Olga Sorkine-Hornung — Curriculum Vitae

ETH Zurich
Department of Computer Science
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Research interests

Geometric modeling, geometry processing and computer graphics. In particular: algorithms and user interfaces for interactive shape modeling, discrete differential geometry, image and video processing, digital fabrication, computer animation, simulation.

Academic positions

2018 – present
Full Professor of Computer Science
Institute of Visual Computing, Interactive Geometry Lab
Head of the Institute of Visual Computing (2016 – 2020)
ETH Zurich, Switzerland

2015 – 2017
Associate Professor of Computer Science
Institute of Visual Computing, Interactive Geometry Lab
ETH Zurich, Switzerland

2011 – 2014
Assistant Professor of Computer Science
Institute of Visual Computing, Interactive Geometry Lab
ETH Zurich, Switzerland

2008 – 2011
Assistant Professor of Computer Science
Courant Institute of Mathematical Sciences
New York University, USA

2006 – 2008
Postdoctoral researcher, Alexander von Humboldt fellow
Faculty of Computer Science and Electrical Engineering
Technische Universität Berlin, Germany

Education

2002 – 2006
Tel Aviv University, Israel
PhD in Computer Science
Thesis title: Laplacian mesh processing. Supervised by Prof. Daniel Cohen-Or.

2001 – 2002
Tel Aviv University, Israel
MSc in Computer Science
Admitted to fast-track PhD program after one year.

1996 – 2000
Tel Aviv University, Israel
BSc in Mathematics and Computer Science (double major)
Graduated *summa cum laude*.

1993 – 1999
Alliance High School, Ramat Aviv, Israel
Admitted to the undergraduate program at Tel Aviv University in the ninth grade (age of 15), studied in parallel at high school and at the university.

Honors and Awards

2024	Symposium on Geometry Processing Test of Time Award for the paper "Laplacian Surface Editing" (O. Sorkine, D. Cohen-Or, Y. Lipman, M. Alexa, C. Rössl and H.-P. Seidel, SGP 2004)
2024	ACM SIGGRAPH Test of Time Award for the paper "Robust inside-outside segmentation using generalized winding numbers" (A. Jacobson, L. Kavan and O. Sorkine, SIGGRAPH 2013)
2024	Best Paper Honorable Mention at SIGGRAPH 2024
2024	Best Paper Honorable Mention at EUROGRAPHICS 2024
2023	Elected as member of the Swiss Academy of Engineering Sciences, the SATW
2022	Best Paper Award at the International Conference on 3D Vision (3DV) 2022
2022	Symposium on Geometry Processing Test of Time Award for the paper "As-Rigid-As-Possible Surface Modeling" (O. Sorkine and M. Alexa, SGP 2007)
2021	Golden Owl, awarded for excellence in teaching at ETH Zurich
2020	ACM Fellow
2020	ERC Consolidator Grant
2020	Best Paper Award at Eurographics Symposium on Geometry Processing 2020
2020	Symposium on Geometry Processing Software Award for `Instant Meshes`
2018	Best Paper Honorable Mention at EUROGRAPHICS 2018
2017	Rössler Prize (accompanied by CHF 200,000 in research funds)
2017	EUROGRAPHICS Outstanding Technical Contributions Award
2016	Best Paper Award at the International Conference on 3D Vision (3DV) 2016
2015	Symposium on Geometry Processing Software Award for `libigl`, a C++ geometry processing library
2015	Fellow of the Eurographics Association
2014	Best Paper Award at Eurographics Symposium on Geometry Processing 2014
2013	Intel Early Career Faculty Award
2012	ERC Starting Grant
2012	Latsis Prize of ETH Zurich
2011	ACM SIGGRAPH Significant New Researcher Award
2008	EUROGRAPHICS Young Researcher Award
2006 – 2008	Alexander von Humboldt research fellowship
2003	Excellence award, School of Computer Science, Tel Aviv University
1999 – 2000	Dean's List of Excellence, Faculty of Exact Sciences, Tel Aviv University

Funding

2021 – 2025	MYCLOTH: Sustainable Algorithmic Modeling of Personalized Garments, **ERC Consolidator Grant** 101003104, sole PI, €2,000,000
2019	Adobe gift
2019 – 2021	SHFN / SWISSHEART Network grant, CHF 219,000.
2018	Snap, Inc. gift
2018	Facebook gift
2017 – 2019	Deep Learning for Image and Geometry Processing, The Walt Disney Company grant, sole PI, CHF 146,088
2017 – present	Max Rössler Prize, CHF 200,000 unrestricted research funding
2016 – present	PI at the National Centre of Competence in Research (NCCR) "Digital Fabrication in Architecture", SNF grant, 1 PhD position, postdoc funding.
2015 – 2019	Deformation and Motion Modeling using Modular, Sensor-based Input Devices, SNF grant 200021_162958, PI, CHF 497,394
2013	Intel gift, $35,000

2013 – 2016	Artistic Control and Simulation of Complex Visual Appearance, The Walt Disney Company grant, sole PI, CHF 170,000
2012 – 2017	iModel: Intelligent Shape Modeling, **ERC Starting Grant** 306877, sole PI, €1,497,442
2011 – 2014	Interactive Shape Deformation and Animation, SNF grant 200021_137879, sole PI, CHF 208,112
2011 – 2016	Multi-View Geometry Reconstruction Techniques for Video-based View Synthesis Applications, The Walt Disney Company grant, sole PI, CHF 243,479
2010 – 2015	Adobe Systems gift
2010 – 2011	NVidia hardware gift
2009 – 2012	HCC: Medium: Robust and Accurate Modeling with Multifield Geometry, NSF grant IIS-0905502, PI, $739,111
2009 – 2010	Retargeting Legacy Visual Content to Novel Display Devices, NYU University Research Challenge Fund (URCF) award, sole PI, $10,396
2009	Feature-Based Geometric Modeling of Discrete Surfaces, NSF ADVANCE PAID Research Challenge Grant (HRD-0820202), sole PI, $10,000
2009	Interactive Shape Modeling and Deformation, NSF ADVANCE PAID Travel Grant, sole PI, $3,000
2006 – 2008	Alexander von Humboldt research fellowship
2003 – 2006	Colton doctoral scholarship
2002	Minerva short term research grant
1998	Excellence scholarship for young students, Tel Aviv University

Patents (including pending)

2018	Swiss and EU patenting, "Design of developable surfaces for the fabrication of containers with linear fasteners" (WO2019197020A1).
2017	US patenting, "Reconstruction of articulated objects from a moving camera" (US9747668B2).
2016	US patenting, "Object reconstruction from dense light fields via depth from gradients" (US20180137674A1).
2016	US patenting, "Point cloud noise and outlier removal for image-based 3D reconstruction" (US20180315168A1).
2016	US patenting, "Image decomposition and path-space motion estimation" (US20160210778A1).
2016	US patenting, "Sketch-based generation and editing of quad meshes" (US20150002510A1).
2015	US patenting, "Transfusive image manipulation" (US20140104295A1).

