Workshop on Omnidirectional Vision, Camera Networks and Non-traditional Sensors (OMNIVIS)*, C. Geyer, M. Pollefeys and X. Ying (organizers), Beijing, China, Oct 21, 2005.

*Workshop on Advanced 3D Imaging for Safety and Security*, A. Koschan, M. Abidi and M. Pollefeys (organizers), June 25, 2005.

*Vision techniques for digital architectural and archaeological archives*, H. Chikatsu, G. Fangi, M. Pollefeys, G. Zhou (organizers), 1-3 July 2003.

*Vision and Modelling of Dynamic Scenes*, A. Fitzgibbon, M. Pollefeys, L. Van Gool, A. Zisserman (organizers), Copenhagen, Denmark, June 2, 2002.

*European Workshop on Structure from Multiple Images of Large-scale Environments (SMILE2)*, M. Pollefeys, L. Van Gool, A. Zisserman, A. Fitzgibbon (organizers), Dublin, Ireland, 2000

- **Special session organizer**

Special Session at the Int. Symp. on 3D Data Processing Visualization Transmission 2004.

- **Conference/Workshop Program Committee member**

**Int. Conf. on Computer Vision (ICCV) 2003, 2005**

**Int. Conf. on Computer Vision and Pattern Recognition (CVPR) 2003, 2004, 2006, 2007**

**European Conference on Computer Vision (ECCV) 2002, 2004, 2006 (area chair), 2008 (area chair)**

Workshop on Omnidirectional Vision, Camera Networks and Non-traditional Sensors (OMNIVIS) 2007

Workshop on Benchmarking Calibration, Orientation and Surface Reconstruction from Images 2005, 2007

Workshop Beyond Multiview Geometry: Robust Estimation and Organization of Shapes from Multiple Cues 2007

Int. Workshop on 3D Virtual Rec. and Vis. of Complex Architectures - 3D-Arch'2005, 2007

Indian Conference on Computer Vision, Graphics & Image Processing 2006 (ICVGIP)

Asian Conference on Computer Vision 2006 (ACCV)

ISPRS Commission III Symposium - Photogrammetric Computer Vision 2002, 2006

ISPRS Commission V Symposium 2002, 2006

International Conference on Pattern Recognition 2006 (ICPR)(Computer Vision Track)

Workshop on 25 Years of RANSAC 2006

IEEE Workshop on Three-Dimensional Cinematography (3DCINE'06)

International Conference on 3D Digital Imaging and Modelling 2001, 2003, 2005

Workshop on Dynamical Vision 2005, 2006

IEEE International Workshop on Projector-Camera Systems 2005, 2006 (ProCams)

Virtual Systems and Multi-Media 2005

International Workshop on Real-time 3D Sensors and Their Use 2004 (co-located with CVPR)

European Conference on Visual Media Production 2004, 2005

International Symposium on Visual Computing 2005

Workshop on Motion and Video Computing (MOTION) 2005

Euroconference on Virtual Archaeology - VAST 2001, 2003, 2004, 2005

Vision, Modeling and Visualization (VMV) 2004, 2005  
 International Symposium on 3D Data Processing Visualization Transmission 2004  
 ISPRS Congress 2004  
 Workshop on Higher-Level Knowledge in 3D Modeling & Motion Analysis 2003  
 EuroGraphics 2003  
 GRAPHITE 2003  
 ISPRS Conference on Photogrammetric Image Analysis 2003  
 Workshop on Vision and Modelling of Dynamic Scenes 2002  
 IEEE Workshop on Stereo and Multi-Baseline Vision 2001  
 International Symposium on Virtual and Augmented Architecture 2001  
 European Workshop on Structure from Multiple Images of Large-scale Environments 2000

- **Journal/Conference reviewer**

International Journal on Computer Vision; IEEE Transactions on Pattern Analysis and Machine Intelligence; Computer Vision and Image Understanding; Image and Vision Computing Journal; Machine Vision and Applications; IEE Proceedings - Vision, Image and Signal Processing; Computer Graphics and Applications; The Journal of Visualization and Computer Animation; The Journal of Mathematical Imaging and Vision; IEEE Transactions on Image Processing; IEEE Transactions on Robotics and Automation; IEEE Transaction on Systems, Man and Cybernetics; IEEE Transactions on Circuits and Systems for Video Technology; IEEE Transactions on Visualization and Computer Graphics; IEEE Transactions on Biomedical Engineering; ISPRS Journal of Photogrammetry and Remote Sensing; Photogrammetric Engineering and Remote Sensing; International Journal of Shape Modeling; Pattern Recognition Letters; Journal of Oceanographic Engineering; Presence SIGGRAPH; Eurographics; Eurographics Rendering Workshop; I3D; American Control Conference

- **Panels/project review**

NSF Robotics and Human Augmentation/Computer Vision (3 panels), Computer Graphics.  
 Army Research Office; Israeli Science Foundation; Indian Swiss Joint Research Programme; Canada Foundation for Innovation; EPSRC; Research Grants Council of Hong Kong; Kentucky Science & Engineering Foundation; Netherlands Organisation for Scientific Research; Research Office Limburgs Universitair Centrum

- **Invited conference/workshop speaker**

Workshop on Mathematical Methods in Computer Vision 2006 (Banff Int. Research Station)  
 Packard Fellows Meeting 2006  
 Vision colloquium 2006 (TU Graz)  
 Workshop on Comp. Vision for Interactive and Intelligent Environments 2005 (Univ. of Kentucky)  
 CVR Conference on Computational Vision in Biological and Machine Systems 2005 (York Univ.)  
 Int. Fall Workshop on Vision, Modeling and Visualization 2004 (Stanford Univ.)  
 Int. Symp. on 3D Data Processing, Visualization and Transmission 2004  
 Advanced Concepts for Intelligent Vision Systems 2004 (**keynote**)  
 DIMACS Workshop on Surface Reconstruction 2003  
 East-West Vision 2002  
 IMAGINA 2002 (**keynote**)  
 International Symposium on Virtual and Augmented Architecture 2001 (**keynote**)  
 Congres of the International Society on Photogrammetry and Remote Sensing 2000  
 Symposium Virtual Reality, Dutch Mathematisch Congres 2000  
 Asian Conference on Computer Vision 2000

- **Member of discussion panel**

Member of panel on 3D digitizing and modeling: future trends and applications at 3DIM 1999 and 3DIM 2001

- **Conference Courses**

Course on *Video-based rendering* at SIGGRAPH 2005 (co-organizer/lecturer).

