Curriculum Vitae: Prof. Ariel Shamir

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Contact: Efi Arazi School of Computer Science
Riechman University (IDC - The Interdisciplinary Center)
8 University Street, Herzelia 4610101 Israel

Positions

PROFESSOR (2014 - present), Efi Arazi School of Computer Science, IDC.

DEAN (2017 - 2021), Efi Arazi School of Computer Science, The Interdisciplinary Center.

VICE DEAN (2012 - 2017), Efi Arazi School of Computer Science, IDC.

VISITING PROFESSOR (2007 - 2018), Tel Aviv University.

VISITING SCIENTIST & CONSULTANT (2008 - 2016), Disney Research, USA.

VISITING SCIENTIST (2013 - 2014 Sabbatical), MIT CSAIL.

ASSOCIATE PROFESSOR (2009 - 2014), Efi Arazi School of Computer Science, IDC.

ALGORITHMIC RESEARCH MANAGER (2005 - 2013), Sensomatix Ltd.

SENIOR LECTURER (2006 - 2009), Efi Arazi School of Computer Science, IDC.

VISITING SCIENTIST (2006 - 2007 Sabbatical), Mitsubishi Electric Research Laboratories, Cambridge.

LECTURER (2000 - 2006), Efi Arazi School of Computer Science, IDC.

VISITING SCIENTIST (Summer 2002), Lawrence Livermore National Laboratory, Livermore, California.

POST-DOCTORAL FELLOW (1999 - 2000), The Center for Computational Visualization of TICAM, University of Texas, Austin.

CHIEF SCIENTIST & MANAGER R&D (1995 - 2001), Heshev Developments Ltd.

COMPUTER SCIENCE TEACHER (1995 - 1998), High-school for Science and Art, Jerusalem.

RESEARCH ASSISTANT (1995 - 1998), The Institute of Computer Science, The Hebrew University.

TEACHING ASSISTANT (1993 - 1998), The Institute of Computer Science, The Hebrew University.

SENIOR SOFTWARE ENGINEER (1991 - 1995), Heshev Developments Ltd.

Education

1999: Ph.D. in Computer Science, the Hebrew University, Jerusalem, Israel
1996: M.Sc. in Computer Science, the Hebrew University, Jerusalem, Israel
1991: B.Sc. Cum Laude in Mathematics and Computer Science,
the Hebrew University, Jerusalem, Israel

Membership

ACM SIGGRAPH, IEEE Computer Society, Eurographics and Asia Graphics (member of the EC).

Awards & Grants

2019: Israel Ministry of Science and Technology:
"Neural-Network based animation for non-humanoid robots".
2019: Israel Science Foundation Grant for 4 years:
"Learning the Functionality of 3D Objects and Scenes".
2019: Israel Innovation Authority (Magneton for 2 years):
"Multi-Modal Summarization of a Video Event".
2018: Amazon Grant for Cloud Computing.
2014-2016: Listed on Thomson Reuters list of most highly cited researchers
2016: IDC President Award for Outstanding Research
2015: Israel Science Foundation & China NSF Grant for 3 years:
"Data-Driven Visual Media Processing".
2011: Israel Science Foundation Grant for 4 years:
"Information Enhanced Media Manipulation and Synthesis".
2008: IDC President Award for Outstanding Research
2007: Israel Science Foundation Grant for 4 years:
"Reconstruction of Complex Surfaces" (Joint grant).
2007: Israel Ministry of Science and Education Tashtiot Grant for 3 years:
"Advanced Methods For Reconstruction Of Three-Dimensional Synthetic Objects" (Joint grant).
2003: IDC President Award for Outstanding Research
2002: Israel Ministry of Science and Education Tashtiot Grant for 3 years:
"Fundamentals of Virtual Reality and Medical Applications" (Joint grant).

Editorials

- Associate Editor, ACM Transactions on Graphics, 2017–present.
- Associate Editor, Graphical Models, 2015–present.
- Associate Editor, Visual Informatics (Elsevier), 2016–present.
- Associate Editor, IEEE Transactions on Visualization and Computer Graphics, 2015–2017.
- Associate Editor, Computers & Graphics: An International Journal of Systems & Applications in Computer Graphics (Elsevier), 2010–2015.
- Wen Gao, Chang Wen Chen, Ariel Shamir, Bo Yan, Guest Editors,
IEEE Journal on Emerging and Selected Topics in Circuits and Systems, Vol. 4, No. 1, 2014, Special Issue on Content-aware Visual Systems: Analysis, Streaming and Retargeting.
- Niloy Mitra, Olga Sorkine, Ariel Shamir, Ayellet Tal, Guest Editors,
Computers & Graphics, Vol. 35, No. 3, 2011, Special Issue: Shape Modeling International (SMI) Conference 2011.