Research group

Current PhD students and postdocs

10.2024 – present	Marcel Padilla, postdoc, Feodor-Lynen fellow
09.2024 – present	Ruben Wiersma, postdoc
09.2024 – present	Annika Öhri, PhD student
04.2023 – present	Tanguy Magne, PhD student
05.2022 – present	Aviv Segall, PhD student
12.2021 – present	Jing Ren, postdoc
09.2021 – present	Peizhuo Li, PhD student (direct doctorate program)
06.2021 – present	Alexandre Binninger, PhD student

Past PhD students and postdocs

09.2022 – 09.2024	Maria Korosteleva, postdoc. Now at Meshcapade.
11.2018 – 02.2024	Floor Verhoeven, PhD student. Thesis title: "Algorithms for developable remeshing, approximation and unwarping." Now at Huawei Research Zurich.
03.2019 – 03.2022	Philipp Herholz, postdoc. Now at Meta Research.
08.2017 – 02.2022	Yifan Wang, PhD student. Thesis title: "Detail-driven geometry processing pipeline using neural networks," *awarded the ETH Medal for an Outstanding Doctoral Thesis and the EUROGRAPHICS 2023 Best PhD Thesis Award.* Next stations: postdoc at Stanford University; research scientist at Adobe.
08.2018 – 06.2021	Shihao Wu, postdoc. Now at Qualcomm.
05.2016 – 12.2020	Katja Wolff, PhD student. Thesis title: "3D shape fabrication from flat material sheets". Next stations: Meta Research; independent game developer and artist.
03.2019 – 11.2020	Alexandra Ion, postdoc. Now faculty at Carnegie Mellon University, USA.
05.2016 – 01.2020	Michael Rabinovich, PhD student. Thesis title: "Modeling developable surfaces with discrete orthogonal geodesic nets", *awarded the ETH Medal for an Outstanding Doctoral Thesis.* Now senior scientist at Microsoft.
10.2014 – 10.2019	Oliver Glauser, PhD student. Thesis title: "Self-sensing devices for motion and deformation capture". Founder of Capskin AG.
03.2013 – 02.2019	Christian Schüller, PhD student. Thesis title: "Computational fabrication of 3D shapes: Enabling makers through novel geometric algorithms". Now at Nvidia.
09.2015 – 12.2017	Roi Poranne, postdoc. Now faculty at University of Haifa, Israel.
04.2017 – 07.2017	Noam Aigerman, postdoc. Now researcher at Adobe.
09.2011 – 11.2016	Kaan Yücer, PhD student. Thesis title: "Inferring multidimensional correspondences in multi-image scenarios". Now at Google.
04.2013 – 10.2016	Romain Prévost, PhD student. Thesis title: "Physics-based optimization for assisted creation of tangible artifacts". Now at Meta.
09.2015 – 08.2016	Changil Kim, postdoc. Now at Meta Research.
09.2011 – 01.2016	Daniele Panozzo, postdoc. Now faculty at the Courant Institute of Mathematical Sciences, New York University, USA.
08.2013 – 01.2016	Wenzel Jakob, postdoc, ETH / Marie Curie COFUND Fellow. Now faculty at EPFL, Switzerland.
07.2015 – 01.2016	Alex Wan-Chun Ma, visiting postdoctoral scholar. Now at Meta, previously at ByteDance, Google and Activision.
09.2011 – 10.2015	Olga Diamanti, PhD student. Thesis title: "Algorithms for user-guided surface mappings", *awarded the ETH Medal for an Outstanding Doctoral Thesis.* Now faculty at TU Graz.
04.2012 – 08.2014	Kenshi Takayama, postdoc, JSPS Fellow. Next stations: faculty at the National Institute of Informatics, Tokyo, Japan; research scientist at CyberAgent AI Lab.
11.2011 – 06.2014	Emily Whiting, postdoc, ETH / Marie Curie COFUND Fellow. Now faculty at Boston University, USA.

09.2009 – 07.2013	Alec Jacobson, PhD student. PhD thesis title: "Algorithms and interfaces for real-time deformation of 2D and 3D shapes", *awarded the ETH Medal for an Outstanding Doctoral Thesis and the EUROGRAPHICS 2014 Best PhD Thesis Award.* Now faculty at University of Toronto, Canada.
09.2012 – 06.2013	Leonardo Sacht, visiting PhD student from IMPA, Rio de Janeiro, Brazil, winner of the Swiss Government Scholarship. Now faculty at Universidade Federal de Santa Catarina, Brazil.
11.2011 – 12.2012	Ladislav Kavan, postdoc. Now at Meta Research; previously faculty at University of Utah, USA.
09.2010 – 09.2011	Ofir Weber, postdoc. Now faculty at Bar Ilan University, Israel.
06.2010 – 09.2011	David Harmon, postdoc.
03.2009 – 02.2011	Tino Weinkauf, postdoc, Feodor-Lynen Fellow. Now faculty at KTH Stockholm, Sweden.
11.2009 – 04.2010	Nico Pietroni, postdoc. Now faculty at University of Technology Sydney, Australia.
10.2009 – 11.2009	Yu-Shuen Wang, visiting PhD student from The National Cheng-Kung University. Now faculty at National Chiao Tung University, Taiwan.
09.2009 – 02.2011	Qingnan (James) Zhou, PhD student. Now research engineer at Adobe.