Course on *3D modelling with a hand-held camera* at International Symposium on 3D Data Processing Visualization Transmission 2004 and Congress of ISPRS 2004 (organizer/lecturer).  
 Course on *3D Models from Photo and Video* at Siggraph 2003 (organizer/lecturer with Luc Van Gool)  
 Course on Interactive Geometric and Scientific Computations Using Graphics Hardware at Siggraph 2003 (lecturer)  
 Short course on *Multiple view geometry* CVPR2003 (co-organizer/lecturer with Andrew Zisserman)  
 Short course on *Multi-View Geometry* CVPR2001 (co-organizer/lecturer with Anders Heyden)  
 Course on *3D modelling with a hand-held camera* at Siggraph 2000, 2001 and 2002 (organizer/lecturer)  
 Course on *acquisition and rendering of surface lightfields/Image-based modeling* Siggraph 2001 and 2002 (lecturer)  
 Tutorial on *3D modelling from images* at ECCV2000 and 3DIM 2001, 2003 (organizer/lecturer)

- **Invited research presentations**

Navy Postgraduate School (03/07), Stanford (03/07), Industrial Light & Magic (03/07), Georgia Tech (01/07), Columbia University (12/06), New York University (12/06), Max Planck Institute - Saarbrücken (distinguished lecture) (9/06), ETH Zürich (3/06), INRIA-Grenoble (12/05), Microsoft Research Redmond (11/05), University of Washington (11/05), K.U.Leuven (07/05; 12/03; 12/02), Limburg University Center (07/05), Stanford University (03/05), General Electric CRD (02/05), Rensselaer Polytechnic Institute (02/05), John Hopkins University (02/05), University of California at Berkeley (11/04), Wright-Patterson Airforce Base/Wright State University (10/04), University of Illinois at Urbana Champaign (09/04), University of Oxford (08/04), Microsoft Research Cambridge (08/04), AlphaTech (08/04), University of Pennsylvania (GRASP seminar) (04/04), University of Maryland at College Park (04/04), Duke (03/04), Carnegie Mellon University (RI Seminar) (02/04), UNC Research Laboratory for Archaeology (02/04), North Carolina State University (10/03), Technical University of Denmark (10/03), Siemens SCR (05/03), Princeton University (04/03), Sarnoff (04/03), MIT (11/02), GeorgiaTech (11/02), Imperial College (08/02), Max Planck Institute - Saarbrücken (06/02), University of North Carolina - Chapel Hill (02/02), Technical University Graz (01/02), UCLA (07/01), Prague Technical University (05/01), Chinese University of Hong-Kong (01/00), Erlangen-Nürnberg University (10/98), Gunma University (11/98), Oxford University (03/98).

- **Guest class lectures**

Stanford ('07), GeorgiaTech ('02), ENST-Paris ('02), ETHZurich ('00).

- **Ph.D. or M.S. committee member**

Henrik Aanaes, Ph.D. Technical University of Denmark, 20 Oct. 2003.  
 Oscar Pizaro, Ph.D., MIT/WHOI, 13 Aug. 2004.  
 Srikumar Ramalingam, M.S., UCSC, Sept. 2004.  
 Jean-Sébastien Franco, Ph.D., INRIA-grenoble, 13 Dec. 2005  
 David Neil Ross McKinnon, Ph.D., University of Queensland, 2006

Kok-Lim Low, Ph.D., UNC, 16 Aug. 2005  
 Sang-Uok Kum, Ph.D., UNC, 5 May 2006  
 Scott Larsen, Ph.D., UNC, 27 Oct. 2006  
 Greg Coombe, Ph.D., UNC, 20 Nov. 2006  
 Jingyu Yan, Ph.D., UNC, 28 Nov. 2006 (advisor) Eric Bennett, Ph.D., UNC, 22 Mar. 2007

- **Membership**

member of IEEE and ACM Siggraph.

- **Misc**

Research Associate of the Research Laboratory for Archaeology (UNC) (2004-present)  
 Chair of ISPRS intercommission III/V workinggroup on Image Sequences (2000-2004/2004-2008).  
 Member of Honorary Committee Imagina 2003, 2004.

## Courses taught

- Computer Vision (Comp256), Spring 2006, Fall 2003.
- Recent advances in computer vision and image analysis (Comp255), Fall 2005.
- Computer Organization (Comp120), Spring 2005, Spring 2004.
- 3D Urban Modeling (Comp790-089), Fall 2006.
- 3D Photography (Comp290-089), Fall 2004.
- Multiple View Geometry (Comp290-089) , Spring 2003.
- Computer Vision (Inter-University Graduate Course with Luc Van Gool), Fall 2001.
- Summer School on Shape in Computer Vision and Graphics, ETHZürich, 2000 (lecturer).

## Current Ph.D./M.S. student supervision

- **Seon Joo Kim**, Fall 2002-present, current research topic: On-line photometric calibration of moving cameras.
- **Sudipta Sinha**, Summer 2003-present, current research topic: Calibration and reconstruction from active PTZ camera networks.
- **Guan Li**, Fall 2004-present, current research topic: Dynamic reconstruction from active PTZ camera networks.
- **Sriram-Thirthala Venkata**, Summer 2004-present (on leave), current research topic: omnidirectional vision and camera networks.
- **David Gallup**, Summer 2005-present, current research topic: Urban modeling from video.
- **Brian Clipp**, Summer 2005-present, current research topic: Urban modeling from video.
- **Paul Merrell**, Fall 2005-present, current research topic: Urban modeling from video.
- **ChangChang Wu**, Fall 2005-present, current research topic: 3D Terrain modeling and image registration.
- **Xiaowei Li**, Fall 2006-present, current research topic: Large-Scale Structure from Motion.

## Postdoctoral advisees

- **Jan-Michael Frahm**, 07/05-present, current research topic: urban modeling from video.
- **Philippos Mordohai**, 08/05-present, current research topic: urban modeling from video.
- **Jean-Sébastien Franco**, 02/06-present, current research topic: 3D modeling of dynamic scenes.

## Graduated students

- **Jingyu Yan**, Ph.D. 2006, Articulated Non-rigid Shapes, Motions and Kinematic Chains From Video.
- **Jason Repko**, M.S., May 2005.

## Projects and grants

### UNC

- *Packard Fellowship for Science and Engineering*, recipient, The David and Lucile Packard Foundation, 11/05-10/10, \$625,000.
- *VACEIII: 3D Content Extraction from Video Streams*, PI, DTO, 10/06-10/08, \$1,000,000.
- *Transportable Computing Clusters for Real World Acquisition, Display, and Immersive Training*, Co-PI (with Henry Fuchs (PI), Greg Welch (Co-PI)), ONR, 04/06-06/07, \$133,000.
- *UrbanScape*, UNC PI, DARPA, 03/05-03/08, UNC budget \$1,300,000.
- *Geo\*: Meshless wavelets and their application to terrain modeling*, Co-PI (with Jack Snoeyink (PI), Leonard McMillan, Wei Wang, Charles Chui, Wenjie He (Co-PIs)), DARPA, 03/05-02/10, \$2,300,000.
- *Calibration and 3D modeling from pan-tilt-zoom camera networks*, PI, Siemens Ph.D. student support, 08/04-08/05, \$31,000.
- *ITR: Converting 2D video to 3D with Applications to 3D-TV, Video Analysis and Compression*, PI, NSF, 08/03-07/06, \$286,000 (including REU supplement).
- *UrbanScape seedling*, UNC PI, DARPA, 07/03-06/04, \$120,000.
- *CAREER: Visual 3D Acquisition, Modeling and Rendering of the Real World*, PI, NSF, 02/03-02/08, \$400,000.