- Shamir, A., Seungyong, L., Guest Editors,
The Visual Computer, Vol. 20, No. 4, June 2004, Special Issue on Geometric Modeling.

- Tal, A., Funkhauser, T., Shamir, A., Guest Editors,
Computers & Graphics, Vol. 30, No. 6, 2006, Special issue on Mesh Processing.

- Shamir, A., Fischer, A., Guest Editors,
Journal of Shape Modeling, Special Issue on CAD and Geometric Modeling.

Courses & Tutorials

Siggraph 2020: *Intelligent Tools for Creative Graphics*, Ariel Shamir, Niloy J. Mitra, Nobuyuki Umetani, Yuki Koyama
Siggraph 2016: *Computational Tools for 3D Printing*, Ariel Shamir, Bernd Bickely, Wojciech Matusikz.
Siggraph 2016: *Computational Tools for 3D Printing*, Ariel Shamir, Bernd Bickely, Wojciech Matusikz.
Siggraph Asia 2014: *Data-Driven Visual Computing*, K. Xu, S. Hu, A. Shamir, A. Efros, L. Guibas.
Siggraph Asia 2014: *3D Printing Oriented Design: Geometry and Optimization*, Ligang Liu, Ariel Shamir, Charlie Wang and Emily Whiting.
Eurographics 2014: *Data-driven video completion: State of the Art Report*, S. Ilan and A. Shamir.
Siggraph Asia 2012: *Advanced Media Retargeting Techniques*, A. Shamir, O. Sorkine & Alexander Hornung.
Siggraph Asia 2009: *Visual Media Retargeting*, A. Shamir & O. Sorkine.
AIM@SHAPE Summer school 2007: Shape Modeling and Reasoning, *Strategies for Mesh Segmentation*, A. Shamir.
Eurographics 2006: *Mesh Segmentation: State of the Art Report*, A. Shamir.
Eurographics 2002: *View-Dependent Rendering for Polygonal Data-sets*, J. El-Sana, L. De Floriani, E. Puppo, A. Shamir.

Chair

International Conference on Shape Modeling, Herzliya, Israel, June 22–24, 2011 (with Prof. Ayellet Tal).
The 2nd China-Israel Bi-National Conference on Graphics and Geometric Computing, Herzliya, Israel, June 19-20, 2010 (with Prof. Shimin Hu)
The 1st China-Israel Bi-National Conference on Graphics and Geometric Computing, Beijing China, October 10-13, 2009
The 6th Korea-Israel Bi-National Conference on Geometric Modeling and Computer Graphics, Haifa, Israel, November 7–9, 2005.
Chair of Central Israel SIGGRAPH Professional Chapter, 2002 – 2005.

Program committees

2022: WICED
2021: AIGraphics
2020: Siggraph
2019: Siggraph-Asia, IMVC
2018: Siggraph, Eurographics
2017: Siggraph, GraDiFab

2016: Eurographics, IMVC, GraDiFab
2015: Siggraph, Eurographics, CVM, IMVC
2014: Siggraph, SGP
2013: 3DOR, SGP, CVM
2012: SMI
2011: Siggraph, Siggraph-Asia, Eurographics, SMI (chair)
2010: Siggraph-Asia, Pacific Graphics, SGP, SMI, 3DPVT, 3DOR, GRAPP
2009: Eurographics, Siggraph Jury, Pacific Graphics, SGP, SMI, 3DOR, GRAPP
2008: Siggraph Jury, Pacific Graphics, SGP, SMI, 3DOR, WSCG, GRAPP
2007: Eurographics, Pacific Graphics, WSCG, GRAPP, ISVC, VRST
2006: SMI, WSCG, ISVC, Afrigraph, VRCIA
2005: Pacific Graphics, WSCG, ICEC
2004: Pacific Graphics, CGI

3DPVT = International Symposium on 3D Data Processing, Visualization and Transmission, 3DOR = Eurographics Workshop on 3D Object Retrieval, CGI = Computer Graphics International, CVM = Computational Visual Media, GraDiFab = Eurographics Workshop On Graphics For Digital Fabrication GRAPP = Computer Graphics Theory and Applications, ICEC = Entertainment Computing, IMVC = Israel Machine Vision Conference, ISVC = International Symposium on Visual Computing, SGP = Symposium on Geometry Processing, SMI = International Conference on Shape-Modeling and Applications, VRST = Virtual Reality Software and Technology, VRCIA = Virtual Reality Continuum, WSCG = Computer Graphics, Visualization and Computer Vision.