Supervised Master students (MS theses)

2024	Junpeng Gao, ETH Zurich. Developable document unwarping.
2024	Clémont Jambon, ETH Zurich and Seoul National University. Interactive scene authoring with specialized generative primitives.
2024	Ningfeng Zhou, ETH Zurich. Computational design of Italian smocking.
2024	Annika Öhri, ETH Zurich. Chebyshev nets for cloth modeling and deformation.
2023	Anna Eggler, ETH Zurich. Sewing pattern adaptation for custom made garments. *ETH Medal for an Outstanding Master Thesis.*
2022	Tatiana Gerth, ETH Zurich. Deep learned implicit facial expressions.
2022	Niklaus Houska, ETH Zurich. Context-sensitive procedural modeling of architecture.
2021	Johannes Baureithel, ETH Zurich. Human foot modeling and tracking using a wearable sock.
2021	Alexandre Binninger, ETH Zurich. Approximation of 3D shapes by developable surfaces via tangent space thinning.
2021	Rafael Bischof, ETH Zurich. Physics-informed neural networks for structural concrete engineering.
2021	Lukas Rahmann, ETH Zurich. Residual SDFs.
2020	Madlaina Signer, ETH Zurich. Developable metamaterials: mass-fabricable metamaterials by laser-cutting elastic structures.
2020	Thomas Wolf, ETH Zurich. Physical simulation of discrete developable surfaces. *ETH Willi Studer Prize.*
2020	Nikhil Gosala, ETH Zurich. Multi-sensor calibration and fusion for efficient hand pose estimation.
2019	Linus Wigger, ETH Zurich. Scalable discrete orthogonal geodesic nets modeling.
2019	Lea Auf der Maur, ETH Zurich. Patch-based progressive DeepSDF for shape completion.
2018	Lidia de Freitas, ETH Zurich. Deep learning video super resolution (collaboration with Disney Research).
2018	Renfei Liu, ETH Zurich. Fast approximate geodesics via surface parameterization.
2018	Daniel Luginbühl, ETH Zurich. Hexahedral-based simulation in projective dynamics (collaboration with VirtaMed).

2018	Floor Verhoeven, ETH Zurich. Sketch-based 3D modeling in virtual reality.
2018	Ruben Wohlgenannt, ETH Zurich. Optimized thickness computational thermoforming (collaboration with Disney Research).
2017	Carlota Soler, ETH Zurich. Cosserat rods with projective dynamics (collaboration with VirtaMed).
2016	Benedek Vartok, ETH Zurich. Integration of animation input device in Blender and pose space interpolation with dynamics.
2016	Sandro Huber, ETH Zurich. Fast shape optimization.
2016	Jonathan Forman, ETH Zurich. Light field reconstruction from sparse input.
2016	Michael Rabinovich, ETH Zurich. Scalable flipless mappings.
2015	Alexandra Trif, ETH Zurich. Efficient shape-aligned hexahedral mesh generation. *ETH Medal for an Outstanding Master Thesis.*
2015	Stefan Brugger, ETH Zurich. Dynamic cross-parameterization (collaboration with Disney Research).
2015	Stefan Messmer, ETH Zurich. Variational shape modeling and deformation on mobile devices.
2014	Pascal Spörri, ETH Zurich. Data-driven fitting of discrete elements (collaboration with Disney Research).
2014	Joël Bohnes, ETH Zurich. Non-rigid reconstruction of articulated objects from monocular video.
2014	Victor Savu, ETH Zurich. An augmented Lagrangian method for locally injective mapping.
2014	Xiang Gao, ETH Zurich. Cross parameterization via edge straightening and domain smoothing.
2013	Remo Meyer, ETH Zurich. A robust method for brush-based interactive geometry cloning.
2013	Nikolay Kobyshev, ETH Zurich. Consistent 3D scene modeling and integration from layered light field reconstructions (collaboration with Disney Research).
2013	Daniel Leuenberger, ETH Zurich. Light field rendering in Unity3D (collaboration with Disney Research).
2013	Matthias Schelker, ETH Zurich. Color correction for videos (collaboration with Disney Research).
2013	Romain Prévost, ETH Zurich. Accelerated diffusion curves using irradiance caching (collaboration with Disney Research).
2013	Christian Schüller, ETH Zurich. Locally injective mappings.
2012	Cyrill Peterhans, ETH Zurich. Interactive surface reconstruction (collaboration with Disney Research).
2012	David Meier, ETH Zurich. Guided geometry reconstruction (collaboration with LiberoVision).
2010 – 2011	Yang Song, New York University. User interfaces for skinning animation.
2006 – 2007	Mathias Eitz, TU Berlin. Sketch-based image deformation.
2006 – 2007	Ofir Weber, Technion. Example-based character animation.
2005 – 2006	Ran Gal, Tel Aviv University. Content-aware image warping.

Teaching

Department of Computer Science, ETH Zurich, Switzerland

Fall 2024	263-5907-00 Geometry for Computational Design and Fabrication (assisting Prof. Dr. Helmut Pottmann) 263-5702-00 Seminar on Digital Humans 264-5800-00 Seminar, Doctoral Seminar in Visual Computing
Spring 2024	252-0538-00 Shape Modeling and Geometry Processing 252-5704-00 Seminar, Advanced Methods in Computer Graphics 264-5800-00 Seminar, Doctoral Seminar in Visual Computing