### K.U.Leuven

- *ATTEST - Advanced Three-dimensional Television System Technology*, local project leader, European IST project, 03/02-02/04, local budget: approx. \$200,000.
- *Micro-Mechanisms and Adaptation of Micro-Cameras to Planetary Exploration*, consultant, ESA project, 1/02-12/02, approx. \$30,000.
- *Dynamic 3D multi camera setup*, personal equipment grant, FWO Fund for Scientific Research - Flanders, 01/02-12/02, approx. \$27,500.
- *InViews - Interactive and Immersive Video from Multiple Images*, local project leader, European IST project, 12/01-5/04, approx. \$350,000.
- *Combined geometric and image-based approaches to virtual and augmented reality*, co-principal investigator, Flemish FWO research project, 01/01-12/04, approx. \$110,000
- *3D Murale - 3D Measurements & Virtual Reconstruction of Ancient Lost Worlds of Europe*, local project leader, European IST project, 11/00-10/03, approx. \$290,000
- *BEYOND the Graphical User Interface*, local project leader, European ITEA project, 9/99-11/01, local budget: approx. \$400,000
- *VirtErf - Virtual Heritage*, local project leader, Flemish STWW project, 9/99-8/01, local budget approx. \$ 125,000
- *ROBUST - Payload Support for Planetary Exploration*, local project leader, ESA project, 3/99- .
- *Intelligent Mechatronic Systems*, workpackage leader, Belgian IUAP project, 01/97-12/01.
- *Combined geometric and image-based approaches to the acquisition of photo-realistic models from real-world 3D scenes*, competitive post-doctoral grant, recipient, FWO - Fund for Scientific Research - Flanders, 10/99-9/02.

- *Visual 3D reconstruction and recognition*, competitive Ph.D. grant, recipient, IWT - Institute for Promotion of Innovation by Science and Technology in Flanders, 01/95-12/98.

## **Publications** (93 refereed or invited)

### **Journals**

(CI: ISI Citation Index 2002, CR: ISI Cited References (04/04),

CS: CiteSeer citation count (excluding self-citations; 08/04))

1. S. Sinha, J.-M. Frahm, M. Pollefeys, Y. Genc, Feature Tracking and Matching in Video Using Programmable Graphics Hardware, *Machine Vision and Application*, to appear.
2. S. Sinha, M. Pollefeys, Pan-Tilt-Zoom Camera Calibration and High-Resolution Mosaic Generation, *Computer Vision and Image Understanding*, 103(3), 170-183, 2006.
3. R. Yang, M. Pollefeys, A Versatile Stereo Implementation on Commodity Graphics Hardware, *Journal of Real-Time Imaging*, Volume 11, Issue 1, February 2005, Pages 7-18.
4. M. Pollefeys, L. Van Gool, M. Vergauwen, F. Verbiest, K. Cornelis, J. Tops, R. Koch, Visual modeling with a hand-held camera, ***International Journal of Computer Vision*** 59(3), 207-232, 2004.  
CI: 2.034
5. R. Yang, M. Pollefeys, H. Yang, G. Welch, A Unified Approach to Real-Time, Multi-Resolution, Multi-Baseline 2D View Synthesis and 3D Depth Estimation using Commodity Graphics Hardware, *International Journal of Image and Graphics*, Vol. 4, No. 4 (2004) 627-651.
6. K. Landzettel, K. Arbter, B. Brunner, B.-M. Steinmetz, M. Pollefeys, M. Vergauwen, R. Moreas, F. Xu, L. Steinicke, B. Fontaine, "A Micro-Rover Navigation and Control System for Autonomous Planetary Exploration", *Advanced Robotics*, Vol. 18, No.3, pp.285-314, 2004.  
(overview paper reporting on ESA project, contribution as local project leader)
7. M. Pollefeys, L. Van Gool, M. Vergauwen, K. Cornelis, F. verbiest, J. Tops, Image-based 3D Recording for Archaeological Field Work, *Computer Graphics and Applications (CGA)*, vol. 23, no. 3., May/June 2003, pp. 20-27.  
CI: 1.193
8. M. Pollefeys and L. Van Gool. Visual modeling: from images to images, *The Journal of Visualization and Computer Animation*, **13**: 199-209, 2002.
9. M. Pollefeys and L. Van Gool. From Images to 3D Models, *Communications of the ACM*, July 2002/Vol. 45, No. 7, pp.50-55.  
CI: 1.497
10. M. Vergauwen, M. Pollefeys, L. Van Gool. A stereo vision system for support of planetary surface exploration, special issue *Machine Vision and Applications*, Vol. 14(1), 2003, pp.5-14.  
(paper reporting on KULeuven-ESAT component of ESA project, contribution as local project leader)
11. G. Van Meerbergen, M. Vergauwen, M. Pollefeys, L. Van Gool. A Hierarchical Symmetric Stereo Algorithm Using Dynamic Programming, ***International Journal on Computer Vision*** 47(1/2/3): 275-285, 2002.  
(supervised G. Van Meerbergen and M. Vergauwen's research as team leader)  
CI: 2.034
12. R. Koch, M. Pollefeys, L. Van Gool, Realistic surface reconstruction of 3D scenes from uncalibrated image sequences, *Journal of Visualization and Computer Animation*, Vol. 11, pp. 115-127, 2000.  
(describes our early research in combining dense stereo (R. Koch) with uncalibrated structure from motion and self-calibration (M. Pollefeys))

13. M. Pollefeys, R. Koch, M. Vergauwen, L. Van Gool. Automated reconstruction of 3D scenes from sequences of images, *ISPRS Journal Of Photogrammetry And Remote Sensing* (55)4 (2000) pp. 251-267.  
CR: 3 CS: 5
14. M. Pollefeys, R. Koch and L. Van Gool. Self-Calibration and Metric Reconstruction in spite of Varying and Unknown Internal Camera Parameters, **International Journal of Computer Vision**, 32(1), 7-25, 1999.  
CI: 2.034 CR: 31
15. M. Pollefeys and L. Van Gool, Stratified Self-Calibration with the Modulus Constraint, **IEEE Transactions on Pattern Analysis and Machine Intelligence**, Vol 21, No.8, pp.707-724, 1999.  
CI: 2.923 CR: 9 CS: 10

### Proceedings (refereed)

(24 in top conferences ICCV, CVPR and ECCV, as in most areas of CS those conference are as important as journals)

(AR: Acceptance Ratio)

