

HaoLi



CEO & Co-Founder, Pinscreen Inc.

Assistant Professor of Computer Science, Andrew & Erna Viterbi Early Career Chair, USC

Director of the Vision and Graphics Lab, USC Institute for Creative Technologies

University of Southern California
Department of Computer Science
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Home page <http://www.hao-li.com/>
Facebook <http://www.facebook.com/li.hao/>

PROFILE

Date of birth 17/01/1981
Place of birth Saarbrücken, Germany
Citizenship German
Languages German, French, English, and Mandarin Chinese (all fluent and no accents)

COMMITMENT

With 3D sensing being democratized, I develop graphics and vision techniques for unobtrusive 3D digitization and analysis of humans in unconstrained settings. My current research focusses on data-driven methods for dynamic shape reconstruction, realtime facial and body performance capture, 3D hair acquisition, and garment digitization. Depth sensors will become an integral part of every computer, mobile device, and living room; and streaming terabytes of data about us and our friends every second over the Internet. I want to build algorithms for collecting and analyzing this data, and learn how to use them to improve our everyday lives. 3D sensors give machines a *human-scale* understanding of space and motion. Our world is 3D, and I want machines to be able to see it like we do.

I have been named one of the world's top 35 innovator under 35 by MIT Technology Review in 2013 and NextGen10: Innovators under 40 by C-Suite Quarterly in 2014. I received the Google Faculty Research Award, the Okawa Foundation Research Grant, and the Andrew and Erna Viterbi Early Career Chair in 2015, the Swiss National Science Foundation fellowship for prospective researchers in 2011, and the best paper award at SCA 2009. I am ranked #1 on Microsoft Academic in 2016 on the top 10 leaderboard in Computer Graphics for the past five years. I am also curator for virtual and augmented reality at the World Economic Forum (WEF).

EDUCATION

- Ph. D., Computer Science** 07/2006 - 11/2010
ETH Zurich, Department of Computer Science
- Thesis: *Animation Reconstruction of Deformable Surfaces*
Advisor: Prof. M. Pauly
- M. Sc., Computer Science** 10/2000 - 01/2006
Universität Karlsruhe (TH), Department of Computer Sciences
- Thesis: *Reconstruction of Colored Objects from Structured Illuminated Views*
Advisor: Prof. H. Prautzsch
 - Major 1: Computer graphics and geometric modeling
 - Major 2: Cryptography and security
 - Minor: Differential and projective geometry
- ERASMUS Student Exchange, Computer Science** 10/2002 - 09/2003
Institut National Polytechnique de Grenoble, ENSIMAG
- French-German High School Diploma** 09/1992 - 05/1999
Lycée Franco-Allemand de Sarrebruck, Germany

POSITIONS

USC Institute for Creative Technologies Director of the Vision and Graphics Lab	08/2016 - ongoing
Pinscreen Inc. CEO & Co-Founder	10/2015 - ongoing
University of Southern California Tenure-track Assistant Professor, Computer Science Department	08/2013 - ongoing
Ambidio Inc. CEO & Co-Founder	07/2014 - 02/2015
Weta Digital Visiting Professor, Virtual Studio Group	06/2014 - 08/2014
Industrial Light & Magic, Lucasfilm Ltd. Research Lead, R&D Group	04/2012 - 07/2013
Columbia University Postdoctoral Fellow, Columbia Computer Graphics Group	04/2011 - 03/2012
Princeton University Visiting Postdoctoral Researcher, Princeton Computer Graphics Group	04/2011 - 03/2012
École Polytechnique Fédérale de Lausanne Visiting and Postdoctoral Researcher, Computer Graphics and Geometry Laboratory	02/2010 - 04/2011
Industrial Light & Magic, Lucasfilm Ltd. Research Intern, R&D Group	07/2009 - 10/2009
Stanford University Visiting Researcher, Geometric Computing Group	07/2008 - 09/2008
ETH Zurich Research Assistant, Applied Geometry Group	07/2006 - 11/2010
National University of Singapore Visiting Research Scholar, Centre for Information Mining and Extraction	01/2006 - 07/2006

TEACHING

Lecturer

University of Southern California, Computer Science Department

- CSCI 621: Digital Geometry Processing (Lecture) SS 2017
- CSCI 420: Computer Graphics (Lecture) FS 2014, FS 2015, and FS 2017
- CSCI 599: Digital Geometry Processing (Lecture) SS 2014 and SS 2015

Guest Lecturer

University of Southern California, Computer Science Department

- CSCI 576: Multimedia Systems Design (Lecture) FS 2016
- EE 598: Electrical Engineering Research Seminar (Lecture) SS 2016
- CSCI 697: Seminar in Computer Science Research (Lecture) FS 2015 and FS 2017
- CSCI 109: Introduction to Computing (Lecture) SS 2014 and FS 2015
- CSCI 597: Seminar in Computer Science Research (Lecture) FS 2013
- ENGR 102: Freshmen Academies (Lecture) FS 2013

Stanford University, Computer Science Department

- CS148: Introduction to Computer Graphics & Imaging (Lecture) 2012

Columbia University, Computer Science Department

- Computer Graphics (Lecture) 2011

Teaching Assistant

École Polytechnique Fédérale de Lausanne, School of Computer and Communication Sciences

- Digital 3D Geometry Processing (Lecture) 2010
- Computer Graphics (Lecture) 2010

ETH Zurich, Department of Computer Science

- Surface Representation and Geometric Modeling (Lecture) 2007, 2008, and 2009
- Introduction to Computer Graphics (Lecture) 2006, 2007, 2008, and 2009
- Advanced Topics in Computer Graphics (Seminar) 2006 and 2007
- Geometric Computing (Seminar) 2008

Supervision

University of Southern California, Computer Science Department

- | | |
|--|-------------------|
| • Sitao Xiang, PhD Student | 09/2016 - ongoing |
| • Zimo Li, PhD Student | 09/2016 - ongoing |
| • Zeng Huang, PhD Student | 09/2016 - ongoing |
| • Zhou Yi, PhD Student | 09/2016 - ongoing |
| • Tianye Li, PhD Student | 11/2015 - ongoing |
| • Shunsuke Saito, PhD Student | 09/2015 - ongoing |
| • Kyle Olszewski, PhD Student | 09/2014 - ongoing |
| • Ling-Yu Wei, PhD Student | 09/2014 - ongoing |
| • Liwen Hu, PhD Student (MSc in 2013) | 09/2014 - ongoing |
| • Natalie Monger, BSc Student | 09/2016 - 05/2017 |
| • Ronald Yu, MSc Student (next stop: Stanford University) | 05/2016 - 05/2017 |
| • Dr. Chongyang Ma, Postdoctoral Researcher (next stop: Snap Inc.) | 09/2013 - 06/2015 |