Teaching

- **Computer Graphics:**
  Spring 2010–Spring 2013, Spring 2015, Winter 2015, Winter 2017, Spring 2018– Spring 2022.
- **Machine Learning:**
  Fall 2003, Fall 2004, Spring 2008, Fall 2009, Fall 2011, Spring 2016, Spring 2017, Spring 2022.
- **Geometric Modeling and Visualization:**
  Spring 2002, Spring 2003, Spring 2004, Spring 2006, Spring 2009.
- **Introduction to Computer Science in Java:**
  Fall 2000, Fall 2001, Fall 2002, Fall 2003, Fall 2004, Fall 2005, Fall 2007, Fall 2008.
- **Advanced Seminar on Computer Graphics and Modeling:**

  Algorithm Animation: Spring 2002

  Level of Details in Graphics and Visualization: Spring 2005

  From Shape to Motion: Spring 2006

  Images, Features, Patches: Fall 2009

  Information Enhanced Graphics: Fall 2010

  Semantics in image processing: Fall 2011

  Image & Video manipulations: Fall 2012

Machine Learning in Graphics Fall 2014

Deep Learning in Vision Fall 2016

Machine Learning Applications in Graphics Winter 2019

Post-Docs

- **Yotam Gingold** (2011) - now at George Mason University.
- **Alexander Agathos** (2012) - Graduated from University of the Aegean, Greece.
- **Tao Chen** (2013) - Graduated from Tsinghua U., Beijing.
- **Ronit Slyper** (2013) - Graduated from Carnegie Mellon U.
- **Andreas Aristidou** (2016) - Graduated from the University of Cambridge.

Graduate Students

- **Nadav Cohen**, MSc. Hebrew University, 2021. Thesis: Semantic Segmentation in Art Paintings.
- **Tom Braude**, MSc. The Interdisciplinary Center , 2020. Thesis: Ordered Attention for Visual Storytelling.
- **Yarden Yaniv**, MSc. Tel-Aviv University, 2019. Thesis: The face of art: landmark detection and geometric style in portraits.
- **Moti Kadosh**, MSc. Tel-Aviv University, 2019. Thesis: On the Role of Geometry in Geo-Localization.
- **Ran Badanes**, MSc. Tel-Aviv University, 2018. Thesis: Salient Scene Graph.
- **Guy Rozenthal**, MSc. Tel-Aviv University, 2017. Thesis: Visual Phrases Detection Using Independent and Joint Detectors.
- **Elishai Ezra**, MSc. The Interdisciplinary Center 2017. Thesis: Computer-Aided Spatially Optimized Design of Layer-Assembled Micro-Scale Mechanical Resistance Networks for 3D printing
- **Yonatan Graber**, MSc. The Interdisciplinary Center, 2017. Project: Story Graphs.
- **Ido Arev**, MSc. The Interdisciplinary Center 2017. Thesis: Automatic Editing of Footage from Multiple Social Cameras.
- **Shay Sheinfeld**, MSc. The Interdisciplinary Center 2016. Thesis: Video Summarization using Causality Relations.
- **Amir Mor**, MSc. The Interdisciplinary Center 2016. Thesis: Joint Morpho-Syntactic Processing of Morphologically Rich Languages in a Transition-Based Framework (joint with Dr. Reut Tsarfaty).
- **Tomer Cagan**, MSc. The Interdisciplinary Center 2016. Thesis: Opinionated Natural Language Generation (joint with Dr. Reut Tsarfaty).
- **Lucas Majerowicz**, MSc. The Interdisciplinary Center 2016. Thesis: Synthesizing Diverse Style-Preserving Artifact Arrangements.