16. L. Guan, J.-S. Franco, M. Pollefeys, 3D Occlusion Inference from Silhouette Cues, **Proc. CVPR'07** (IEEE Conf. on Computer Vision and Pattern Recognition),  
AR oral:  $\pm 7\%$
17. H. Yang, M. Pollefeys, G. Welch, J.-M. Frahm, A. Ilie, Differential Camera Tracking through Linearizing the Local Appearance Manifold, **Proc. CVPR'07** (IEEE Conf. on Computer Vision and Pattern Recognition),  
AR oral:  $\pm 7\%$
18. D. Gallup, J.-M. Frahm, P. Mordohai, Q. Yang, M. Pollefeys, Real-Time Plane-sweeping Stereo with Multiple Sweeping Directions, **Proc. CVPR'07** (IEEE Conf. on Computer Vision and Pattern Recognition),  
AR:  $\pm 25\%$
19. S. J. Kim, D. Gallup, J.-M. Frahm, A. Akbarzadeh, Q. Yang, R. Yang, D. Nistr, M. Pollefeys, Gain Adaptive Real-Time Stereo Streaming, Proc. Int. Conf. on Computer Vision Systems, 2007.
20. J. Yan, M. Pollefeys, "Recovering Articulated Non-rigid Shapes, Motions and Kinematic Chains From Video", AMDO'06 (Conference on Articulated Motion and Deformable Objects), 2006.
21. J.-M. Frahm, M. Pollefeys, "RANSAC for (Quasi-)Degenerate data (QDEGSAC)", **Proc. CVPR'06** (IEEE Conf. on Computer Vision and Pattern Recognition), 2006.  
AR oral:  $\pm 7\%$
22. J. Yan, M. Pollefeys, "Automatic Kinematic Chain Building from Feature Trajectories of Articulated Objects", **Proc. CVPR'06** (IEEE Conf. on Computer Vision and Pattern Recognition), (to appear), 2006.  
AR:  $\pm 25\%$
23. A. Akbarzadeh, J.-M. Frahm, P. Mordohai, B. Clipp, C. Engels, D. Gallup, P. Merrell, M. Phelps, S. Sinha, B. Talton, L. Wang, Q. Yang, H. Stewenius, R. Yang, G. Welch, H. Towles, D. Nister and M. Pollefeys, "Towards Urban 3D Reconstruction From Video", Proc. 3DPVT'06 (Int. Symp. on 3D Data, Processing, Visualization and Transmission), 2006.
24. L. Guan, S. Sinha, J.-S. Franco and M. Pollefeys, "Visual Hull Construction in the Presence of Partial Occlusion", Proc. 3DPVT'06 (Int. Symp. on 3D Data, Processing, Visualization and Transmission), 2006.
25. S. Larsen, P. Mordohai, M. Pollefeys and H. Fuchs, "Simplified Belief Propagation for Multiple View Reconstruction", Proc. 3DPVT'06 (Int. Symp. on 3D Data, Processing, Visualization and Transmission), 2006.



26. H. Yang, G. Welch and M. Pollefeys, "Illumination Insensitive Model-Based 3D Object Tracking and Texture Refinement", Proc. 3DPVT'06 (Int. Symp. on 3D Data, Processing, Visualization and Transmission), 2006.
27. J. Yan, M. Pollefeys, "A General Framework for Motion Segmentation: Independent, Articulated, Rigid, Non-rigid, Degenerate and Non-degenerate", **Proc. ECCV'06** (European Conference of Computer Vision).  
AR: 25%
28. S. Sinha, M. Pollefeys, "Multi-view Reconstruction using Photo-consistency and Exact Silhouette Constraints: A Maximum-Flow Formulation", **Proc. ICCV'05** (International Conf. on Computer Vision), Vol. 1, pp. 349-356, 2005.  
AR: 20%
29. S. Thirthala, M. Pollefeys, "Multi-view geometry of 1D radial cameras and its application to omnidirectional camera calibration.", **Proc. ICCV'05** (International Conf. on Computer Vision), Vol. 2, pp. 1539-1546, 2005.  
AR: 20%
30. S. Thirthala and M. Pollefeys, "Trifocal Tensor for Heterogeneous Cameras", Omnivis'05 (in conjunction with ICCV'05).
31. J. Yan and M. Pollefeys, "Articulated Motion Segmentation Using RANSAC With Priors", Workshop on Dynamic Vision (in conjunction with ICCV'05)
32. J. Yan, M. Pollefeys, "A factorization approach to articulated motion recovery", **Proc. CVPR'05** (IEEE Conf. on Computer Vision and Pattern Recognition), Vol. 2, pp. 815-821, 2005.  
AR: 26.8%
33. S. Thirthala, M. Pollefeys, "The Radial Trifocal Tensor: A Tool for Calibrating Radial Distortion of Wide-Angle Cameras", **Proc. CVPR'05** (IEEE Conf. on Computer Vision and Pattern Recognition), Vol. 1, pp. 321-328, 2005.  
AR: 26.8%
34. J. Repko, M. Pollefeys, "3D Models from Extended Uncalibrated Video Sequences: Addressing Key-frame Selection and Projective Drift", Proc. 3DIM'05, pp. 150-157, 2005.
35. S. Sinha, M. Pollefeys, S.J. Kim, "High-Resolution Multiscale Panoramic Mosaics from Pan-Tilt-Zoom Cameras", Proc. of 4th Indian Conference on Computer Vision, Graphics & Image Processing (ICVGIP 2004), pp. 28-33, 2004.
36. N. Williams, K.-L. Low, C. Hantak, M. Pollefeys, and A. Lastra. "Automatic Image Alignment for 3D Environment Modeling", Proc. of the 17th Brazilian Symposium on Computer Graphics and Image Processing (SIBGRAPI), Curitiba, Brazil, pp. 388-395.
37. S. Sinha, M. Pollefeys. "Visual-Hull Reconstruction from Uncalibrated and Unsynchronized Video Streams", Second International Symposium on 3D Data Processing, Visualization & Transmission, 2004 (invited).
38. J. Yan, M. Pollefeys, "Video Synchronization via Space-Time Interest Point Distribution", Advanced Concepts for Intelligent Vision Systems, 2004, 5 pages.
39. S. Sinha, M. Pollefeys, "Calibrating a network of cameras from live or archived video", Advanced Concepts for Intelligent Vision Systems, 2004, 7 pages.
40. S. Sinha, M. Pollefeys. "Synchronization and Calibration of Camera Networks from Silhouettes", International Conference on Pattern Recognition 2004, Vol. 1, pp. 116-119, 2004.  
AR oral: 16.5%