Fall 2023	263-5702-00 Seminar on Digital Humans 264-5800-00 Seminar, Doctoral Seminar in Visual Computing
Spring 2023	252-0538-00 Shape Modeling and Geometry Processing 252-5704-00 Seminar, Advanced Methods in Computer Graphics 264-5800-00 Seminar, Doctoral Seminar in Visual Computing
Fall 2022	401-0131-00 Linear Algebra 264-5800-00 Seminar, Doctoral Seminar in Visual Computing
Spring 2022	252-0538-00 Shape Modeling and Geometry Processing 252-5704-00 Seminar, Advanced Methods in Computer Graphics 264-5800-00 Seminar, Doctoral Seminar in Visual Computing
Fall 2021	401-0131-00 Linear Algebra 252-5701-00 Seminar, Advanced Topics in Computer Graphics and Vision 264-5800-00 Seminar, Doctoral Seminar in Visual Computing
Spring 2021	252-0538-00 Shape Modeling and Geometry Processing 252-5704-00 Seminar, Advanced Methods in Computer Graphics 264-5800-00 Seminar, Doctoral Seminar in Visual Computing
Fall 2020	401-0131-00 Linear Algebra 252-5701-00 Seminar, Advanced Topics in Computer Graphics and Vision 264-5800-00 Seminar, Doctoral Seminar in Visual Computing
Spring 2020	252-0538-00 Shape Modeling and Geometry Processing 252-5704-00 Seminar, Advanced Methods in Computer Graphics 264-5800-00 Seminar, Doctoral Seminar in Visual Computing
Fall 2019	401-0131-00 Linear Algebra 252-5701-00 Seminar, Advanced Topics in Computer Graphics and Vision 264-5800-00 Seminar, Doctoral Seminar in Visual Computing
Spring 2019	252-0538-00 Shape Modeling and Geometry Processing 252-5704-00 Seminar, Advanced Methods in Computer Graphics 264-5800-00 Seminar, Doctoral Seminar in Visual Computing
Fall 2018	401-0131-00 Linear Algebra 252-5701-00 Seminar, Advanced Topics in Computer Graphics and Vision 264-5800-00 Seminar, Doctoral Seminar in Visual Computing
Spring 2018	Sabbatical
Fall 2017	401-0131-00 Linear Algebra 252-5701-00 Seminar, Advanced Topics in Computer Graphics and Vision 264-5800-00 Seminar, Doctoral Seminar in Visual Computing
Spring 2017	252-0538-00 Shape Modeling and Geometry Processing 252-5704-00 Seminar, Advanced Methods in Computer Graphics 264-5800-00 Seminar, Doctoral Seminar in Visual Computing
Fall 2016	401-0131-00 Linear Algebra 252-5701-00 Seminar, Advanced Topics in Computer Graphics and Vision 264-5800-00 Seminar, Doctoral Seminar in Visual Computing
Spring 2016	No teaching, maternity leave
Fall 2015	252-0543-01 Computer Graphics 252-5701-00 Seminar, Advanced Topics in Computer Graphics and Vision 264-5800-00 Seminar, Doctoral Seminar in Visual Computing
Spring 2015	252-0538-00 Shape Modeling and Geometry Processing 252-5704-00 Seminar, Advanced Methods in Computer Graphics 264-5800-00 Seminar, Doctoral Seminar in Visual Computing
Fall 2014	252-0543-01 Computer Graphics 252-5701-00 Seminar, Advanced Topics in Computer Graphics and Vision 264-5800-00 Seminar, Doctoral Seminar in Visual Computing
Spring 2014	252-0538-00 Shape Modeling and Geometry Processing 252-5704-00 Seminar, Advanced Methods in Computer Graphics 264-5800-00 Seminar, Doctoral Seminar in Visual Computing
Fall 2013	252-0543-01 Computer Graphics 252-5701-00 Seminar, Advanced Topics in Computer Graphics and Vision 264-5800-00 Seminar, Doctoral Seminar in Visual Computing

Spring	2013	252-0538-00 Shape Modeling and Geometry Processing 252-5704-00 Seminar, Advanced Methods in Computer Graphics 264-5800-00 Seminar, Doctoral Seminar in Visual Computing
Fall	2012	252-0543-01 Computer Graphics 252-5701-00 Seminar, Advanced Topics in Computer Graphics and Vision
Spring	2012	252-0538-00 Shape Modeling and Geometry Processing 252-5704-00 Seminar, Advanced Methods in Computer Graphics
Fall	2011	252-0543-01 Computer Graphics 252-5701-00 Seminar, Advanced Methods in Computer Graphics and Vision

Computer Science Department, Courant Institute of Mathematical Sciences, NYU, USA

Fall	2010 – 2011	G22.2274-001 Advanced computer graphics
Spring	2009 – 2010	G22.3033-008 Geometric modeling
Fall	2009 – 2010	G22.2274-001 Advanced computer graphics
Spring	2008 – 2009	G22.3033-004 Interactive shape modeling
Fall	2008 – 2009	G22.3850-005 Computational topology, algebra and geometry seminar

Faculty of Electrical Engineering and Computer Science, TU Berlin, Germany

Fall	2007 – 2008	Computational photography seminar
Spring	2006 – 2007	Computer Graphics II (assistant, guest lecturer)
Fall	2006 – 2007	Computational photography seminar

School of Computer Science, Tel Aviv University, Israel

Fall	2005 – 2006	Mathematical tools for Computer Graphics (lecture) Programming in C for engineers (recitations)
Spring	2004 – 2005	Mathematical tools for Computer Graphics (lecture)
Fall	2005 – 2006	Software programming project (instructor)
Spring	2003 – 2004	Mathematical tools for Computer Graphics (lecture) Advanced topics in Computer Graphics (guest lecturer)
Fall	2003 – 2004	Software programming project (instructor) Workshop in Computer Graphics (instructor)
Spring	2002 – 2003	Mathematical tools for Computer Graphics (lecture) Software programming project (instructor)
Spring	2002 – 2003	Advanced topics in Computer Graphics (guest lecturer)
Fall	2002 – 2003	Programming in C for engineers (recitations)

Member of PhD thesis committees

10.2024	Cristian Romero (UJRC, Rey Juan Carlos University, Madrid).
10.2024	Ruben Wiersma (TU Delft).
07.2024	Yingying (Samara) Ren (EPFL): Computational inverse design of shape morphing structures.
02.2024	Floor Verhoeven (ETH Zurich): Algorithms for developable remeshing, approximation and unwarping.
02.2024	Alina Dubatovka (ETH Zurich): Interpretable and robust machine learning models for time-series analysis in cardiology.
06.2023	Ryan Johns (ETH Zurich): Autonomous dry stone: mobile robotic construction with naturally nonstandard materials.
12.2022	Stefan Pillwein (TU Vienna): Form finding of deployable elastic gridshells based on nets of geodesic curves.
07.2022	Élie Michel (Télécom Paris): Interactive authoring of 3D shapes represented as programs.