- **Nir Ben-Zvi**, MSc. The Hebrew University 2015. Thesis: Line Drawing Video Stylization.
- **Michael Litvin**, MSc. Tel-Aviv University 2015. Thesis: Parameterization Driven 3D Surface Modeling from a Single Image.
- **Shachar Ilan**, MSc. Tel-Aviv University 2014. Thesis: data-driven video completion.
- **Itamar Berger**, MSc. The Interdisciplinary Center, 2013. Thesis: Style and Abstraction in Portrait Sketching.
- **Tzach Yarimi**, MSc. The Interdisciplinary Center, 2013. Thesis: PictureBoard - Interactive Image Arrangement using Context-Based Similarity.
- **Alex Shtof**, MSc. Tel-Aviv University 2013. Thesis: Geosemantic Snapping for Sketch-Based Modeling (joint with Prof. D. Cohen-Or).
- **Roy Shilkrot**, MSc. Tel-Aviv University 2011. Thesis: Identity Transfer in Images for Garments Try-On Experience (joint with Prof. D. Cohen-Or).
- **Liad Serruya**, MSc. The Interdisciplinary Center, 2011. Thesis:Image Compression Terrain Simplification (joint with Dr. Boaz Ben-Moshe).
- **Lior Shapira**, Ph.D. Tel-Aviv University 2010. Thesis: Exploration and Analysis of High-Dimensional Visual Feature Space.
- **Meir-Johnathan Dahan**, MSc. Tel-Aviv University 2010. Thesis: Combining Color and Depth for Enhanced Image Segmentation and Retargeting (joint with Prof. D. Cohen-Or).
- **Roni Zatzarinni**, MSc. Technion 2009. Thesis: Relief Segmentation and Analysis (joint with Prof. A. Tal).
- **Ala Stolpnik**, Msc. Tel-Aviv University 2009. Thesis: Visual Hints for Graph Exploration (joint with Prof. D. Cohen-Or).
- **Michael Rubinstein**, MSc. The Interdisciplinary Center 2009, Thesis: Discrete Approaches for Media Retargeting.
- **Yoav Serbrnik**, MSc. The Interdisciplinary Center 2009, Thesis: Interrogative Visualization of Graphs.
- **Andrei Sharf**, Ph.D. Tel-Aviv University 2008. Thesis: Surface Reconstruction Techniques for Imperfect Raw-Data.
- **Lior Shapira**, Msc Tel-Aviv University 2005. Thesis: Mesh Feature Analysis using Geodesic Mean Shift (joint with Prof. D. Cohen-Or).
- **Amir Shaham**, Msc. Tel-Aviv University 2004. Thesis: Medial Axis Based Solid Representation (joint with Prof. D. Cohen-Or).
- **Andrei Sotzio**, Msc Tel-Aviv University 2002. Thesis: Hierarchical Shape Matching using Union of Spheres (joint with Prof. D. Cohen-Or).

Patents

WO 1998036630 Parametric font models based on features and constraints

US 8452084 Method for compressing elevation maps

US 7477800 Method for Retargeting Images

US 8380010 Content aware resizing of images and videos

US 8405681 Image comparison by asymmetric dynamic warping

US 8400473 Multi-operator media retargeting

US 8737767 Perceptually guided capture and stylization of 3D human figures

US 20110242326 System and Method for Utilizing Motion Fields to Predict Evolution in Dynamic Scenes

US 20130241934 Smart Scribbles for Sketch Segmentation

US 20140180727 System and Method for Classifying and Identifying a Driver Using Driving Performance Data

WO 2014031723 Apparatus and Method for Analyzing Driving Performance Data

US 20140229143 Three-dimensional modeling from single photographs

US 20170208243 Automatic Image Composition

WO 2017077533 Real-Time Alpha Compositing For High-Resolution Image Stream

US 20170032563 System and method for retexturing of images of three-dimensional objects

US 20170068643 Story Albums

Publications

Journals

1. Yael Vinker, Ehsan Pajouheshgar, Jessica Y. Bo, Roman C. Bachmann, Amit Bermano, Daniel Cohen-Or, Amir Zamir, Ariel Shamir *CLIPasso: Semantically-Aware Abstract Object Sketching* ACM Transactions on Graphics (proc. SIGGRAPH 2022), accepted

2. Nadav Cohen, Yael Newman, Ariel Shamir *Semantic Segmentation in Art Paintings* Computer Graphics Forum (proc. Eurographics 2022), accepted

3. Oron Nir, Gal Rapoport, Ariel Shamir *CAST: Character labeling in Animation using Self-supervision by Tracking* Computer Graphics Forum (proc. Eurographics 2022), accepted