USC Institute for Creative Technologies, Vision and Graphics Lab

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|---|-------------------|
| • Kathleen Haase, Special Projects Manager | 06/2016 - ongoing |
| • Jun Xing, Postdoctoral Researcher | 05/2017 - ongoing |
| • Weikai Chen, Postdoctoral Researcher | 06/2017 - ongoing |
| • Yajie Zhao, Postdoctoral Researcher | 10/2017 - ongoing |
| • Hikaru Ibayashi PhD Student | 08/2017 - ongoing |
| • Kalle Bladin, Research Programmer | 08/2017 - ongoing |
| • Pratusha Prasad, Research Programmer | 06/2016 - ongoing |
| • Xinglei Ren, Research Programmer | 04/2017 - ongoing |
| • Bipin Kishore, Research Programmer | 04/2017 - ongoing |
| • Marcel Ramos, Artist in Residence | 06/2016 - ongoing |
| • Christina Trejo, Project Coordinator | 06/2016 - ongoing |
| • Andrew Jones, Sr. Research Associate (next stop: Raxxon Inc.) | 06/2016 - 01/2018 |

Columbia University, Computer Science Department

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|-------------------------------------|-------------------|
| • Nathaniel Clinger, BSc Student | 01/2012 - 05/2012 |
| • Papoj Thamjaroenporn, BSc Student | 01/2012 - 05/2012 |
| • Pei-Lun Hsieh, MSc Student | 01/2012 - 05/2012 |
| • Xiaochen Hu, BSc Student | 01/2012 - 05/2012 |

EPFL, School of Computer and Communication Sciences

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|--------------------------------|-------------------|
| • Alexandru Ichim, MSc Student | 06/2010 - 09/2010 |
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ETH Zurich, Department of Computer Science

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|-----------------------------|-------------------|
| • Huw Bowles, MSc Student | 11/2008 - 05/2009 |
| • Jens Puwein, MSc Student | 02/2008 - 08/2008 |
| • Jeroen Dries, MSc Student | 09/2006 - 03/2007 |

PhD Defense and Candidacy Committee

• Lingyu Wei, <i>University of Southern California</i>	11/2017
• Yijing Li, <i>University of Southern California</i>	05/2017
• Sean Mason, <i>University of Southern California</i>	03/2017
• Yi Guo, <i>University of Southern California</i>	03/2017
• Srinath Sridhar, <i>Saarland University / Max Planck Institute for Informatics</i>	12/2016
• Hongyi Xu, <i>University of Southern California</i>	11/2016
• Soravit Changpinyo, <i>University of Southern California</i>	11/2016
• Inkyu Kim, <i>University of Southern California</i>	08/2016
• Matthias Hernandez, <i>University of Southern California</i>	05/2016
• Tran Tuan Anh, <i>University of Southern California</i>	04/2016
• Koki Nagano, <i>University of Southern California</i>	04/2016
• Arnav Aghaarwal, <i>University of Southern California</i>	04/2016
• Kai Chang, <i>University of Southern California</i>	02/2016
• Sema Berkiten, <i>Princeton University</i>	02/2016
• Ruizhe Wang, <i>University of Southern California</i>	12/2015
• Yi Guo, <i>University of Southern California</i>	12/2015
• Rongqi Qiu, <i>University of Southern California</i>	08/2015
• Kai Chang, <i>University of Southern California</i>	05/2015
• Christian Potthast, <i>University of Southern California</i>	05/2015
• Guan Pang, <i>University of Southern California</i>	05/2014
• Zhuoliang Kang, <i>University of Southern California</i>	04/2014
• Mohammad Abdel-Majeed, <i>University of Southern California</i>	03/2014
• Paul Graham, <i>University of Southern California</i>	09/2013
• Andrew Jones, <i>University of Southern California</i>	09/2013
• Morten Bojsen-Hansen, <i>IST Austria</i>	07/2012
• Breannan Smith, <i>Columbia University</i>	03/2012

Outreach

University of Southern California, Computer Science Department

- USC Academic Career Mentoring Panel 2017
- USC Viterbi K-12 STEM: Coding and Animation (Screening and Panel) 2015

ACADEMIC SERVICES

University of Southern California, Computer Science Department

- Department's PhD Admissions Committee, FS 2017
- Annual Faculty Merit Review Committee, SS 2017
- Department's PhD Admissions Committee, FS 2016
- Department's Faculty Search Committee, FS 2015
- Department's PhD Admissions Committee, FS 2015
- Department's Faculty Search Committee, FS 2014
- Department's Transformative Committee, FS 2013
- Co-Chair of Department's Colloquium Committee, FS 2013

CONSULTING

Huawei	09/2015 - 09/2016
LEIA, Inc.	04/2015 - 10/2015
L Squared Capital Partners	03/2015 - 04/2015
Oculus VR/Facebook	08/2014 - 07/2015
Embodee Corp.	03/2014 - 05/2015
Pelican Imaging	02/2014 - 11-2016
Adobe Systems	11/2013 - ongoing
Innored, Inc.	09/2013 - 01/2014

Disney Research Zurich	09/2013 - 09/2016
Industrial Light & Magic, Lucasfilm Ltd.	07/2013 - 06/2014
The Jig Lab	07/2013 - 05/2014
Tuxedo Agency	11/2012 - 11/2012
Artec Group, Inc	08/2011 - 12/2014
3Gear Systems	05/2011 - 04/2012
XYZ RGB, Inc.	07/2011 - 01/2012
Max Planck Institute for Intelligent Systems	05/2011 - 11/2011
C-RAD AB	08/2010 - 08/2011
Mova LLC	08/2010 - 10/2010
Filmakademie Baden-Württemberg GmbH, Institute for Animation	04/2010 - 07/2010
Aguru Images, Inc.	08/2008 - 07/2009

RESEARCH GRANTS & GIFTS

SRC / DARPA	2018
Army Research Office	2016, 2017, and 2018
United States SHARP Academy	2016 and 2017
RL Leaders	2016 and 2017
SOOVII	2016 and 2017
USC Shoah Foundation Institute	2016 and 2017
Sony	2016 and 2017
Huawei	2015 and 2017
Okawa Foundation	2015
Office of Naval Research	2015
Google	2015
Pelican Imaging	2015
Oculus VR/Facebook	2014, 2015, and 2016
IARPA	2014, 2015, 2016, and 2017
Nvidia	2014
Intel	2014
Embodee Corp.	2014
Panasonic	2014
USC IMSC	2014
Adobe Systems	2013, 2014, 2015, 2016, and 2017

AWARDS & HONORS

USC Stevens Commercialization Award	05/2017
Microsoft Academic Top 10 Leaderboard in the past 5 years in Computer Graphics (ranking #1)	05/2016
World Technology Award Fellow	10/2015
Andrew and Erna Viterbi Early Career Chair	10/2015
Okawa Foundation Research Grant	09/2015
Google Faculty Research Award	02/2015
C-Suite Quaterly NextGen 10: Innovators under 40	01/2014
World's top 35 innovator under 35 by MIT Technology Review	08/2013
Swiss National Science Foundation fellowship for prospective researchers	03/2011
ACM Symposium on Computer Animation Best Paper Award '09	08/2009
National Science Foundation 3DPVT '06 Student Travel Stipend	05/2006
German Academic Exchange Service (DAAD) fellowship	01/2006
Karl-Steinbuch scholarship of the MFG Baden-Württemberg	10/2005
Thomas Gessmann-Stiftung fellowship, German Science Foundation	09/2004
Baden-Württemberg scholarship of the Markel Foundation	10/2004
Scholarship of the Richard Winter foundation	09/2004
ERASMUS scholarship	10/2002
E-fellows scholarship	11/2001

AVATAR DIGITIZATION FROM A SINGLE IMAGE FOR REAL-TIME RENDERING

Liwen Hu, Shunsuke Saito, Lingyu Wei, Koki Nagano, Jaewoo Seo, Jens Fursund, Iman Sadeghi, Carrie Sun, Yen-Chun Chen, Hao Li