41. A. Raij, M. Pollefeys. "Auto-Calibration of Multi-Projector Display Walls", International Conference on Pattern Recognition 2004, Vol. 1, pp. 14-17, 2004.  
AR oral: 16.5%
42. R. Yang, M. Pollefeys, and S. Li, "Improved Real-Time Stereo on Commodity Graphics Hardware", Workshop on Real Time 3D Sensors and Their Use 2004 (in conjunction with CVPR), 7 pages.
43. S. Sinha, M. Pollefeys. Camera Network Calibration from Dynamic Silhouettes, **Proc. CVPR'04** (IEEE Conf. on Computer Vision and Pattern Recognition), pp. 195-202, 2004.  
AR: 29.3%
44. S.J. Kim, M. Pollefeys. Radiometric Self-Alignment of Image Sequences, **Proc. CVPR'04** (IEEE Conf. on Computer Vision and Pattern Recognition), pp. 645-651, 2004.  
AR: 29.3%
45. S. Sinha, M. Pollefeys. "Towards Calibrating a Pan-Tilt-Zoom Cameras Network", OMNIVIS 2004, ECCV Conference Workshop CD-rom proceedings, 2004, 13 pages.
46. M. Pollefeys, S. Sinha. Iso-disparity surfaces for general stereo configurations, T. Pajdla and J. Matas (Eds.), **Computer Vision - ECCV 2004** (European Conference on Computer Vision), LNCS, Vol. 3023, pp. 509-520, Springer-Verlag, 2004.  
AR: 34.5%
47. R. Yang, M. Pollefeys, and G. Welch. Dealing with Textureless Regions and Specular Highlight: A Progressive Space Carving Scheme Using a Novel Photo-consistency Measure, **Proc. ICCV'03** (International Conference on Computer Vision), pp. 576-584, 2003.  
AR: 20.6%
48. R. Yang and M. Pollefeys. Multi-Resolution Real-Time Stereo on Commodity Graphics Hardware, **Proc. CVPR'03** (IEEE Conf. on Computer Vision and Pattern Recognition), pp. 211-218, 2003.  
AR: 23% CS: 6
49. J. Cosmas, T. Itegaki, D. Green, N. Joseph, L. Van Gool, A. Zalesny, D. Vanrintel, F. Leberl, M. Grabner, K. Schindler, K. Karner, M. Gervautz, S. Hynst, M. Waelkens, M. Vergauwen, M. Pollefeys, K. Cornelis, T. Vereenoghe, R. Sablatnig, M. Kampel, P. Axell, E. Meyns, "Providing multimedia tools for recording, reconstruction, visualisation and database storage/access of archaeological excavations", Proceedings 4th international symposium on virtual reality, archaeology and intelligent cultural heritage - VAST2003, pp. 183-192, November 5-7, 2003, Brighton, United Kingdom
50. M. Pollefeys, L. Van Gool, M. Vergauwen, K. Cornelis, F. Verbiest, J. Tops, Video-to-3D, Proc. Photogrammetric Computer Vision 2002 (ISPRS Commission III Symposium), International Archive of Photogrammetry and Remote Sensing. 12 pages.
51. A. Redert, M. Op de Beeck, C. Fehn, W. IJsselsteijn, M. Pollefeys, L. van Gool, E. Ofek, I. Sexton, P. Surman, ATTEST, Advanced Three-dimensional Television System Technologies, Proc. of First International Symposium on 3D Data Processing Visualization and Transmission. 7 pages.
52. M. Pollefeys, F. Verbiest, L. Van Gool, Surviving dominant planes in uncalibrated structure and motion recovery, A. Heyden, G. Sparr, M. Nielsen, P. Johansen (Eds.) **Computer Vision - ECCV 2002**, 7th European Conference on Computer Vision, Lecture Notes in Computer Science, Vol.2351, pp. 837-851.  
AR oral: 7.5%
53. K. Cornelis, M. Pollefeys, L. Van Gool, Lens Distortion Recovery for Accurate Sequential Structure and Motion Recovery A. Heyden, G. Sparr, M. Nielsen, P. Johansen (Eds.) **Computer Vision - ECCV 2002**, 7th European Conference on Computer Vision, Lecture Notes in Computer Science, Vol.2351, pp. 186-200.  
AR: 37.7%

54. G. Van Meerbergen, M. Vergauwen, M. Pollefeys, L. Van Gool, A Hierarchical Stereo Algorithm Using Dynamic Programming, Proc. IEEE Workshop on Stereo and Multi-Baseline Vision, pp. 166-174, 2001.
55. M. Pollefeys, L. Van Gool, M. Vergauwen, K. Cornelis, F. Verbiest, J. Tops. Image-based 3D Acquisition of Archaeological Heritage and Applications, Proc. VAST2001 (Virtual Reality, Archaeology, and Cultural Heritage), ACM Press, pp.255-262.
56. M. Pollefeys, L. Van Gool, I. Akkermans, D. De Becker, A Guided Tour to Virtual Sagalassos, Proc. VAST2001 (Virtual Reality, Archaeology, and Cultural Heritage), ACM press, pp.213-218.
57. J. Cosmas, T. Itagaki, D. Green, E. Grabczewski, L. Van Gool, A. Zalesny, D. Vanrintel, F. Leberl, M. Grabner, K. Schindler, K. Karner, M. Gervautz, S. Hynst, M. Waelkens, M. Pollefeys, R. DeGeest, R. Sablatnig, M. Kampel. 3D MURALE: A Multimedia System for Archaeology. Proc. VAST2001 (Virtual Reality, Archaeology, and Cultural Heritage) ACM Press, pp.297-306.
58. K. Cornelis, M. Pollefeys, M. Vergauwen, F. Verbiest, L. Van Gool, Tracking based structure and motion recovery for augmented video productions , Proceedings A.C.M. symposium on virtual reality software and technology - VRST 2001, pp. 17-24, November 14-17, 2001, Banff, Canada
59. M. Pollefeys, L. Van Gool. Do ambiguous reconstructions always give ambiguous images?, **Proc. ICCV'01** (International Conference on Computer Vision), 2001, pp.187-192.  
AR: 34%
60. M. Pollefeys, M. Vergauwen, F. Verbiest, K. Cornelis, J. Tops and L. Van Gool. Virtual Models from Video and Vice-Versa, keynote presentation, Proc. International Symposium on Virtual and Augmented Architecture (VAA01), B. Fisher, K. Dawson-Howe, C. O'Sullivan (Eds.), Springer-Verlag, 2001, pp.11-22.
61. K. Nuyts, J.P.Kruth, B. Lauwers, M. Pollefeys, L. Qiongyan, J. Schouteden, P. Smars, K. Van Balen, L. Van Gool, M. Vergauwen. Vision on Conservation: VIRTERRF Proc. International Symposium on Virtual and Augmented Architecture (VAA01), B. Fisher, K. Dawson-Howe, C. O'Sullivan (Eds.), Springer-Verlag, 2001, pp.125-132.
62. M. Vergauwen, M. Pollefeys, L. Van Gool. A stereo vision system for support of planetary surface exploration, In B. Schiele, G. Sagerer (Eds.) Computer Vision Systems (Proc. Second International Workshop), LNCS 2095, pp.298-312, 2001.
63. M. Vergauwen, M. Pollefeys, L. Van Gool, Calibration and 3D measurements from Martian Terrain Images, Proceedings of the 2001 IEEE International Conference on Robotics and Automation, pp 2153-2158, Seoul, Korea, IEEE Computer Society Press, 2001.
64. M. Vergauwen, M. Pollefeys, T. Tuytelaars and L. Van Gool, On Satellite Vision-aided Robotics Experiment, Proc. International Conference on Robotics and Automation, pp. 4039-4044, IEEE Computer Society Press, 2000.
65. M. Pollefeys and L. Van Gool, Some issues on self-calibration and critical motion sequences, invited presentation, Proc. Asian Conference on Computer Vision, pp.893-898, 2000.
66. M. Pollefeys, R. Koch, M. Vergauwen and L. Van Gool, Hand-held acquisition of 3D models with a video camera, Proc. 3DIM'99 (Second International Conference on 3-D Digital Imaging and Modeling), IEEE Computer Society Press, pp.14-23, 1999.  
CR: 6 CS: 4
67. M. Pollefeys, R. Koch and L. Van Gool, A simple and efficient rectification method for general motion, **Proc. ICCV'99** (International Conference on Computer Vision), pp.496-501, Corfu (Greece), 1999.  
AR: 31% CS: 14