4. Andreas Aristidou, Anastasios Yiannakidis, Kfir Aberman, Daniel Cohen-Or, Ariel Shamir, Yiorgos Chrysanthou *Rhythm is a Dancer: Music-Driven Motion Synthesis with Global Structure* IEEE Transactions on Visualization and Computer Graphics, accepted, 2022

5. Paul L. Rosin, Yu-Kun Lai, David Mould, Ran Yi, Itamar Berger, Lars Doyle, Seungyong Lee, Chuan Li, Yong-Jin Liu, Amir Semmo, Ariel Shamir, Minjung Son, Holger Winnemller *A three-level benchmark for non-photorealistic rendering of portraits* Computational Visual Media, accepted, 2022

6. Jennifer Chan, S. T. Boris Choy, Udi Makov, Ariel Shamir, Vered Shapovalov *Variable Selection Algorithm for a Mixture of Poisson Regression for Handling Over-dispersion in Claims Frequency Modeling Using Telematics Car Driving Data* Risks special issue on Special Issue Advanced Statistical and Machine Learning Models in Non-life and Health Insurance, accepted, 2022

7. Xiaonan Fang, Song-Hai Zhang, Tao Chen, Xian Wu, Ariel Shamir, Shi-Min Hu *User-Guided Deep Human Image Matting using Arbitrary Trimaps* IEEE Transactions on Image Processing, Volume 31, Pages 2040–2052, 2022

8. Dov Danon, Moab Arar, Daniel Cohen-Or, Ariel Shamir *Image resizing by reconstruction from deep features* Computational Visual Media 7(4): 453-466, 2021

9. Moti Kadosh, Yael Moses, Ariel Shamir, *On the Role of Geometry in Geo-Localization*, Computational Visual Media, 7(1): 103-113, 2021

10. Miao Wang, Xiao-Nan Fang, Guo-Wei Yang, Ariel Shamir, Shi-Min Hu *Prominent Structures for Video Analysis and Editing* IEEE Transactions on Visualization and Computer Graphics, 27(7): 3305-3317, 2021

11. Xian Wu, Rui-Long Li, Fang-Lue Zhang, Jian-Cheng Liu, Jue Wang, Ariel Shamir, and Shi-Min Hu, *Deep Portrait Image Completion and Extrapolation*, IEEE Transactions on Image Processing, Volume: 29: 2344-2355, 2020

12. Andreas Aristidou, Ariel Shamir, Yiorgos Chrysanthou *Digital Dance Ethnography: Organizing Large Dance Collections* ACM journal on Computing and Cultural Heritage, Volume 12 Issue 4, Pages 29:1-29:27, 2020

13. Xiaonan Fang, Miao Wang, Ariel Shamir, Shi-Min Hu, *Learning Explicit Smoothing Kernels for Joint Image Filtering*, Computer Graphics Forum, Volume 38, Issue 7 (proceedings Pacific Graphics), Pages 181-190, 2019

14. Miao Wang, Guo-Wei Yang, Shi-Min Hu, Shing-Tung Yau, Ariel Shamir, *Write-A-Video: Computational Video Montage for Themed Text*, ACM Transactions on Graphics, Volume 38, Number 6 (proceedings. SIGGRAPH Asia), Article No. 177, 2019

15. Jordan Yaniv, Yael Newman, Ariel Shamir, *The Face of Art: Landmark Detection and Geometric Style in Portraits*, ACM Transactions on Graphics, Volume 38, Number 4, (proceedings SIGGRAPH), 60:1-60:15, 2019

16. Manyi Li, Akshay Gadi Patil, Kai Xu, Siddhartha Chaudhuri, Owais Khan, Ariel Shamir, Changhe Tu, Baoquan Chen, Daniel Cohen-Or, Hao Zhang, *GRAINS: Generative Recursive Autoencoders for INdoor Scenes*, ACM Transactions on Graphics, Volume 38, Number 2, 12:1-12:16, 2019

17. Andreas Aristidou, Ariel Shamir, Yiorgos Chrysanthou, *Digital Dance Ethnography: Organizing Large Dance Collections*, ACM Journal on Computing and Cultural Heritage, Volume 12 Issue 4, Article No. 29, 2019

18. Miao Wang, Guo-Ye Yang, Jin-Kun Lin, Song-Hai Zhang, Ariel Shamir, Shao-Ping Lu, Shi-Min Hu, *Deep Online Video Stabilization With Multi-Grid Warping Transformation Learning*, IEEE Transactions on Image Processing Volume: 28 Issue: 5 (2283 - 2292), 2019