ACM Transactions on Graphics, Proceedings of the 10th ACM SIGGRAPH Conference and Exhibition in Asia (SIGGRAPH Asia 2017), 11/2017

LEARNING A MODEL OF FACIAL SHAPE AND EXPRESSION FROM 4D SCANS

Tianye Li, Timo Bolkart, Michael J. Black, Hao Li, Javier Romero

ACM Transactions on Graphics, Proceedings of the 10th ACM SIGGRAPH Conference and Exhibition in Asia (SIGGRAPH Asia 2017), 11/2017

AUTO-CONDITIONED LSTM NETWORK FOR EXTENDED COMPLEX HUMAN MOTION SYNTHESIS

Zimo Li, Yi Zhou, Shuangjio Xiao, Chong He, Hao Li

arXiv:1707.05363

(arXiv 2017), 07/2017

ON THE EFFECTS OF BATCH AND WEIGHT NORMALIZATION IN GENERATIVE ADVERSARIAL NETWORKS

Sitao Xiang, Hao Li

arXiv:1704.03971

(arXiv 2017), 04/2017

LEARNING DENSE FACIAL CORRESPONDENCES IN UNCONSTRAINED IMAGES

Ronald Yu, Shunsuke Saito, Haoxiang Li, Duygu Ceylan, Hao Li

Proceedings of the IEEE International Conference on Computer Vision 2017 (ICCV 2017), 10/2017

REALISTIC DYNAMIC FACIAL TEXTURES FROM A SINGLE IMAGE USING GANS

Kyle Olszewski, Zimo Li, Chao Yang, Yi Zhou, Ronald Yu, Zeng Huang, Sitao Xiang, Shunsuke Saito, Pushmeet Kohli, Hao Li

Proceedings of the IEEE International Conference on Computer Vision 2017

(ICCV 2017), 10/2017

PRODUCTION-LEVEL FACIAL PERFORMANCE CAPTURE USING DEEP CONVOLUTIONAL NEURAL NETWORKS

Samuli Laine, Tero Karras, Timo Aila, Antti Herva, Shunsuke Saito, Ronald Yu, Hao Li, Jaakko Lehtinen

Proceedings of the 16th ACM SIGGRAPH / Eurographics Symposium on Computer Animation, arXiv:1609.06536 (SCA 2017), 07/2017

PHOTOREALISTIC FACIAL TEXTURE INFERENCE USING DEEP NEURAL NETWORKS

Shunsuke Saito, Lingyu Wei, Liwen Hu, Koki Nagano, Hao Li

Proceedings of the 30th IEEE International Conference on Computer Vision and Pattern Recognition, arXiv:1612.00523 (CVPR 2017 Spotlight Presentation), 07/2017

HIGH-RESOLUTION IMAGE INPAINTING USING MULTI-SCALE NEURAL PATCH SYNTHESIS

Chao Yang, Xin Lu, Zhe Lin, Eli Shechtman, Oliver Wang, Hao Li

Proceedings of the 30th IEEE International Conference on Computer Vision and Pattern Recognition, arXiv:1611.09969 (CVPR 2017), 07/2017

INSPIRING COMPUTER VISION SYSTEM SOLUTIONS

Julian Zilly, Amit Boyarski, Micael Carvalho, Amir Atapour Abarghouei, Konstantinos Amliantis, Aleksandr Krasnov, Massimiliano Mancini, Hernán Gonzalez, Riccardo Spezialetti, Carlos Sampredo Pérez, Hao Li

arXiv:1707.07210

(arXiv 2017 Best ICVSS Reading Group Prize), 07/2017

SIMULATION-READY HAIR CAPTURE

Liwen Hu, Derek Bradley, Hao Li, Thabo Beeler

Computer Graphics Forum 36(2), Proceedings of the 38th Annual Conference of the European Association for Computer Graphics (Eurographics 2017), 04/2017

MULTI-VIEW STEREO ON CONSISTENT FACE TOPOLOGY

Graham Fyffe, Koki Nagano, Loc Huynh, Shunsuke Saito, Jay Bush, Andrew Jones, Hao Li, Paul Debevec

Computer Graphics Forum 36(2), Proceedings of the 38th Annual Conference of the European Association for Computer Graphics (Eurographics 2017), 04/2017

LEARNING DETAIL TRANSFER BASED ON GEOMETRIC FEATURES

Sema Berkiten, Maciej Halber, Justin Solomon, Chongyang Ma, Hao Li, Szymon Rusinkiewicz

Computer Graphics Forum 36(2), Proceedings of the 38th Annual Conference of the European Association for Computer Graphics (Eurographics 2017), 04/2017

HIGH-FIDELITY FACIAL AND SPEECH ANIMATION FOR VR HMDS

Kyle Olszewski, Joseph J. Lim, Shunsuke Saito, Hao Li

ACM Transactions on Graphics, Proceedings of the 9th ACM SIGGRAPH Conference and Exhibition in Asia (SIGGRAPH Asia 2016), 12/2016

REAL-TIME FACIAL SEGMENTATION AND PERFORMANCE CAPTURE FROM RGB INPUT

Shunsuke Saito, Tianye Li, Hao Li

Proceedings of the 14th European Conference on Computer Vision, arXiv:1604.02801 (ECCV 2016), 10/2016

CAPTURING DYNAMIC TEXTURED SURFACES OF MOVING TARGETS

Ruizhe Wang, Lingyu Wei, Etienne Vouga, Qixing Huang, Duygu Ceylan, Gerard Medioni, Hao Li

Proceedings of the 14th European Conference on Computer Vision, arXiv:1604.02801 (ECCV 2016 Spotlight Presentation), 10/2016

DENSE HUMAN BODY CORRESPONDENCES USING CONVOLUTIONAL NETWORKS

Lingyu Wei, Qixing Huang, Duygu Ceylan, Etienne Vouga, Hao Li

Proceedings of the 29th IEEE International Conference on Computer Vision and Pattern Recognition, arXiv:1511.05904 (CVPR 2016 Oral Presentation), 06/2016

RAPID PHOTOREALISTIC BLENDSHAPE MODELING FROM RGB-D SENSORS

Dan Casas, Andrew Feng, Oleg Alexander, Graham Fyffe, Paul Debevec, Ryosuke Ichikari, Hao Li, Kyle Olszewski, Evan Suma, Ari Shapiro

Computer Animation and Virtual Worlds 2016, Proceedings of the 29th Conference on Computer Animation and Social Agents (CASA 2016), 05/2016

PATIENT-SPECIFIC ASSESSMENT OF DYSMORPHISM OF THE FEMORAL HEAD-NECK JUNCTION: A STATISTICAL SHAPE MODEL APPROACH

Vikas Khanduja, Nick Baelde, Andreas Dobbelaere, Jan Van Houcke, Hao Li, Christophe Pattyn, Emmanuel A. Audenaert

The International Journal of Medical Robotics and Computer Assisted Surgery 2015 (MRCAS 2015), 12/2015