68. R. Koch, M. Pollefeys, B. Heigl, L. Van Gool and H. Niemann. Calibration of Hand-held Camera Sequences for Plenoptic Modeling, **Proc. ICCV'99** (International Conference on Computer Vision), pp.585-591, Corfu (Greece), 1999.  
AR: 31% CS: 5
69. R. Koch, M. Pollefeys and L. Van Gool, Robust Calibration and 3D Geometric Modeling from Large Collections of Uncalibrated Images, In: W.Foerstner, J.M. Buhmann, A. Faber. P. Faber (Eds.): Mustererkennung 1999. Series Informatik Aktuell, Springer, pp. 413-420, presented at DAGM'99, joint best paper.
70. B. Heigl, R. Koch, M. Pollefeys, J. Denzler and L. Van Gool, Plenoptic Modeling and Rendering from Image Sequences taken by Hand-held Camera, Proc. DAGM'99, pp.94-101, joint best paper.  
CS: 8
71. L. Van Gool, T. Tuytelaars and M. Pollefeys, Adventurous tourism for couch potatoes, invited paper, Proc. CAIP99, LNCS 1689, Springer-Verlag, pp.98-107, 1999.
72. R. Koch, B. Heigl, M. Pollefeys, L. Van Gool and H. Niemann, A Geometric Approach to Lightfield Calibration, Proc. CAIP99, LNCS 1689, Springer-Verlag, pp.596-603, 1999.
73. M. Pollefeys, R. Koch, M. Vergauwen and L. Van Gool, Metric 3D Surface Reconstruction from Uncalibrated Image Sequences, Proc. SMILE Workshop (post-ECCV'98), LNCS 1506, pp.138-153, Springer-Verlag, 1998.  
AR oral: 18% CR: 8 CS: 18
74. R. Koch, M. Pollefeys and L. Van Gool, Automatic 3D Model Acquisition from Uncalibrated Image Sequences, Proceedings Computer Graphics International, pp.597-604, Hannover, 1998.
75. L. Van Gool, F. Defoort, R. Koch, M. Pollefeys, M. Proesmans and M. Vergauwen, 3D modeling for communications, Proceedings Computer Graphics International, pp.482-487, Hannover, 1998.
76. M. Pollefeys, R. Koch, M. Vergauwen and L. Van Gool, Flexible 3D Acquisition with a Monocular Camera, Proceedings IEEE Int'l Conf. on Robotics and Automation'98, Vol.4, pp.2771-2776, Leuven, 1998.
77. R. Koch, M. Pollefeys and L. Van Gool, Multi Viewpoint Stereo from Uncalibrated Video Sequences, **Computer Vision – ECCV'98** (European Conference on Computer Vision), LNCS, Springer-Verlag, Freiburg, 1998.  
CS: 27
78. M. Pollefeys, R. Koch and L. Van Gool. Self-Calibration and Metric Reconstruction in spite of Varying and Unknown Internal Camera Parameters, **Proc.ICCV'98** (international Conference on Computer Vision), pp.90-95, Bombay, 1998. joint winner of the David Marr prize (best paper).  
AR: 30% CR: 81 CS: 154 (in CiteSeer top 100 most cited documents published in 1998, position 43)
79. M. Pollefeys and L. Van Gool. Self-calibration from the Absolute Conic on the Plane at Infinity, Proc.CAIP97, LNCS vol.1296, pp.175-182, Kiel, 1997.  
CR: 6 CS: 5
80. M. Pollefeys and L. Van Gool. A stratified approach to metric self-calibration, **Proc. CVPR'97** (Conference on Computer Vision and Pattern Recognition), pp.407-412, Puerto Rico, 1997.  
CR: 13 CS: 35
81. M. Pollefeys, L. Van Gool, A. Oosterlinck. The modulus constraint: a new constraint for self-calibration, Proc.ICPR'96 (Int'l Conf. on Pattern Recognition), Vol.1, pp.349-353, Vienna, 1996.  
CR: 7 CS: 25

82. M. Pollefeys, L. Van Gool, M. Proesmans. Euclidean 3D reconstruction from image sequences with variable focal lengths, **Computer Vision – ECCV’96** (European Conference on Computer Vision), LNCS Vol.1064, Springer-Verlag, pp.31-42, Cambridge(UK), 1996.

CR: 21 CS: 23

83. M. Pollefeys, L. Van Gool, T. Moons. Euclidean 3D reconstruction from stereo sequences with variable focal lengths, invited presentation, Proc.ACCV’95 (Asian Conference on Computer Vision), Vol.2, pp.6-10, Singapore, 1995.

#### **Book/Proceeding editor**

84. A. Koschan, M. Pollefeys, and M. Abidi (Eds.), 3D imaging for Safety and Security , Kluwer/Springer, 2006, in preparation.

85. M. Pollefeys, L. Van Gool, A. Zisserman, A. Fitzgibbon (Eds.), 3D Structure from Images - SMILE 2000, Lecture Notes in Computer Science, Vol. 2018, Springer-Verlag, 2001.

#### **Contributions to books (refereed or invited)**

86. M. Pollefeys, S. Sinha, J. Yan, “Calibration and Shape Recovery from Videos of Dynamic Scenes”, Computational Vision in Neural and Machine Systems, L. Harris and M. Jenkin (Eds.), Cambridge University Press, (in preparation).

87. M. Pollefeys, “3D from Image Sequences: Calibration, Motion and Shape Recovery”, Mathematical Models of Computer Vision: The Handbook, N. Paragios, Y. Chen, O. Faugeras, Springer, 2006.

88. M. Waelkens, M. Pollefeys, L. Van Gool, “Sagalassos: Reconciling on-going large scale excavations with the natural and human environment”, Interpreting the Past (Presenting Archaeological Sites to the Public), D. Callebaut, A. Killebrew, N. Silberman (Eds.), pp.55-75, 2004.

89. A. Heyden and M. Pollefeys, Multi-view Geometry, in Emerging Topics in Computer Vision, G. Medioni and S. B. Kang (Eds.), Prentice-Hall, pp. 45-107, 2004.

90. L. Van Gool, M. Pollefeys, M. Proesmans, A. Zalesny, MURALE : modelling Sagalassos, A.K.Bowman, J.M. Brady (eds.), Images and Artefacts of the Ancient World, (Oxford University Press, British Academy, June 2005).

91. L. Van Gool, M. Pollefeys, M. Proesmans, A. Zalesny. THE MURALE PROJECT: IMAGE-BASED 3D MODELING FOR ARCHAEOLOGY Franco Niccolucci (ed.), Virtual Archaeology Proceedings of the VAST2000 Euroconference held in Arezzo, November 2000. Oxford, Archaeopress, 2002.

92. R. Koch, B. Heigl, and M. Pollefeys, Image-Based Rendering from Uncalibrated Lightfields with Scalable Geometry, In R. Klette, T. Huang, G. Gimel’farb (Eds.), Multi-Image Analysis, Lecture Notes in Computer Science, Vol. 2032, pp.51-66, Springer-Verlag, 2001.

93. M. Pollefeys, S. B. Kang, G. Slabaugh, K. Cornelis, P. Debevec, Panel Session on Visual Scene Representations, In M. Pollefeys, L. Van Gool, A. Zisserman, A. Fitzgibbon (Eds.), 3D Structure from Images - SMILE 2000, Lecture Notes in Computer Science, Vol. 2018, pp.168-176, Springer-Verlag, 2001.