10.2021	Yifan Wang (ETH Zurich): Detail-driven geometry processing pipeline using neural networks.
09.2021	Rosa Sanchez (UJRC, Rey Juan Carlos University, Madrid): Robust elasticity and damping models for high-fidelity textile simulation.
12.2020	Katja Wolff (ETH Zurich): 3D shape fabrication from flat material sheets.
12.2019	Michael Rabinovich (ETH Zurich): Modeling developable surfaces with discrete orthogonal geodesic nets.
10.2019	Oliver Glauser (ETH Zurich): Self-sensing devices for motion and deformation capture.
04.2019	Mathias Bernhard (ETH Zurich, Department of Architecture): Domain transforms in architecture: encoding and decoding of cultural artefacts.
10.2018	Christian Schüller (ETH Zurich): Computational fabrication of 3D shapes: Enabling makers through novel geometric algorithms.
07.2017	Stamatios Georgoulis (KU Leuven): Extraction of surface characteristics and lighting in 3D reconstruction from uncalibrated images.
10.2016	Kaan Yücer (ETH Zurich): Inferring multidimensional correspondences in multi-image scenarios.
10.2016	Romain Prévost (ETH Zurich): Physics-based optimization for assisted creation of tangible artifacts.
07.2016	Mikhail Bessmeltsev (University of British Columbia): Recovering 3D shape from concept and pose drawings.
07.2016	Daniel Sieger (University of Bielefeld): Constrained deformation for evolutionary optimization.
10.2015	Amit Bermano (ETH Zurich): Geometric methods for realistic facial animation.
10.2015	Olga Diamanti (ETH Zurich): Algorithms for user-guided surface mappings.
09.2013	Benjamin Schindler (ETH Zurich): Efficient algorithms for Lagrangian visualization of flow structures.
05.2013	Alec Jacobson (ETH Zurich): Algorithms and interfaces for real-time deformation of 2D and 3D shapes.
04.2013	Christian Schulz (Freie Universität Berlin): Interactive spacetime control of deformable objects and modal shape analysis beyond Laplacian.
12.2012	Peter Kaufmann (ETH Zurich): Discontinuous Galerkin FEM in Computer Graphics.
12.2012	David Günther (Saarland University): Topological analysis of discrete scalar data.
05.2012	Daniele Panozzo (University of Genova): From irregular meshes to structured models.
05.2011	Marcio Cabral (INRIA Sophia-Antipolis): Reshape and relighting for interactive content creation and manipulation.
09.2010	Adrian Secord (New York University): Creating collections and evaluating viewpoints: selection techniques for interface design.
05.2010	Darko Pavić (RWTH Aachen): Combining raster- and vector-representations for image and geometry processing applications.
05.2009	Yotam Gingold (New York University): 2D-Centric interfaces and algorithms for 3D modeling.
05.2009	Benjamin Galehouse (New York University): Topologically accurate meshing using spatial subdivision techniques.
08.2008	Elif Tosun (New York University): Geometric modeling with high order derivatives.

University service activities

2020 – 2024	Member of the Executive Board of the Women Professors Forum, ETH Domain
2020 – 2022	Member of the Scientific Advisory Board for the Institute for Theoretical Studies, ETH Zurich

2018 – 2024	Member of the Executive Board of the Department of Computer Science, ETH Zurich
2017 (spring)	Member of the Executive Board of the Department of Computer Science, ETH Zurich
2016 – 2020	Head of the Institute of Visual Computing, Department of Computer Science, ETH Zurich
2011 – 2019	Professor-in-charge of CSNOW: Network of Women in Computer Science, Department of Computer Science, ETH Zurich
2016 – 2017	Member of the Studies Committee (Unterrichtskommission) of the Department of Computer Science, ETH Zurich
2014 – 2015	Member of the Executive Board of the Department of Computer Science, ETH Zurich
2013 – 2016	Member of the Colloquium committee at the Department of Computer Science, ETH Zurich
2011	Google Summer of Code mentor, co-mentoring the project "Implementation of As-Rigid-As-Possible Surface Modeling in CGAL" together with Andreas Fabri
2009 – 2010	Member of the PhD Fellowship Committee, NYU's Computer Science Department (responsible for graduate student admissions, fellowships and status monitoring)

Other work experience

2000 – 2002	Israel Defense Forces Regular military service
1999 – 2000	School of Mathematics, Tel Aviv University, Israel Course grader: Linear Algebra, Discrete Mathematics, Introduction to Programming
1999	Hebrew Language Unit, Tel Aviv University, Israel Computer lab operator

Publications

http://igl.ethz.ch/publications/
https://scholar.google.ch/citations?hl=en&user=GBU568oAAAAJ

Books

[1] Image content retargeting: maintaining color, tone, and spatial consistency. Alessandro Artusi, Francesco Banterle, Tunç Ozan Aydın, Daniele Panozzo, Olga Sorkine-Hornung. AK Peters/CRC Press, 2016.

[2] A sampler of useful computational tools for applied geometry, computer graphics, and image processing. Daniel Cohen-Or, Chen Greif, Tao Ju, Niloy Mitra, Ariel Shamir, Olga Sorkine-Hornung and Hao (Richard) Zhang. AK Peters/CRC Press, 2015.

[3] Digital representations of the real world: How to capture, model, and render visual reality. Marcus Magnor, Oliver Grau, Olga Sorkine-Hornung and Christian Theobalt, editors. AK Peters/CRC Press, 2015.

Edited volumes

[1] ACM Transactions on Graphics, Vol. 38 (4), proceedings of SIGGRAPH 2019 Technical Papers program. Olga Sorkine-Hornung, program chair.

[2] Proceedings of Advances in Architectural Geometry, September 22-25, 2018. Axel Kilian, Samar Malek, Olga Sorkine-Hornung and Christopher Williams, scientific chairs.

[3] Proceedings of Pacific Graphics, October 16-19, 2017. Jernej Barbic, Wen-Chieh Lin and Olga Sorkine-Hornung, editors. Special Issue of Computer Graphics Forum, Vol. 36(7), 2017.

[4] Proceedings of EUROGRAPHICS Full Papers, May 4-8, 2015. Olga Sorkine-Hornung and Michael Wimmer, editors. Special issue of Computer Graphics Forum, Vol. 34(2), 2015.

[5] Real-world visual computing (Dagstuhl Seminar 13431). Oliver Grau, Marcus A. Magnor, Olga Sorkine-Hornung and Christian Theobalt. Dagstuhl reports, Vol. 3(10), pp. 72-91, 2013.

[6] Proceedings of EUROGRAPHICS Short Papers, May 6-10, 2013. Miguel A. Otaduy and Olga Sorkine, editors. The Eurographics Association.

[7] Proceedings of 3DIMPVT, October 13-15, 2012. Jan-Michael Frahm and Olga Sorkine, editors. IEEE Computer Society Conference Publishing Services.

[8] Proceedings of Shape Modeling International, June 22-24, 2011. Niloy Mitra and Olga Sorkine, editors. Special issue of Computers & Graphics, Vol. 35(3), 2011.

[9] Proceedings of the ECCV Media Retargeting Workshop, September 10, 2010. Thomas Deselaers, Alexander Hornung and Olga Sorkine, editors.