BREAKING THE BARRIERS TO TRUE AUGMENTED REALITY

Christian Sandor, Martin Fuchs, Alvaro Cassinelli, Hao Li, Richard Newcombe, Goshiro Yamamoto, Steven Feiner

arXiv:1512.05471 (arXiv 2015), 12/2015

FACIAL PERFORMANCE SENSING HEAD-MOUNTED DISPLAY

Hao Li, Laura Trutoiu, Kyle Olszewski, Lingyu Wei, Tristan Trutna, Pei-Lun Hsieh, Aaron Nicholls, Chongyang Ma

ACM Transactions on Graphics, Proceedings of the 42nd ACM SIGGRAPH Conference and Exhibition (SIGGRAPH 2015), 08/2015

SINGLE-VIEW HAIR MODELING USING A HAIRSTYLE DATABASE

Liwen Hu, Chongyang Ma, Linjie Luo, Hao Li

ACM Transactions on Graphics, Proceedings of the 42nd ACM SIGGRAPH Conference and Exhibition (SIGGRAPH 2015), 08/2015

SKIN MICROSTRUCTURE DEFORMATION WITH DISPLACEMENT MAP CONVOLUTION

Koki Nagano, Graham Fyffe, Oleg Alexander, Jernej Barbič, Hao Li, Abhijeet Ghosh, Paul Debevec

ACM Transactions on Graphics, Proceedings of the 42nd ACM SIGGRAPH Conference and Exhibition (SIGGRAPH 2015), 08/2015

UNCONSTRAINED REALTIME FACIAL PERFORMANCE CAPTURE

Pei-Lun Hsieh, Chongyang Ma, Jihun Yu, Hao Li

Proceedings of the 28th IEEE International Conference on Computer Vision and Pattern Recognition (CVPR 2015), 06/2015

CAPTURING BRAIDED HAIRSTYLES

Liwen Hu, Chongyang Ma, Linjie Luo, Li-Yi Wei, Hao Li

ACM Transactions on Graphics, Proceedings of the 7th ACM SIGGRAPH Conference and Exhibition in Asia (SIGGRAPH Asia 2014), 12/2014

ROBUST HAIR CAPTURE USING SIMULATED EXAMPLES

Liwen Hu, Chongyang Ma, Linjie Luo, Hao Li

ACM Transactions on Graphics, Proceedings of the 41st ACM SIGGRAPH Conference and Exhibition (SIGGRAPH 2014), 08/2014

RAPID AVATAR CAPTURE AND SIMULATION USING COMMODITY DEPTH SENSORS

Ari Shapiro, Andrew Feng, Ruizhe Wang, Hao Li, Mark Bolas, Gerard Medioni, Evan Suma

Computer Animation and Virtual Worlds 2014, Proceedings of the 27th Conference on Computer Animation and Social Agents (CASA 2014), 05/2014

DEPTH SENSOR-BASED REALTIME TUMOR TRACKING FOR ACCURATE RADIATION THERAPY

Björn Nutti, Åsa Kronander, Mattias Nilsing, Kristofer Maad, Cristina Svensson, Hao Li

Eurographics 2014 Short Papers presented at the 35th Annual Conference of the European Association for Computer Graphics (Eurographics 2014 Short Papers), 04/2014

A STATISTICAL SHAPE MODEL OF TROCHLEAR DYSPLASIA OF THE KNEE

Annemieke Van Haver, Peter Mahieu, Tom Claessens, Hao Li, Christophe Pattyn, Peter Verdonk, Emmanuel A. Audenaert

The Knee Journal Elsevier (KNEE 2013), 12/2013

3D SELF-PORTRAITS

Hao Li, Etienne Vouga, Anton Gudym, Jonathan T. Barron, Linjie Luo, Gleb Gusev

ACM Transactions on Graphics, Proceedings of the 6th ACM SIGGRAPH Conference and Exhibition in Asia (SIGGRAPH Asia 2013), 11/2013

REALTIME FACIAL ANIMATION WITH ON-THE-FLY CORRECTIVES

Hao Li, Jihun Yu, Yuting Ye, Chris Bregler

ACM Transactions on Graphics, Proceedings of the 40th ACM SIGGRAPH Conference and Exhibition (SIGGRAPH 2013), 07/2013

STRUCTURE-AWARE HAIR CAPTURE

Linjie Luo, Hao Li, Szymon Rusinkiewicz

ACM Transactions on Graphics, Proceedings of the 40th ACM SIGGRAPH Conference and Exhibition (SIGGRAPH 2013), 07/2013

TRACKING SURFACES WITH EVOLVING TOPOLOGY

Morten Bojsen-Hansen, Hao Li, Chris Wojtan

ACM Transactions on Graphics, Proceedings of the 39th ACM SIGGRAPH Conference and Exhibition (SIGGRAPH 2012), 08/2012

TEMPORALLY COHERENT COMPLETION OF DYNAMIC SHAPES

Hao Li, Linjie Luo, Daniel Vlasic, Pieter Peers, Jovan Popović, Mark Pauly, Szymon Rusinkiewicz

ACM Transactions on Graphics 31(1), Presented at the 39th ACM SIGGRAPH Conference and Exhibition (SIGGRAPH 2012), 08/2012

MAPPING CARDIAC SURFACE MECHANICS WITH STRUCTURED LIGHT IMAGING

Jacob I. Laughner, Song Zhang, Hao Li, Connie C. Shao, Igor R. Efimov

American Journal of Physiology, Heart and Circulatory Physiology 2012 Jul 13, PMID: 22796539 (AJP Heart 2012), 07/2012

MULTI-VIEW HAIR CAPTURE USING ORIENTATION FIELDS

Linjie Luo, Hao Li, Sylvain Paris, Thibaut Weise, Mark Pauly, Szymon Rusinkiewicz

Proceedings of the 25th IEEE International Conference on Computer Vision and Pattern Recognition (CVPR 2012), 06/2012

FACTORED FACADE ACQUISITION USING SYMMETRIC LINE ARRANGEMENTS

Duygu Ceylan, Niloy J. Mitra, Hao Li, Thibaut Weise, Mark Pauly

Computer Graphics Forum 31(2), Proceedings of the 33rd Annual Conference of the European Association for Computer Graphics (Eurographics 2012), 05/2012

REALTIME PERFORMANCE-BASED FACIAL ANIMATION

Thibaut Weise, Sofien Bouaziz, Hao Li, Mark Pauly

ACM Transactions on Graphics, Proceedings of the 38th ACM SIGGRAPH Conference and Exhibition (SIGGRAPH 2011), 08/2011

EXAMPLE-BASED FACIAL RIGGING

Hao Li, Thibaut Weise, Mark Pauly

ACM Transactions on Graphics, Proceedings of the 37th ACM SIGGRAPH Conference and Exhibition (SIGGRAPH 2010), 07/2010

ROBUST SINGLE VIEW GEOMETRY AND MOTION RECONSTRUCTION

Hao Li, Bart Adams, Leonidas J. Guibas, Mark Pauly

ACM Transactions on Graphics, Proceedings of the 2nd ACM SIGGRAPH Conference and Exhibition in Asia (SIGGRAPH Asia 2009), 12/2009

FACE/OFF: LIVE FACIAL PUPPETRY (BEST PAPER AWARD)

Thibaut Weise, Hao Li, Luc Van Gool, Mark Pauly

Proceedings of the 8th ACM SIGGRAPH / Eurographics Symposium on Computer Animation (SCA 2009), 08/2009