94. K. Cornelis, M. Pollefeys, M. Vergauwen and L. Van Gool, Augmented Reality from Uncalibrated Video Sequences, In M. Pollefeys, L. Van Gool, A. Zisserman, A. Fitzgibbon (Eds.), 3D Structure from Images - SMILE 2000, Lecture Notes in Computer Science, Vol. 2018, pp.144-160, Springer-Verlag, 2001.

CS: 3

95. R. Koch, M. Pollefeys, L. Van Gool, 3D Surface Reconstruction from Uncalibrated Image Sequences, in B. Jahne and H. Haussbecker, ”Computer Vision and Applications”, Academic Press, pp.622-623, 2000.

96. M. Pollefeys, M. Proesmans, R. Koch, M. Vergauwen and L. Van Gool, Detailed model acquisition for virtual reality, in J. Barcelo, M. Forte and D. Sanders, "Virtual Reality in Archaeology", ArcheoPress (BAR International Series S 843) ISBN 1-84171-047-4, Oxford, pp.71-77, 2000.
97. M. Pollefeys, L. Van Gool, A. Oosterlinck. Euclidean self-calibration via the modulus constraint, in F.Dillen, L.Vrancken, L.Verstraelen, and I. Van de Woestijne, "Geometry and topology of submanifolds, VIII" World Scientific, Singapore, New Jersey, London, Hong Kong, pp.283-291, 1997.
98. M. Pollefeys, L. Van Gool, T. Moons. Euclidean 3D reconstruction from stereo sequences with variable focal lengths, Recent Developments in Computer Vision, LNCS Vol.1035, pp.405-414, Springer-Verlag, 1996.
99. T. Moons, L. Van Gool, and M. Pollefeys. 1996. Geometrical structure from perspective image pairs, in F.Dillen, L.Vrancken, L.Verstraelen, and I. Van de Woestijne, "Geometry and topology of submanifolds, VII" World Scientific, Singapore, New Jersey, London, Hong Kong, pp.305-308

### **Thesis**

100. M. Pollefeys, Self-calibration and metric 3D reconstruction from uncalibrated image sequences, Ph.D. Thesis, ESAT-PSI, K.U.Leuven, 1999, Scientific Prize BARCO 1999.  
CR: 17 CS: 31
101. M. Pollefeys, Algorithms for Radial Basis Function Neural Networks, Master Thesis, ESAT, K.U.Leuven, 1994.

### **Magazine**

102. M. Pollefeys and L. Van Gool. Virtualising the 3D Real World: Automatic Method for the Acquisition of Detailed 3D Models from Image Sequences, GIM International (The Worldwide Magazine of Geomatics), Volume 14, Number 4, April 2000, pp. 12-15.

### **Proceedings (non-refereed)**

103. M. Pollefeys, L. Van Gool, M. Vergauwen, K. Cornelis, F. Verbiest, J. Tops, Proc. of the ISPRS workshop on Vision Techniques for Digital Architectural and Archaeological Archives, July 1-3 2003, Ancona, Italy, 3D Capture of Archaeology and Architecture with a Hand-Held Camera, The International Archive of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Vol. XXXIV, Part 5/W12, pp. 262-267, 2003.
104. M. Pollefeys, M. Vergauwen, F. Verbiest, J. Tops, L. Van Gool, Obtaining 3D models with a hand-held camera, East-West Vision 2002, F. Leberl and A. Ferko (Eds.), p.127-136.
105. M. Pollefeys, L. Van Gool, M. Vergauwen, K. Cornelis, F. Verbiest, J. Tops, From video to 3D: an automatic processing pipeline, Proc. ISPRS Commission V Symposium 2002, International Archive of Photogrammetry and Remote Sensing, 6 pages.
106. C. Fehn, P. Kauff, M. Op de Beeck, F. Ernst, W. IJsselsteijn, M. Pollefeys, L. Van Gool, E. Ofek and I. Sexton, "An Evolutionary and Optimised Approach on 3D-TV", In Proc. IBC '02, pages 357-365, Amsterdam, Netherlands, September 2002.
107. M. op de Beeck, P. Wilinski, C. Fehn, P. Kauff, W. IJsselsteijn, M. Pollefeys, L. Van Gool, E. Ofek and I. Sexton, "Towards an Optimized 3D Broadcast Chain", In Proc. SPIE ITCOM '02, Boston, MA, USA, July - August 2002, pages 9.
108. M. Pollefeys and L. Van Gool From Images to Virtual Models and Vice-Versa, Proc. IMAGINA, pp.235-246, 2002.
109. M. Pollefeys, M. Vergauwen, K. Cornelis, L. Van Gool, 3D Acquisition of Archaeological Heritage from Images, Proc. XVIII International Symposium of CIPA, ISPRS International Archive of Photogrammetry, Remote Sensing and Spatial Information Sciences Vol. XXXIV-5/C7 / CIPA International Archive for Documentation of Cultural Heritage Vol. XVIII-2001, pp. 381-388, 2001.