19. Andreas Aristido, Daniel Cohen-Or, Jessica Hodgins, Yiorgos Chrysanthou, Ariel Shamir, *Deep Motifs and Motion Signatures*, ACM Transactions on Graphics, Volume 37, Number 6, (Proceedings SIGGRAPH Asia), 187:1-187:13, 2018

20. Miao Wang , Ariel Shamir, Guo-Ye Yang, Jin-Kun Lin , Guo-Wei Yang , Shao-Ping Lu , Shi-Min Hu, *BiggerSelfie: Selfie Video Expansion with Hand-held Camera*, IEEE Transactions on Image Processing, 27(12): 5854-5865, 2018

21. Ruizhen Hu, Zhihao Yan, Jingwen Zhang, Oliver van Kaick, Ariel Shamir, Hao Zhang, Hui Huang, *Predictive and Generative Neural Networks for Object Functionality*, ACM Transactions on Graphics, Volume 37, Number 4, (Proceedings SIGGRAPH), 151:1–151:14, 2018

22. Andreas Aristidou, Daniel Cohen-Or, Jessica Hodgins, Ariel Shamir, *Self-similarity Analysis for Motion Capture Cleaning*, Computer Graphics Forum, Volume 37, Number 2, pp. 297–309 (Eurographics 2018 Special Issue) 2018

23. Andreas Aristidou, Joan Lasenby, Yiorgos Chrysanthou, Ariel Shamir, *Inverse Kinematics Techniques in Computer Graphics: A Survey*, Computer Graphics Forum, Volume 37, 2018

24. Elishai Ezra Tsur, Ariel Shamir, *Computer-Aided Spatially Optimized Design of Layer-Assembled Micro-Scale Mechanical Resistance Networks for 3D printing*, Computer Aided Design, Volume 98, pp. 12–23 , 2018

25. Miao Wang, Jun-Bang Liang, Song-Hai Zhang, Shao-Ping Lu, Ariel Shamir, Shi-Min Hu, *Hyperlapse from Multiple Spatially-overlapping Videos* IEEE Transactions on Image Processing, 27(4): 1735-1747, 2018

26. Oz Radiano, Yonatan Graber, Moshe Mahler, Leonid Sigal, Ariel Shamir *Story Albums: Creating Fictional Stories from Personal Photograph Sets* Computer Graphics Forum, Volume 37: 19-31, 2018

27. Ruizhen Hu, Wenchao Li, Oliver Van-Kaick, Ariel Shamir, Hao Zhang, Hui Huang *Learning to Predict Part Mobility from a Single Static Snapshot* ACM Transactions on Graphics, Volume 36, Number 6, (proceedings SIGGRAPH Asia), Article No. 227, 2017

28. Adriana Schultz, Ariel Shamir, Ilya Baran, David Levin, Pitchaya Sitthi-Amorn, Wojceich Matusik *Retrieval on Parametric Shape Collections*, ACM Transactions on Graphics, Volume 36, Issue 1, Article No. 11, February 2017

29. Tao Chen, Zhe Zhu, Shi-Min Hu, Daniel Cohen-Or, and Ariel Shamir *Extracting 3D Objects from Photographs using 3-Sweep*, Communications of the ACM, Volume 59, Volume 59, Number 12, December 2016 Pages 121-129

30. Timothy Langlois, Ariel Shamir, Daniel Dror, Wojciech Matusik, David I.W. Levin *Stochastic Structural Analysis for Context-Aware Design and Fabrication*, ACM Transactions on Graphics, Volume 35, Number 6, (proceedings SIGGRAPH Asia), Article No. 226, 2016

31. Ruizhen Hu, Oliver van Kaick, Bojian Wu, Hui Huang, Ariel Shamir, Hao Zhang *Learning How Objects Function via Co-Analysis of Interactions*, ACM Transactions on Graphics, Volume 35, Number 4, (proceedings SIGGRAPH), Article No. 47, 2016

32. Nir Ben-Zvi, Jose Bento, Moshe Mahler, Jessica Hodgins, Ariel Shamir, *Line-Drawing Video Stylization*, Computer Graphics Forum, Volume 35, Issue 6, Pages 1832, September 2016

33. Xiao-Nan Fang, Bin Liu, Ariel Shamir *Automatic thread painting generation*, Communications in Information and Systems, Volume 16, Number 4, 2016