[10] Proceedings of the 8th Symposium on Geometry Processing, July 5-7, 2010. Olga Sorkine and Bruno Lévy, editors. Special issue of Computer Graphics Forum, Vol. 29(5), 2010, in cooperation with EUROGRAPHICS and ACM SIGGRAPH.

Journal publications

[1] Chebyshev parameterization for woven fabric modeling. Annika Oehri, Aviv Segall, Jing Ren and Olga Sorkine-Hornung. ACM Transactions on Graphics, Vol. 43(6), 2024 (*SIGGRAPH ASIA 2024 issue*).

[2] Digital garment alteration. Anna Maria Eggler, Raphael Falque, Mark Liu, Teresa Vidal-Calleja, Olga Sorkine-Hornung and Nico Pietroni. Computer Graphics Forum, Vol. 43(7), 2024 (*Pacific Graphics 2024 issue*).

[3] Pose-to-motion: cross-domain motion retargeting with pose prior. Qingqing Zhao, Peizhuo Li, Wang Yifan, Olga Sorkine-Hornung and Gordon Wetzstein. Computer Graphics Forum, Vol. 43(8), 2024 (*ACM SIGGRAPH/Eurographics Symposium on Computer Animation 2024 issue*).

[4] Mesh parameterization meets intrinsic triangulations. Koray Akalin, Ugo Finnendahl, Olga Sorkine-Hornung and Marc Alexa. Computer Graphics Forum, Vol. 43(5), 2024 (*Eurographics Symposium on Geometry Processing 2024 issue*).

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[122] WalkTheDog: Cross-morphology motion alignment via phase manifolds. Peizhuo Li, Sebastian Starke, Yuting Ye and Olga Sorkine-Hornung. SIGGRAPH 2024, Technical Papers track.

[123] UVDoc: Neural grid-based document unwarping. Floor Verhoeven, Tanguy Magne and Olga Sorkine-Hornung. SIGGRAPH ASIA 2023, Technical Papers track.

[124] MoDi: Unconditional motion synthesis from diverse data. Sigal Raab, Inbal Leibovitch, Peizhuo Li, Kfir Aberman, Olga Sorkine-Hornung and Daniel Cohen-Or. Conference on Computer Vision and Pattern Recognition (CVPR) 2023.

[125] Smooth non-rigid shape matching via effective Dirichlet energy optimization. Robin Magnet, Jing Ren, Olga Sorkine-Hornung and Maks Ovsjanikov. International Conference on 3D Vision (3DV) 2022, oral. **Winner of the Best Paper Award at 3DV 2022.**

[126] Geometry-consistent neural shape representation with implicit displacement fields. Wang Yifan, Lukas Rahmann und Olga Sorkine-Hornung. International Conference on Learning Representations (ICLR) 2022.

[127] SAPE: Spatially-adaptive progressive encoding for neural optimization. Amir Hertz, Or Perel, Raja Giryes, Olga Sorkine-Hornung and Daniel Cohen-Or. Conference on Neural Information Processing Systems (NeurIPS) 2021.

[128] Iso-points: Optimizing neural implicit surfaces with hybrid representations. Wang Yifan, Shihao Wu, Cengiz Öztireli and Olga Sorkine-Hornung. Conference on Computer Vision and Pattern Recognition (CVPR) 2021.

[129] Developable metamaterials: Mass-fabricable metamaterials by laser-cutting elastic structures. Madlaina Signer, Alexandra Ion and Olga Sorkine-Hornung. ACM CHI 2021.

[130] Neural cages for detail-preserving 3D deformations. Wang Yifan, Noam Aigerman, Vladimir G. Kim, Siddhartha Chaudhuri and Olga Sorkine-Hornung. Conference on Computer Vision and Pattern Recognition (CVPR) 2020. **Oral**.

[131] Reflection symmetry in textured sewing patterns. Katja Wolff, Philipp Herholz and Olga Sorkine-Hornung. Vision, Modeling and Visualization (VMV) 2019.

[132] RodMesh: Two-handed 3D surface modeling in virtual reality. Floor Verhoeven and Olga Sorkine-Hornung. Vision, Modeling and Visualization (VMV) 2019.

[133] Patch-based progressive 3D point set upsampling. Yifan Wang, Shihao Wu, Hui Huang, Daniel Cohen-Or and Olga Sorkine-Hornung. IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2019.

[134] A fully progressive approach to single-image super-resolution. Yifan Wang, Federico Perazzi, Brian McWilliams, Alexander Sorkine-Hornung, Olga Sorkine-Hornung and Christopher Schroers. IEEE Conference on Computer Vision and Pattern Recognition (CVPR) Workshops, NTIRE (New Trends in Image Restoration and Enhancement), 2018.

[135] Animato: 2D shape deformation and animation on mobile devices. Stefan Messmer, Signe Fleischmann and Olga Sorkine-Hornung. SIGGRAPH ASIA Symposium on Mobile Graphics and Interactive Applications 2016.

[136] Point cloud noise and outlier removal for image-based 3D reconstruction. Katja Wolf, Changil Kim, Henning Zimmer, Christopher Schroers, Mario Botsch, Olga Sorkine-Hornung and Alexander Sorkine-Hornung. International Conference on 3D Vision (3DV) 2016.

[137] Depth from gradients in dense light fields for object reconstruction. Kaan Yücer, Changil Kim, Alexander Sorkine-Hornung and Olga Sorkine-Hornung. International Conference on 3D Vision (3DV) 2016. *Oral*. **Winner of the Best Paper Award at 3DV 2016.**

[138] Balancing 3D models with movable masses. Romain Prévost, Moritz Bächer, Wojciech Jarosz and Olga Sorkine-Hornung. Vision, Modeling and Visualization (VMV) 2016.

[139] Reconstruction of articulated objects from a moving camera. Kaan Yücer, Oliver Wang, Alexander Sorkine-Hornung and Olga Sorkine-Hornung. ICCV Workshop on 3D Representation and Recognition 2015.

[140] Efficient salient foreground detection for images and video using Fiedler vectors. Federico Perazzi, Olga Sorkine-Hornung and Alexander Sorkine-Hornung. WICED 2015: 4th Workshop on Intelligent Camera Control, Cinematography and Editing.

[141] Transfusive weights for content-aware image manipulation. Kaan Yücer, Alexander Sorkine-Hornung and Olga Sorkine-Hornung. Vision, Modeling and Visualization (VMV) 2013.