GLOBAL CORRESPONDENCE OPTIMIZATION FOR NON-RIGID REGISTRATION OF DEPTH SCANS

Hao Li, Robert W. Sumner, Mark Pauly

Computer Graphics Forum 27(5), Proceedings of the 6th Eurographics Symposium on Geometry Processing (SGP 2008), 07/2008

STRUCTURED LIGHT BASED RECONSTRUCTION UNDER LOCAL SPATIAL COHERENCE ASSUMPTION

Hao Li, Raphael Straub, Hartmut Prautzsch

Proceedings of the 3rd IEEE International Symposium on 3D Data Processing, Visualization and Transmission (3DPVT 2006), 06/2006

FAST SUBPIXEL ACCURATE RECONSTRUCTION USING COLOR STRUCTURED LIGHT

Hao Li, Raphael Straub, Hartmut Prautzsch

Proceedings of the Fourth IASTED International Conference on Visualization, Imaging and Image Processing (VIIP 2004), 09/2004

COURSE NOTES, TECH TALKS & EXHIBITIONS

PINSCREEN: CREATING PERFORMANCE-DRIVEN AVATARS IN SECONDS

Hao Li, Liwen Hu, Koki Nagano, Jaewoo Seo, Shunsuke Saito, Lingyu Wei, Iman Sadeghi, Jens Fursund, Yen-Chun Chen, Stephen Chen, Carrie Sun

ACM SIGGRAPH 2017 Real-Time Live!, 08/2017

PINSCREEN: 3D AVATAR FROM A SINGLE IMAGE

Hao Li, Shunsuke Saito, Jens Fursund, Lingyu Wei, Liwen Hu, Chao Yang, Ronald Yu, Stephen Chen, Isabella Benavente, Yen-Chun Chen

ACM SIGGRAPH Asia 2016 Emerging Technologies, 12/2016

GEOMETRIC DEEP LEARNING

Jonathan Masci, Emanuelle Rodolà, Davide Boscaini, Michael M. Bronstein, Hao Li

ACM SIGGRAPH Asia 2016 Courses, 12/2016

MODERN TECHNIQUES AND APPLICATIONS FOR REAL-TIME NON-RIGID REGISTRATION

Andrea Tagliasacchi, Hao Li

ACM SIGGRAPH Asia 2016 Courses, 12/2016

CANCER MOONSHOT: SXSL - MARKERLESS FACIAL PERFORMANCE CAPTURE

Hao Li

SXSL South by South Lawn: A White House Festival of Ideas, Art, and Action, Interactive Exhibit, 10/2015

CREATING AVATARS FROM A SINGLE IMAGE AND BRINGING THEM TO LIFE

Hao Li, Shunsuke Saito

ACM SIGGRAPH 2016 Experience Presentations, 07/2016

DIGITIZING THE HUMAN BODY: FROM VR, CONSUMER, TO HEALTH APPLICATIONS

Hao Li, Tristan Swedish, Pratik Shah, Lingyu Wei, Ramesh Raskar

ACM SIGGRAPH 2016 Courses, 07/2016

MODELING AND CAPTURING THE HUMAN BODY: FOR RENDERING, HEALTH, AND VISUALIZATION

Hao Li, Anshuman Das, Tristan Swedish, Hyunsung Park, Ramesh Raskar

ACM SIGGRAPH 2015 Courses, 08/2015

HOLOCHAT: 3D AVATARS ON MOBILE LIGHT FIELD DISPLAYS

Jing Liu, Armand Niederberger, Jihun Yu, Hao Li, David Fattal

ACM SIGGRAPH 2015 Emerging Technologies, 08/2015

DIGITAL IRA AND BEYOND: CREATING PHOTOREAL REAL-TIME DIGITAL CHARACTERS

Javier von der Pahlen, Jorge Jimenez, Etienne Danvoye, Paul Debevec, Graham Fyffe, Hao Li

ACM SIGGRAPH 2014 Courses, 08/2014

MAKE YOUR OWN AVATAR

Ari Shapiro, Andrew Feng, Ruizhe Wang, Hao Li, Mark Bolas, Gerard Medioni, Evan Suma

ACM SIGGRAPH 2014 Real-Time Live!, 08/2014

MEASUREMENT AND MODELING OF MICROFACET DISTRIBUTION UNDER DEFORMATION

Koki Nagano Oleg Alexander, Jernej Barbic, Hao Li, Paul Debevec

ACM SIGGRAPH 2014 Talks, 08/2014

RAPID AVATAR CAPTURE AND SIMULATION USING COMMODITY DEPTH SENSORS

Ari Shapiro, Andrew Feng, Ruizhe Wang, Hao Li, Mark Bolas, Gerard Medioni, Evan Suma
ACM SIGGRAPH 2014 Talks, 08/2014

DYNAMIC GEOMETRY PROCESSING

Will Chang, Hao Li, Niloy J. Mitra, Mark Pauly, Michael Wand
Eurographics 2012 Tutorial Notes, 05/2012

KINECT-BASED FACIAL ANIMATION

Thibaut Weise, Sofien Bouaziz, Hao Li, Mark Pauly
ACM SIGGRAPH Asia 2011 Emerging Technologies, 12/2011

COMPUTING CORRESPONDENCES IN GEOMETRIC DATA SETS

Will Chang, Hao Li, Niloy J. Mitra, Mark Pauly, Szymon Rusinkiewicz, Michael Wand
Eurographics 2011 Tutorial Notes, 04/2011

GEOMETRIC REGISTRATION FOR DEFORMABLE SHAPES

Will Chang, Hao Li, Niloy J. Mitra, Mark Pauly, Michael Wand
Eurographics 2010 Tutorial Notes, 05/2010

TECHNICAL REPORTS & PATENTS

REALTIME FACIAL ANIMATION WITH ON-THE-FLY CORRECTIVES

Hao Li, Jihun Yu, Yuting Ye, Chris Bregler
US Patent (US14/141348), filed 08/2012

A METHOD FOR FACIAL ANIMATION

Thibaut Weise, Sofien Bouaziz, Hao Li, Mark Pauly
US Patent (US13/323231), filed 12/2011

DYNAMIC HAIR CAPTURE

Linjie Luo, Hao Li, Thibaut Weise, Sylvain Paris, Mark Pauly, Szymon Rusinkiewicz
Technical Report, Princeton University, 08/2011

FIRST STEPS TOWARD THE AUTOMATIC REGISTRATION OF DEFORMABLE SCANS

Hao Li, Mark Pauly
Technical Report, ETH Zurich, 06/2007

THESES

ANIMATION RECONSTRUCTION OF DEFORMABLE SURFACES

Hao Li
PhD dissertation, ETH Zurich, 11/2010

REKONSTRUKTION FARBIGER OBJEKTE AUS STRUKTURIERT BELEUCHTETEN ANSICH-TEN

Hao Li
Diplomarbeit, Universität Karlsruhe (TH), 06/2005

RECONSTRUCTION USING STRUCTURED LIGHT

Hao Li
Studienarbeit, Universität Karlsruhe (TH), 02/2004

FILM CREDITS

Blade Runner 2049 (USC Institute for Creative Technologies, Light Stage Processing Supervisor)	2017
Valerian and the City of a Thousand Planets (Vision & Graphics Lab, Director)	2017
Furious 7 (Weta Digital, Researcher)	2015
The Hobbit: The Battle of the Five Armies (Weta Digital, Researcher)	2014
Noah (ILM, R&D)	2014
Captain America: The Winter Soldier (ILM, R&D)	2014
Snickers - Hungry Face Morph	2013
Star Trek Into Darkness (ILM, R&D)	2013
The Lone Ranger (ILM, R&D)	2013
Pacific Rim (ILM, R&D)	2013
Space Pirate Captain Harlock	2013
G.I. Joe: Retaliation (ILM, R&D)	2012
Maattraan	2012
Yellow	2012
3D Underwater Motion Capture of Dana Vollmer Olympic Gold Medalist 2012	2012