34. Yuki Koyama, Shinjiro Sueda, Emma Steinhardt, Takeo Igarashi, Ariel Shamir, Wojciech Matusik, *AutoConnect: Computational Design of 3D-Printable Connectors*, ACM Transactions on Graphics, Volume 34, Number 6, (proceedings SIGGRAPH Asia), Article No. 231, 2015

35. Ruizhen Hu, Chenyang Zhu, Oliver van Kaick, Ligang Liu, Ariel Shamir, Hao Zhang, *Interaction Context (ICON): Towards a Geometric Functionality Descriptor*, ACM Transactions on Graphics, Volume 34, Number 4, (proceedings SIGGRAPH), Article No. 83, 2015

36. Maria Shugrina, Ariel Shamir, Wojciech Matusik, *FabForms: Customizable Objects for Fabrication with Validity and Geometry Caching*, ACM Transactions on Graphics, Volume 34, Number 4, (proceedings SIGGRAPH), Article No. 100, 2015

37. Shachar Ilan, Ariel Shamir, *A Survey on Data-Driven Video Completion*, Computer Graphics Forum, Volume 34, Issue 6, pages 6085, September 2015

38. Eakta Jain, Yaser Sheikh, Ariel Shamir, Jessica Hodgins, *Gaze-driven Video Re-editing*, ACM Transactions on Graphics, Volume 34, Issue 2, February 2015 Article No. 21, 2015

39. Lucas Majerowicz, Ariel Shamir, Alla Sheffer, Holger H. Hoos, *Filling Your Shelves: Synthesizing Diverse Style-Preserving Artifact Arrangements*, IEEE Transactions on Visualization and Computer Graphics, Volume 20, Number 11, pp. 1507-1518, Nov. 2014

40. Ido Arev, Hyun-Soo Park, Yaser Sheikh, Jessica Hodgins, Ariel Shamir, *Automatic Editing of Footage from Multiple Social Cameras*, ACM Transactions on Graphics, Volume 33, Number 4, (proceedings SIGGRAPH), paper 81, 2014

41. Yahan Zhou, Shinjiro Sueda, Wojciech Matusik, Ariel Shamir, *Boxelization: Folding 3D Objects Into Boxes*, ACM Transactions on Graphics, Volume 33, Number 4, (proceedings SIGGRAPH), paper 71, 2014

42. Adriana Schulz, Ariel Shamir, David Levin, Pitchaya Sitthi-Amorn, Wojceich Matusik, *Design and Fabrication by Example*, ACM Transactions on Graphics, Volume 33, Number 4, (proceedings SIGGRAPH), paper 62, 2014

43. Kai Xu, Rui Ma, Hao Zhang, Chenyang Zhu, Ariel Shamir, Daniel Cohen-Or, Hui Huang, *Organizing Heterogenous Scene Collection through Contextual Focal Points*, ACM Transactions on Graphics, Volume 33, Number 4, (proceedings SIGGRAPH), paper 35, 2014

44. Johannes Kopf, Ariel Shamir, Pieter Peers *Content-Adaptive Image Downscaling*, ACM Transactions on Graphics, Volume 32, Number 6, (proceedings SIGGRAPH Asia), pages 173:1–173:8, 2013

45. Tao Chen, Zhe Zhu, Ariel Shamir, Shi-Min Hu, Daniel Cohen-Or, *3-Sweep: Extracting Editable Objects from a Single Photo*, ACM Transactions on Graphics, Volume 32, Number 6, (proceedings SIGGRAPH Asia), pages 195:1–195:10, 2013

46. Itamar Berger, Ariel Shamir, Moshe Mahler, Elizabeth Carter, Jessica Hodgins, *Style and Abstraction in Portrait Sketching*, ACM Transactions on Graphics, Volume 32, Number 4, (proceedings SIGGRAPH), pages 55:1–55:12, 2013

47. Oliver van Kaick, Kai Xu, Hao Zhang, Yanzhen Wang, Shuyang Sun, Ariel Shamir, Daniel Cohen-Or *Co-Hierarchical Analysis of Shape Structures*, ACM Transactions on Graphics, Volume 32, Number 4, (proceedings SIGGRAPH), pages 69:1–69:10, 2013