[142] Mobile image retargeting. Daniel Graf, Daniele Panozzo and Olga Sorkine-Hornung. Vision, Modeling and Visualization (VMV) 2013.

[143] Cusps of characteristic curves and intersection-aware visualization of path and streak lines. Tino Weinkauf, Holger Theisel and Olga Sorkine. TopoInVis 2011.

[144] Selective reverse tone mapping. Belen Masia, Roland Fleming, Olga Sorkine and Diego Gutierrez. CEIG 2010, pp. 135-144.

[145] Interactive shape modeling and deformation. Olga Sorkine and Mario Botsch. Proceedings of EUROGRAPHICS 2009, Tutorials Volume.

[146] Understanding exposure for reverse tone mapping. Miguel Martin, Roland Fleming, Olga Sorkine and Diego Gutierrez. CEIG 2008, pp. 189-198.

[147] As-rigid-as-possible surface modeling. Olga Sorkine and Marc Alexa. Proceedings of Eurographics/ACM SIGGRAPH Symposium on Geometry Processing (SGP) 2007, pp. 109-116. **Winner of the Test of Time Award at SGP 2022.**

[148] Sketch based image deformation. Mathias Eitz, Olga Sorkine and Marc Alexa. Proceedings of Vision, Modeling and Visualization (VMV) 2007, pp. 135-142.

[149] SIMOD: Making freeform deformation size-insensitive. Tamy Boubekeur, Olga Sorkine and Christophe Schlick. Proceedings of IEEE/Eurographics Symposium on Point-Based Graphics 2007, pp. 47-56.

[150] 3D collage: expressive non-realistic modeling. Ran Gal, Olga Sorkine, Tiberiu Popa, Alla Sheffer and Daniel Cohen-Or. Proceedings of the 5th International Symposium on Non-Photorealistic Animation and Rendering (NPAR 2007), pp. 7-14.

[151] Laplacian mesh optimization. Andrew Nealen, Takeo Igarashi, Olga Sorkine and Marc Alexa. Proceedings of ACM GRAPHITE 2006, pp. 381-389.

[152] Feature-aware texturing. Ran Gal, Olga Sorkine and Daniel Cohen-Or. Proceedings of Eurographics Symposium on Rendering (EGSR) 2006, pp. 297-303.

[153] Laplacian surface editing. Olga Sorkine, Daniel Cohen-Or, Yaron Lipman, Marc Alexa, Christian Rössl, Hans-Peter Seidel. Proceedings of Eurographics/ACM SIGGRAPH Symposium on Geometry Processing (SGP) 2004, pp. 179-188. **Winner of the Test of Time Award at SGP 2024.**

[154] Least-squares meshes. Olga Sorkine and Daniel Cohen-Or. Proceedings of IEEE Shape Modeling International (SMI) 2004, pp. 191-199.

[155] Differential coordinates for interactive mesh editing. Yaron Lipman, Olga Sorkine, Daniel Cohen-Or, David Levin, Christian Rössl, Hans-Peter Seidel. Proceedings of IEEE Shape Modeling International (SMI) 2004, pp. 181-190.

[156] High-pass quantization for mesh encoding. Olga Sorkine, Daniel Cohen-Or and Sivan Toledo. Proceedings of Eurographics/ACM SIGGRAPH Symposium on Geometry Processing (SGP) 2003, pp. 42-51.

[157] Bounded-distortion piecewise mesh parameterization. Olga Sorkine, Daniel Cohen-Or, Rony Goldenthal and Dani Lischinsky. Proceedings of IEEE Visualization 2002, pp. 355-362.

Book contributions

[158] Shell structures for architecture: form finding and optimization. Sigrid Adriaenssens, Philippe Block, Diederik Veenendaal and Chris Williams (editors). Routledge, 2014. Chapter 13: Best-fit thrust network analysis: rationalization of freeform meshes, by Tom Van Mele, Daniele Panozzo, Olga Sorkine-Hornung and Philippe Block, pp. 157–170.

[159] Emerging technologies for 3D video: creation, coding, transmission and rendering. Frederic Dufaux, Béatrice Pesquet-Popescu, Marco Cagnazzo (editors). Wiley, 2013. Chapter 11: Image domain warping for stereoscopic 3D applications, by Oliver Wang, Manuel Lang, Nikolce Stefanoski, Alexander Hornung, Olga Sorkine, Aljoscha Smolic and Markus Gross, pp. 207–230.

Refereed courses and tutorials

[160] Modern approaches to media retargeting. Ariel Shamir, Alexander Hornung and Olga Sorkine. SIGGRAPH ASIA 2012 Courses (curated course).

[161] Visual media retargeting. Ariel Shamir and Olga Sorkine. SIGGRAPH ASIA 2009 Courses.

[162] Tutorial: Interactive shape modeling and deformation. Olga Sorkine and Mario Botsch. Proceedings of EUROGRAPHICS 2009, Tutorials.

[163] State-of-the-art report: Laplacian mesh processing. Olga Sorkine. Proceedings of EUROGRAPHICS 2005, STAR Volume.

Refereed abstracts

[164] Feature-based mesh editing. Qingnan Zhou, Tino Weinkauf and Olga Sorkine. EUROGRAPHICS 2011, Short Papers.

[165] Scalable freeform deformation. Tamy Boubekeur, Olga Sorkine and Christophe Schlick. SIGGRAPH 2007, Technical Sketches.

[166] Non-realistic expressive modeling. Ran Gal, Olga Sorkine, Tiberiu Popa, Alla Sheffer and Daniel Cohen-Or. SIGGRAPH 2006, Technical Sketches.

[167] Warped textures for uv-mapping encoding. Olga Sorkine and Daniel Cohen-Or. EUROGRAPHICS 2001, Short Papers.

Invited publications

[168] How was it made? Rig animation with a tangible and modular input device. Oliver Glauser, Benedek Vartok, Wan-Chun Ma, Daniele Panozzo, Alec Jacobson, Cédric Pradalier, Otmar Hilliges and Olga Sorkine-Hornung. ACM Interactions, vol. 24(2), pp. 16-17, February 2017.

[169] Demo hour: Rig animation with a tangible and modular device. Oliver Glauser, Benedek Vartok, Wan-Chun Ma, Daniele Panozzo, Alec Jacobson, Otmar Hilliges and Olga Sorkine-Hornung. ACM Interactions 24(1), pp. 11, January 2017.