INVITED TALKS

THE FUTURE OF FAKE NEWS

Speaker, World Congress of Science and Factual Producers, San Francisco, 12/2017

VIRTUAL AVATAR CREATION USING DEEP LEARNING

Speaker, SIGGRAPH Asia Symposium on AR and VR 2017, Bangkok, 12/2017

DIGITAL HUMAN TELEPORTATION USING DEEP LEARNING

Keynote Speaker, CVMP 2017, London, 11/2017

Speaker, Sony US Research Center, San Jose, 11/2017

Keynote Speaker, SoftBank Ventures Forum 2017, Seoul, 10/2017

Speaker, USC China Miniforum, Los Angeles, 9/2017

Speaker, SCA 2017 Symposium on Computer Animation, Los Angeles, 7/2017

Speaker, ICVSS 2017 International Computer Vision Summer School, Sicily, 7/2017

Keynote Speaker, ACM SIGGRAPH Taipei Chapter Computer Graphics Workshop 2017, Taichung, 6/2017

Keynote Speaker, S3PM 2017 International Convention on Shape, Solid, Structure, & Physical Modeling, Berkeley, 6/2017

Speaker, FMX 2017, Stuttgart, 05/2017

Invited Talk, Ochanomizu University, Tokyo, 2/2017

CAPTURE, RENDERING, AND DISPLAY FOR VIRTUAL HUMANS

Speaker, UARC ICT Mission Projects 2017, Los Angeles, 02/2017

LEARNING CORRESPONDENCES BETWEEN CLOTHED HUMAN SHAPES

Speaker, ECCV Workshop on Geometry Meets Deep Learning 2016, Amsterdam, 10/2016

MARKERLESS MOTION CAPTURE

Speaker, Human Performance, Training & Education Tech Review, Quantico US Marine Corps Base, Stafford County, 10/2016

REAL-TIME FACIAL MOTION CAPTURE AND ITS APPLICATIONS

Speaker, 4th Huawei Smart Device Summit on Multimedia Technology, Shenzhen, 9/2016

DEMOCRATIZING HUMAN DIGITIZATION

Invited talk, Nickelodeon Animation Studio, Burbank, 2/2017

Keynote Speaker, SIGGRAPH Asia Workshop on Virtual Reality Meets Physical Reality 2016, Macao, 12/2016

Speaker, The Real Deal @ USC, Los Angeles, 11/2016

Speaker, TEDxHollywood, Los Angeles, 9/2016

DEEP LEARNING: A NEW TOOL FOR CONTENT CREATION AND GAME DESIGN

Speaker, SIGGRAPH 2016 Special Session, Open Problems in Real-Time Rendering, Anaheim, 7/2016

TÊTE-À-TÊTE IN CYBERSPACE

Speaker, Fifth International Workshop on Computer Vision 2016, Lecce, 5/2016

DIGITIZING HUMANS INTO VR USING DEEP LEARNING

Speaker, REAL 2016, San Francisco, 3/2016

Speaker, NVidia Deep Learning Workshop, Los Angeles, 2/2016

MARKERLESS PERFORMANCE CAPTURE FOR AUTOMATED FUNCTIONAL MOVEMENT SYSTEM

Speaker, Warrior Resilience Tech Review, Office of Naval Research, Arlington, 02/2016

BRIDGING PHYSICAL AND DIGITAL WORLDS

Speaker, 16th KOCSEA Technical Symposium 2015, Harvey Mudd College, Claremont, 12/2015

Speaker, SLUSH Conference 2015, Helsinki, 11/2015

Speaker, USC Global Conference 2015, Shanghai, 10/2015

HUMAN DIGITIZATION AND FACIAL PERFORMANCE CAPTURE FOR SOCIAL INTERACTIONS IN VR

Speaker, VRLA Winter Expo, Los Angeles, 01/2016

Invited Talk, Google, Seattle, 10/2015

Invited Talk, Disney Consumer Products, Glendale, 7/2015

Invited Talk, MIT Computer Graphics Group, Massachusetts Institute of Technology, Cambridge, 6/2015

SOCIAL INTERACTION IN CYBERSPACE

Speaker, SLUSH Future Brunch, No Name Club, Los Angeles, 5/2015

DATA-DRIVEN HAIRSTYLING

Speaker, Workshop on Functoriality in Geometric Data 2015, HKUST IAS, Hong Kong, 4/2015

IMMERSIVE TELEPRESENCE WITH 3D SENSING AND VR HMD

Speaker, USC Integrated Media Systems Center Retreat 2015, Los Angeles, 4/2015

DEMOCRATIZING 3D HUMAN CAPTURE: GETTING HAIRY!

Invited Talk, Google, Mountain View, 9/2015

Speaker, Rotary Club, Santa Monica, 9/2015

Invited Talk, Intel, Santa Clara, 6/2015

Invited Talk, Apple, Cupertino, 5/2015

IST Lunch Bunch, Caltech, Pasadena, 5/2015

Invited Talk, SnapChat, Venice, 4/2015

Speaker, LA ACM SIGGRAPH Innovative Research in Computer Graphics at USC and ICT, Los Angeles, 3/2015

Keynote Speaker, International Conference on 3D Vision, Tokyo, 12/2014

Keynote Speaker, ACM SIGGRAPH Conference on Motion in Games 2014, Los Angeles, 11/2014

THE FUTURE OF EXPERIENCING REALITY

Speaker, New York Global Conversation 2014, New York, 10/2014

ON THE FUTURE OF DIGITAL CHARACTERS

Keynote Speaker, Vivid Sydney, Sydney, 06/2014

HUMAN CAPTURE WITH DEPTH SENSORS

Keynote Speaker, Making Augmented Reality Real, NAIST, Nara 08/2014

Invited Talk, Victoria University, Wellington, 07/2014

Chalk Talk, Weta Digital, Wellington, 07/2014

Invited Talk, Pelican Imaging Corporation, Mountain View, 05/2014

3D SELFIES!