48. Shi-Sheng Huang, Ariel Shamir, Chao-Hui Shen, Hao Zhang, Alla Sheffer, Shi-Min Hu, Daniel Cohen-Or *Qualitative Organization of Collections of Shapes via Quartet Analysis*, ACM Transactions on Graphics, Volume 32, Number 4, (proceedings SIGGRAPH), pages 71:1–71:10, 2013

49. Honghua Li, Yanzhen Wang, Junjie Cao, Hao Zhang, Ariel Shamir, and Daniel Cohen-Or, *Curve style analysis in a set of shapes*, Computer Graphics Forum, Volume 32, Issue 6, pages 7788, 2013

50. Tao Chen, Jun-Yan Zhu, Ariel Shamir, Shi-Min Hu, *Motion-Aware Gradient Domain Video Composition*, IEEE Transactions on Image Processing, Volume 22 , Issue 7, Pages 2532 – 2544, 2013

51. Alex Shtof, Alexander Agathos, Yotam Gingold, Ariel Shamir, Daniel Cohen-Or, *Geosemantic Snapping for Sketch-Based Modeling*, Computer Graphics Forum, Volume 32, Number 2 (proceedings Eurographics), pages 245–253, 2013

52. Tao Chen, Ping Tan, Li-Qian Ma, Ming-Ming Cheng, Ariel Shamir, and Shi-Min Hu, *PoseShop: Human Image Database Construction and Personalized Content Synthesis*, IEEE Transactions on Visualization and Computer Graphics, Volume 19 Issue 5, Pages 824-837, May 2013

53. Roy Shilkrot, Daniel Cohen-Or, Ariel Shamir, Ligang Liu, *Garment Personalization via Identity Transfer*, IEEE Computer Graphics And Applications, Volume 33, Issue 4, pages 62 – 72, 2012

54. Honghua Li, Ibraheem Alhashim, Hao Zhang, Ariel Shamir, and Daniel Cohen-Or *Stackabilization*, ACM Transactions on Graphics, Volume 31, No. 6, (Proceedings SIGGRAPH Asia), Article No. 158, 2012

55. G. Noris, D. Sykora, A. Shamir, S. Coros, B. Whited, M. Simmons, A. Hornung, M. Gross, R. Sumner, *Smart Scribbles for Sketch Segmentation*, Computer Graphics Forum, Volume 31, Issue 8, pages 2516-2527, December 2012

56. Meir Johnathan Dahan, Nir Chen, Ariel Shamir and Daniel Cohen-Or *Combining Color and Depth for Enhanced Image Segmentation and Retargeting*, The Visual Computer, Volume 28, Number 12, Pages 1181–1193, 2012

57. Yotam Gingold, Ariel Shamir, Daniel Cohen-Or, *Perceptual Micro Human Computation for Visual Tasks*, ACM Transactions on Graphics, Volume 31, Number 5, 119:1–119:12, 2012

58. Chen Goldberg, Tao Chen, Fang-Lue Zhang, Ariel Shamir, Shi-Min Hu, *Data-Driven Object Manipulation in Images*, Computer Graphics Forum, Volume 31, Number 3, Special issue: proceedings of Eurographics, 2012

59. Ariel Shamir, Alla Stolpnik, *Multivariate Graphs Exploration using Interactive Visual Queries*, Computers and Graphics, Volume 36, Issue 4, Pages 257-264, June 2012

60. Ron Maharik, Mikhail Bessmeltsev, Alla Sheffer, Ariel Shamir, Nathan Carr *Digital Micrography*, ACM Transactions on Graphics, Volume 29, Number 3, (proceedings SIGGRAPH), 100:1-100:12, 2011

61. Yanzhen Wang, Kai Xu, Jun Li, Hao Zhang, Ariel Shamir, Ligang Liu, Zhiquan Cheng, and Yueshan Xiong, *Symmetry Hierarchy of Man-Made Objects*, Computer Graphics Forum, Volume 30, Number 3, pages 287–296, Special issue: proceedings of Eurographics, 2011

62. Michael Rubinstein, Diego Gutierrez, Olga Sorkine, Ariel Shamir, *A Comparative Study of Image Retargeting*, ACM Transactions on Graphics, Volume 29, Number 5 (Proceedings SIGGRAPH Asia - TOG Article: 160), 2010

63. Shy Shalom, Ariel Shamir, Hao Zhang, Daniel Cohen-Or, *Cone Carving for Surface Reconstruction*, ACM Transactions on Graphics, Volume 29, Number 5 (Proceedings SIGGRAPH Asia - TOG Article: 150), 2010

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