110. J. Schouteden, M. Pollefeys, M. Vergauwen, L. Van Gool, Image-based 3D acquisition tool for architectural conservation, Proc. XVIII International Symposium of CIPA, ISPRS International Archive of Photogrammetry, Remote Sensing and Spatial Information Sciences Vol. XXXIV-5/C7 / CIPA International Archive for Documentation of Cultural Heritage Vol. XVIII-2001, pp. 301–305, 2001.
111. M. Pollefeys, M. Vergauwen, K. Cornelis, J. Tops, F. Verbiest, L. Van Gool. Structure and motion from image sequences, Proc. Conference on Optical 3-D Measurement Techniques V, Grün, Kahmen (Eds.), Vienna, October, 2001, pp. 251-258.
112. M. Vergauwen, M. Pollefeys and L. Van Gool, A stereo vision system for planetary surface exploration, Proc. Conference on Optical 3-D Measurement Techniques V, Grün, Kahmen (Eds.), Vienna, October, 2001, pp. 192-199.
113. K. Nuyts, J.-P. Kruth, B. Lauwers, H. Neuckermans, M. Pollefeys, L. Qiongyan, J. Schouteden, P. Smars, K. Van Balen, L. Van Gool, and M. Vergauwen. From a conservationist's point of view, Proc. Conference on Optical 3-D Measurement Techniques V, Grün, Kahmen (Eds.), Vienna, October, 2001, pp. 179-186.
114. M. Vergauwen, M. Pollefeys, R. Moreas, F. Xu, G. Visentin, L. Van Gool and H. Van Brussel. Calibration, Terrain Reconstruction and Path Planning for a Planetary Exploration System, Proc. i-SAIRAS 2001, 8 pages.
115. M. Pollefeys, M. Vergauwen, F. Verbiest, K. Cornelis, L. Van Gool, From image sequences to 3D models, Proc. Automatic Extraction of Man-Made Objects From Aerial and Space Images (III), E. Baltsavias, A. Gruen, L. Van Gool (Eds.) Balkema Publishers, pp.403-410, 2001.
116. B. Fontaine, D. Termont, L. Steinicke, M. Pollefeys, M. Vergauwen, R. Moreas, F. Xu, K. Landzettel, M. Steinmetz, B. Brunner, H. Michaelis, T. Behnke, R. Dequeker, P. Degezelle, R. Bertrand, G. Visentin, Autonomous Operations of a Micro-Rover for Geo-Science on Mars, Proc. 6th ESA workshop on Advanced Space Technologies for Robotics and Automation (ASTRA 2000), paper 3.6-3, 2000.
117. M. Vergauwen, M. Pollefeys, L. Van Gool, Autonomous Operations of a Micro-Rover for Geo-Science on Mars, Proc. 6th ESA workshop on Advanced Space Technologies for Robotics and Automation (ASTRA 2000), paper 3.7-1, 2000.
118. M. Leeman, R. Lauwereins, M. Pollefeys, Implementation of a robust 3D reconstruction algorithm on a TMS320C67x: Memory optimisations for the Harris Corner Detector, Proceedings Third European DSP Education and Research Conference, 2000.
119. M. Pollefeys, M. Vergauwen, L. Van Gool, Automatic 3D modeling from image sequences, invited presentation, International Archive of Photogrammetry and Remote Sensing, Vol. XXXIII, Part B5, pp. 619-626, 2000.
120. M. Pollefeys, R. Koch, M. Vergauwen, B. Deknuydt, L. Van Gool Three-dimensional scene reconstruction from images, proceedings SPIE Electronic Imaging, Three-Dimensional Image Capture and Applications III, SPIE Proceedings series Vol. 3958, pp.215-226, 2000.
121. L. Van Gool, F. Defoort, J. Hug, G. Kalberer, R. Koch, D. Martens, M. Pollefeys, M. Proesmans, M. Vergauwen, A. Zalesny, Image-based 3D modeling : modeling from reality , Proceedings NATO advanced research workshop on confluence of computer vision and computer graphics, NATO science series - 3. high technology, vol. 84, pp.161-178, August 29-31, 1999, Ljubljana, Slovenia, Leonardis A., Solina F. and Bajcsy R., eds., Kluwer Academic Publishers, 2000.
122. R. Koch, M. Pollefeys and L. Van Gool. Realistic 3D Scene Modeling from Uncalibrated Image Sequences, invited presentation International Conference for Image Processing, special session on Image Analysis and Synthesis, 1999, 5 pages.

123. M. Pollefeys, R. Koch, M. Vergauwen and L. Van Gool, An Automatic Method for Acquiring 3D Models from Photographs: applications to an Archaeological Site, ISPRS International Workshop on Photogrammetric Measurement, Object Modeling and Documentation in Architecture and Industry, Thessaloniki, International Archive of Photogrammetry and Remote Sensing, Vol. XXXII, Part 5W11, pp.76-80, 1999.
124. M. Pollefeys, R. Koch, M. Vergauwen and L. Van Gool, Automatic Generation of 3D Models from Photographs, Proceedings Virtual Systems and MultiMedia (VSMM'98), 1998, 6 pages.
125. M. Pollefeys, R. Koch, M. Vergauwen and L. Van Gool, Virtualizing Archaeological Sites, Proceedings Virtual Systems and MultiMedia (VSMM'98). pp. 600-605, 1998.
126. M. Pollefeys, R. Koch, M. Vergauwen and L. Van Gool, Flexible acquisition of 3D structure from motion, Proceedings IEEE workshop on Image and Multidimensional Digital Signal Processing'98, pp.195-198, Alpbach, 1998.  
CR: 2 CS: 8

### **Abstracts**

127. M.Pollefeys, M.Proesmans, R.Koch, M.Vergauwen and L. Van Gool. Flexible 3D reconstruction techniques with applications in archeology, 26th. Int'l Conf. on Computer Applications in Archeology, Barcelona, 1998.
128. T. Tuytelaars. M. Vergauwen, M. Pollefeys and L. Van Gool, Image Matching for Wide baseline Stereo, Proc. International Conference on Forensic Human Identification, October 1999.
129. M. Pollefeys, Van Beeld tot VR, Invited Talk, Symposium Virtual Reality, 36e Nederlands Mathematisch Congres, Maastricht, Nederland, 28 april 2000.

### **Technical Report**

130. M. Vergauwen, M. Pollefeys, L. Van Gool, Calibration and 3D Measurement from Martian Terrain Images, Technical Report Nr. KUL/ESAT/PSI/0005, PSI-ESAT, K.U.Leuven. Belgium, 2000.
131. K. Cornelis, M. Pollefeys, M. Vergauwen, L. Van Gool, Augmented Reality using Uncalibrated Video Sequences, Technical Report Nr. KUL/ESAT/PSI/0002, PSI-ESAT, K.U.Leuven. Belgium, 2000.
132. M. Pollefeys and L. Van Gool. Some Geometric Insight in Self-Calibration and Critical Motion Sequences, Technical Report Nr. KUL/ESAT/PSI/0001, PSI-ESAT, K.U.Leuven, Belgium, 2000.
133. M. Pollefeys, R. Koch and L. Van Gool. Self-Calibration and Metric Reconstruction in spite of Varying and Unknown Internal Camera Parameters, Technical Report Nr. KUL/ESAT/MI2/9707, MI2-ESAT, K.U.Leuven, Belgium, 1997.
134. M. Pollefeys and L. Van Gool. A stratified approach to metric self-calibration, Technical Report Nr.KUL/ESAT/MI2/9702, MI2-ESAT, K.U.Leuven, Belgium, 1997.
135. M. Pollefeys, L. Van Gool and A. Oosterlinck. Self-calibration with the modulus constraint , Technical Report Nr. KUL/ESAT/MI2/9609, MI2-ESAT, K.U.Leuven, Belgium, 1996.
136. M. Pollefeys, L. Van Gool, M. Proesmans. Euclidean 3D reconstruction from image sequences with variable focal lengths, Technical Report Nr. KUL/ESAT/MI2/9508, MI2-ESAT, K.U.Leuven, Belgium, 1995.

### **Video proceedings**

137. J. Yan, M. Pollefeys, Automatic Kinematic Chain Building from Feature Trajectories of Articulated Objects, CVPR'06 video proceedings, accepted.



138. S. Sinha, M. Pollefeys, Synchronization and Calibration of a Camera Network for 3D Event Reconstruction from Live Video, CVPR'05 video proceedings, p. 1196.
139. S. Thirthala, S. Sinha, M. Pollefeys, Calibration of Pan-Tilt-Zoom (PTZ) Cameras and Omni-Directional Cameras, CVPR'05 video proceedings, p. 1198.
140. J. Yan, M. Pollefeys, A Factorization-Based Approach to Articulated Motion Recovery, CVPR'05 video proceedings, p. 1203.

**Course notes/On-line tutorial**

141. M. Pollefeys, "Obtaining 3D Models with a Hand-Held Camera" or "3D Modeling from Images", Course/Tutorial notes, presented at Siggraph 2002/2001/2000, 3DIM 2001/2003, ECCV 2000. Also available on-line at <http://www.cs.unc.edu/~marc/tutorial/>  
CR: 3 CS: 9