Speaker, Depth Camera Birds of Feather, SIGGRAPH 2014, Vancouver, 08/2014

Speaker, FMX 2014, Stuttgart, 04/2014

DEMOCRATIZING 3D SCANNING FOR 3D PRINTING

Speaker, USC Trustee Conference, La Quinta, 03/2014

3D HUMAN CAPTURE: FROM VFX TO THE MAINSTREAM

Speaker, Interactive Media Forum, USC's School of Cinematic Arts, Los Angeles, 04/2014

Speaker, CESASC 52nd Annual Convention, San Gabriel, 04/2014

Invited Talk, University of California, Santa Barbara, 02/2014

HOW DEPTH SENSING TECHNOLOGY WILL CHANGE US

Speaker, Tech Plus Forum (tech+), Seoul, 11/2013

DEMOCRATIZING HUMAN CAPTURE

TR35 Talk, EmTech MIT 2013, Cambridge, 10/2013

3D HUMAN CAPTURE FOR EVERYONE

Invited Talk, SIAT Chinese Academy of Sciences, Shenzhen, 11/2013

Invited Talk, Harvard University, Cambridge, 10/2013

LOW-IMPACT HUMAN DIGITIZATION AND PERFORMANCE CAPTURE

Invited Talk, Dreamworks Animation, Glendale, 08/2013

DIGITIZING HUMANS IN MOTION FROM A GEOMETRIC PERSPECTIVE

3D Imaging and Computing 2012, National Chiao Tung University, Hsinchu, 12/2012

DYNAMIC SHAPE RECONSTRUCTION AND TRACKING

R&D Forum, Industrial Light & Magic, Letterman Digital Arts Center, San Francisco, 04/2012

GEOMETRIC CAPTURE OF HUMAN PERFORMANCES

Faculty Candidate Seminars, Department of Computer Science, Columbia University, New York, 03/2012

Guest Presentation, Rhythm & Hues Studios, Los Angeles, 03/2012

Chalk Talk, Digital Domain, Venice, 03/2012

CS Colloquium Series, Computer Science Department, University of Southern California, Los Angeles, 03/2012

MAYA FOR GRAPHICS SCIENTISTS

Invited Talk, Princeton Computer Graphics Group, Princeton University, New Jersey, 02/2012

TRACKING DEFORMABLE SURFACES

Computer Graphics Reading Group, University of Pennsylvania, Philadelphia, 01/2012

CAPTURING 3D ANIMATION FOR ENTERTAINMENT AND SCIENCES

CVGC Seminar, Columbia Computer Graphics Group, Columbia University, New York, 12/2011

DYNAMIC SHAPE CAPTURE WITH APPLICATIONS IN ART AND SCIENCES

Invited Talk, Microsoft, Redmond, 11/2011

NON-RIGID REGISTRATION IN ENTERTAINMENT AND SCIENCE

Invited Talk, Department for Perceiving Systems, Max-Planck-Institut für Intelligente Systeme, Tübingen, 09/2011

HUMAN BODIES, FACES, AND HAIR

Guest Lecture, Courant Institute of Mathematical Sciences, New York University, New York, 09/2011

ROBUST NON-RIGID 3D ALIGNMENT AND APPLICATIONS

R&D Seminar, Vision Technologies, SRI International/Sarnoff Corporation, New Jersey, 07/2011

CAPTURE, RECONSTRUCT, TRACK, RIG, RETARGET!

Invited Talk, Princeton Computer Graphics Group, Princeton University, New Jersey, 08/2010

INVERSE ENGINEERING DYNAMIC SHAPES FOR COMPUTER ANIMATION

Invited Talk, Courant Institute of Mathematical Sciences, New York University, New York, 08/2010

ANIMATION RECONSTRUCTION

Invited Talk, Columbia Computer Graphics Group, Columbia University, New York, 08/2010

GENERATING BLENDSHAPES FROM EXAMPLES AND CAPTURING WATERTIGHT HUMAN PERFORMANCES

R&D Seminar, Industrial Light & Magic, Letterman Digital Arts Center, San Francisco, 08/2010

A PRACTICAL FACIAL ANIMATION SYSTEM: FROM CAPTURE TO RETARGETING

Research Seminar, Pixar Animation Studios, Emeryville, 08/2010

ART-DIRECTABLE AND DATA-DRIVEN FACIAL ANIMATION

Invited Talk, Institute of Animation, Visual Effects and Digital Postproduction, Filmakademie Baden-Württemberg, Ludwigsburg, 05/2010

ROBUST RECONSTRUCTION OF DYNAMIC SHAPES AND REAL-TIME FACIAL ANIMATION

Invited Talk, Institute for Creative Technologies, University of Southern California, Marina del Rey, 11/2009

DEFORMING GEOMETRY RECONSTRUCTION AND LIVE FACIAL PUPPETRY

R&D Seminar, Industrial Light & Magic, Letterman Digital Arts Center, San Francisco, 10/2009

ANIMATION RECONSTRUCTION FROM A SINGLE-VIEW

Invited Talk, Computer Graphics Department, Max-Planck-Institut für Informatik, Saarbrücken, 05/2009

ACTIVE SHAPE ACQUISITION: FROM IMAGES TO 3-D SURFACES

Invited Talk, Graduate School of Global Information and Telecommunication Studies, Waseda University, Tokyo, 06/2006

3D SCANNING FOR EVERYONE

Ninth SIAM Conference on Geometric Design and Computing (SIAM-GD'05), Phoenix, Arizona, 10/2005

SURFACE RECONSTRUCTION USING COLORED STRIPE PROJECTIONS

Graphics Lunch Seminar, Computer Graphics Laboratory, ETH Zurich, 09/2005

REKONSTRUKTION MIT STRUKTURIERTEM LICHT

First Status Report Meeting of the Institute for Scientific Computing and Mathematical Modeling, Universität Karlsruhe (TH), 04/2005

SOFTWARE & DATASETS

Pinscreen

<http://www.pinscreen.com>

A mobile app that allows anyone to instantly create a 3D avatar by uploading a selfie or an arbitrary 2D photograph. The avatar can then be animated using the phone camera and produce AR selfie content or Animojis. The software can be downloaded from Apple's App Store and has been developed by the entire Pinscreen team.

USC-HairSalon

A large publicly accessible 3D hairstyle database for hair capture, modeling, simulation, and rendering research. This data collection is also a great resource for benchmark and evaluation purposes. My co-authors are Liwen Hu, Chongyang Ma, and Linjie Luo.

Shapify.me

<http://www.shapify.me>

A free application for creating 3D self-portraits directly using Microsoft's Kinect sensor. A person rotates in front of the sensor and the software automatically produces a complete textured digital model of the person. The 3D model can be uploaded to a server and 3D printed. My co-authors are E. Vouga, A. Gudym, and G. Gusev.

ILM's Monster Mirror

Industrial Light & Magic's proprietary depth sensor-driven real-time facial animation system for instantaneous high fidelity facial performance capture for virtual filmmaking. The calibration-free system sets the current bar for realtime facial tracking accuracy and robustness. I co-developed the software with J. Yu, Y. Ye, and C. Bregler.

BeNTO 3D

<http://www.bento3d.com>

An easy to use geometry processing application created exclusively for Mac. The Cocoa based tool distinguishes from other competitors in that development of additional plugins and GUI extensions are considerably simplified.

faceshift

<http://www.faceshift.com>

A software for real-time and markerless facial performance capture using Microsoft's Kinect sensor. The Qt-based application runs on Mac OS X and Windows 7 and is co-developed with T. Weise and S. Bouaziz. Faceshift has been acquired by Apple Inc. and its technology has been incorporated into the iPhone X.

Artec Studio

<http://www.artec3d.com>

Development of a state-of-the-art geometry processing pipeline for aligning and merging non-rigid 3D scan data.

PROFESSIONAL ACTIVITIES

Co-Curator

World Economic Forum (WEF) - Virtual and Augmented Reality Transformation Maps 2017

Associate Editor

Computer Graphics Forum 2016-2019

Program Committee (Computer Graphics)

ACM SIGGRAPH 2015 and 2016

ACM SIGGRAPH Asia 2017

ACM SIGGRAPH Asia (Technical Briefs & Posters) 2014, 2015, and 2016

ACM SIGGRAPH Asia (E-Tech) 2013, 2014, 2015, and 2016

ACM SIGGRAPH Asia (Symposium in Mobile Graphics and Interactive Applications) 2015

Symposium on Computer Animation 2013, 2014, 2015, 2016, and 2017

Symposium on Geometry Processing 2012, 2016, and 2017

Eurographics 2014, 2015, and 2016

Eurographics (STAR) 2015

Eurographics (Short Papers) 2013, 2014, and 2015

Pacific Graphics 2012, 2013, 2014, 2015, 2016, and 2017

Shape Modeling International 2013 and 2017

International Conference on Computer Aided Design and Computer Graphics 2013 and 2015

International Conference on Computer Animation and Social Agents 2014, 2015, and 2016

Program Committee (Computer Vision)

IEEE International Conference on Computer Vision and Pattern Recognition 2017 and 2018
 IEEE CVPR Workshop on Morphable Face Models: from Present to Future 2018
 International Conference on 3D Vision 2014 and 2015
 International Symposium on 3D Data Processing, Visualization and Transmission 2010
 Workshop on Non-rigid Shape Analysis and Deformable Image Alignment 2010, 2011, 2012, and 2014

Reviewer

ACM SIGGRAPH 2008, 2009, 2011, 2012, 2013, 2014, 2015, 2016, and 2017
 ACM SIGGRAPH Asia 2010, 2011, 2012, 2013, 2014, 2015, 2016, and 2017
 ACM Transaction on Graphics 2010, 2011, 2013, 2015, 2016, and 2017
 IEEE International Conference on Computer Vision and Pattern Recognition 2016, 2017, and 2018
 International Conference on Computer Vision 2017
 European Conference on Computer Vision 2016
 ACM User Interface software and Technology Symposium 2014
 Symposium on Computer Animation 2013, 2014, 2015, 2016, and 2017
 Symposium on Geometry Processing 2007, 2008, 2012, 2016, 2017, and 2018
 Eurographics 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, and 2017
 Computer Graphics Forum 2010, 2011, 2016, and 2017
 International Conference on 3D Vision 2014 and 2015
 IEEE International Symposium on mixed and Augmented Reality 2015
 3D Data Processing, Visualization and Transmission 2010
 Non-rigid Shape Analysis and Deformable Image Alignment 2010, 2011, 2012, and 2014
 Transactions on Visualization and Computer Graphics 2009, 2012, 2013, 2014, 2015, 2016, and 2017
 Transactions on Pattern Analysis and Machine Intelligence 2007, 2012, and 2017
 International Journal of Computer Vision 2015
 IEEE Computer Graphics and Applications 2013
 International Conference on Computer Animation and Social Agents 2014, 2015, and 2016
 EURASIP Journal on Advances in Signal Processing 2011
 Graphical Models 2014
 Computers & Graphics 2013 and 2014
 Asian Conference on Computer Vision 2010
 Pacific Graphics 2009, 2011, 2012, 2013, 2014, 2015, 2016, and 2017
 Vision, Modeling, and Visualization Workshop 2006
 Geometric Modeling and Processing 2006
 Computer-Aided Design 2013

Chair

International Conference on 3D Vision 2017 Area Chair
 SIGGRAPH Asia 2017 Session Chair
 SIGGRAPH 2017 Session Chair
 SIGGRAPH 2016 Session Chair
 SIGGRAPH 2015 Session Chair
 SIGGRAPH Asia (E-Tech) Prize 2013 and 2014
 International Conference on 3D Vision 2015 Area Chair

Panels

Judge's Panel for the MIT TR 35 Innovators of 2018	02/2018
Qiu Shi Outstanding Young Scholar Award Selection Committee	05/2017
Judge's Panel for the MIT TR 35 Innovators of 2017	05/2017
European Research Council Research Proposal	12/2016
Judge's Panel for the MIT TR 35 Innovators of 2016	05/2016
European Research Council Research Proposal	12/2015
Judge's Panel for the MIT TR 35 Innovators of 2015	04/2014
Swiss National Science Foundation Research Proposal	12/2014
Judge's Panel for the MIT TR 35 Innovators of 2014	05/2014

Membership

ACM SIGGRAPH	06/2006 - ongoing
Eurographics Association	08/2011 - ongoing
National Academy of Inventors	05/2017 - ongoing
World Future Society	08/2017 - ongoing

BOARD

Tekcapital, Scientific Advisory Board	08/2017
European Conference on Visual Media Production, Scientific Advisory Board	02/2017
Pinscreen Inc., Board of Director	10/2015
Pelican Imaging, Technical Advisory Board	09/2014 - 11/2016

EXTRACURRICULAR ACTIVITIES

Lucasfilm Training LDAC, Practical & CG Cinematography, San Francisco	08/2009
Credit Suisse Group, Equity Derivatives Workshop, Zurich	03/2008
McKinsey&Company, Business Technology Office's European Seminar, Portugal	05/2007

TECHNICAL SKILLS**Operating Systems**

Mac OS X, Linux/Unix, and Windows

Programming Languages

C/C++, Objective C, Python, Java, and HTML/CSS

Professional Tools

Unity, Autodesk Maya, Autodesk 3ds MAX, Pixologic ZBrush, Zeno, Adobe AfterEffects, Adobe Premiere, Adobe Photoshop, and Adobe Illustrator

MILITARY SERVICE

German Federal Armed Forces	11/1999 - 08/2000
Division for Special Operations (DSO) - Airborne Brigade 26	
2 nd Company of the Antitank Parachute Battalion 262, Merzig, Germany	
<ul style="list-style-type: none"> • German parachutist badge in bronze 	

REFERENCES**Prof. Dr. Leonidas J. Guibas**

Paul Pigott Professor of Computer Science and Electrical Engineering
Stanford University, Computer Science Department

Email guibas@cs.stanford.edu**Home page** <http://geometry.stanford.edu/>**Prof. Dr. Szymon Rusinkiewicz**

Professor of Computer Science
Princeton University, Computer Science Department

Email smr@princeton.edu**Home page** <http://www.cs.princeton.edu/~smr/>**Prof. Dr. Wojciech Matusik**

Associate Professor of Computer Science
Massachusetts Institute of Technology, Department of Electrical Engineering and Computer Science

Email wojciech@mit.edu**Home page** <http://people.csail.mit.edu/wojciech>

Prof. Dr. Michael J. Black

Director

Max Planck Institute for Intelligent Systems, Perceiving Systems Department

Email black@tuebingen.mpg.de**Home page** <http://ps.is.tue.mpg.de>**Prof. Dr. Eitan Grinspun**

Associate Professor of Computer Science

Columbia University, Computer Science Department

Email eitan@cs.columbia.edu**Home page** <http://www.cs.columbia.edu/cg/>**Prof. Dr. Paul Debevec**

Senior Staff Engineer, Google VR and Adjunct Research Professor

University of Southern California / Institute for Creative Technologies

Email debevec@gmail.com**Home page** <http://pauldebevec.com/>**Kim Libreri**

Chief Technology Officer

Epic Games

Email available upon request**Home page** <http://epicgames.com/>