[170] Encoding meshes in differential coordinates. Daniel Cohen-Or and Olga Sorkine. Proceedings of SCCG 2006: the 22nd Spring Conference on Computer Graphics, ACM Press.

Technical reports

[171] Least-squares rigid motion using SVD. Olga Sorkine-Hornung and Michael Rabinovich. Technical note about the Procrustes problem, 2017.

[172] Consistently orienting facets in polygon meshes by minimizing the Dirichlet energy of generalized winding numbers. Kenshi Takayama, Alec Jacobson, Ladislav Kavan and Olga Sorkine-Hornung. Technical report, ETH Zurich, July 2014.

[173] Robust and controllable quadrangulation of triangular and rectangular regions. Kenshi Takayama, Daniele Panozzo, Alexander Sorkine-Hornung and Olga Sorkine-Hornung. Technical report, ETH Zurich, 2013.

[174] A cotangent Laplacian for images as surfaces. Alec Jacobson and Olga Sorkine. Technical report, ETH Zurich, April 2012.

[175] A note on boundary constraints for linear variational surface design. Andrew Nealen and Olga Sorkine. Technical report, TU Berlin, May 2007.

Theses

[176] Olga Sorkine. Laplacian mesh processing. PhD Thesis. Tel Aviv University, 2006.

Press (selection)

10.2019	Bolero, "Lunchdate mit Olga Sorkine-Hornung: Aus der Matrix" by Rahel Zingg.
08.2018	Brigitte Woman, "Technik im Kopf: Die Code-Architektin" by Sabine Hoffmann. Print and online.
05.2018	Women in Business, "25 Frauen, die Sie sich merken sollten". Print and online.
11.2017	Tagesanzeiger, "Die Zahlenkünstlerin" by Simone Luchetta. Print and online.
10.2017	SonntagsZeitung, in "Fokus" by Simone Luchetta. Print and online.
06.2017	ETH News, "Olga Sorkine-Hornung wins Rössler Prize" by Peter Rüegg.
05.2017	Bilanz, "Die Zahlen-Dresseurin" by Philipp Albrecht (Rubrik "Markets: Die Pionierin").
10.2016	Das Magazin, "Kinderleichte Computeranimation" by Mathias Plüss.
09.2016	Schweizer Illustrierte, "Frauenpower an der ETH: Olga Sorkine-Hornung – die Animations-Künstlerin" by Manuela Enggist.
03.2015	ETH Globe Magazine, "Algorithms that capture the imagination" by Roland Baumann.
11.2014	Einstein TV Show on SRF (Swiss Radio and Television), "Zahlenkünstlerin mit Spieltrieb" and "Animationsfilme leicht gemacht". `http://www.srf.ch/sendungen/einstein/ausnahmetalent-animationskunst-affenfroschung`
07.2014	watson.ch, "Filme und Games zu animieren ist eine mühselige Arbeit. Dieser Joystick der ETH macht das Ganze zum Kinderspiel" by Philipp Rüegg.
06.2014	Wired UK, "Animate digital creatures with this pliable modular doll" by Olivia Solon.
06.2014	Gizmag, "3D "Joystick" for animation artists takes shape" by Colin Jeffrey.
06.2014	20 Minuten, "Animations-Figuren im Nu zum Leben erweckt".
06.2014	ETH Life, "A versatile joystick for animation artists" by Angelika Jacobs.
09.2013	Horizonte (Research magazine of the Swiss National Science Foundation and the Swiss Academies of Arts and Sciences). "Schwierigkeiten spielend meistern" by Leonid Leiva.
04.2013	Der Landbote. "Die simpelste Lösung ist immer die beste (Olga Sorkine im Interview)" by Daniel Stehula.
03.2013	nano on 3sat (TV channel in the German-speaking part of Europe), "Die perfekte Formel" by Sabine Olff.
12.2012	ETH Life, "3-D-Technik für besseres Hören" by Peter Rüegg.

10.2012	ETH Life, "Spezieller Preis für Grafikspezialistin" by Peter Rüegg.
08.2012	Swiss Radio DRS 2, "Was die Informatik in Hollywood zu suchen hat" (Folge 5 der Reihe "Grosse Träume der Wissenschaft") by Maya Brändli.
08.2012	ETH Life, "Distinguished talents" by Franziska Schmid. Report on the ERC Starting Grant 2012 winners.
03.2012	Das Magazin, "Ein Tag im Leben" by Birgit Schmid. Print version (10.03.2012) and online.
11.2011	SonntagsZeitung, "Die Herrin der 3-D-Monster" by Simone Luchetta. Print version and online.
11.2011	Game Developer Magazine, "The Game Developer 50" by Brandon Sheffield and Frank Cifaldi. Annual list of top 50 persons who have made a significant impact on the game industry.
09.2011	ETH Life, "Genial in Computergrafik" by Peter Rüegg.
12.2006	TU intern (newspaper of TU Berlin), "Die Kunst, Bilder zu erschaffen"; "Humboldt-Stipendiatin Olga Sorkine will Maschinen das Lernen beibringen" by Christian Hohfeld.

Professional activities

Program and conference chair

2025	Pacific Graphics, conference co-chair
2019	**SIGGRAPH 2019 Technical Papers Chair**
2018	Advanced in Architectural Geometry, technical papers
2017	Pacific Graphics, technical papers
2015	EUROGRAPHICS, technical papers
2013	EUROGRAPHICS, short papers
2012	3DimPVT, technical papers
2011	Shape Modeling International, technical papers
2010	Eurographics Symposium on Geometry Processing, technical papers
2010	ECCV Workshop on Media Retargeting

Editorial board member (associate editor)

2016 – 2020	ACM Transactions on Graphics
2015 – 2018	IEEE Transactions on Visualization and Computer Graphics
2011 – 2015	IEEE Computer Graphics and Applications
2010 – 2013	Computer Graphics Forum (Wiley-Blackwell)
2010 – 2015	Graphical Models (Elsevier)
2009 – 2015	The Visual Computer (Springer)
2008 – 2014	Computers & Graphics (Elsevier)

Service on professional committees

2024 – present	Member of the SATW Wahlkommission, the election committee of the Swiss Academy of Engineering Sciences
2023 – present	Member of the Eurographics Technical Awards Committee
2023 – 2028	Member of the Scientific Advisory Board of the Max Planck Institute for Informatics
2023 – present	Member of the Heidelberg Laureate Forum (ACM HLF) Young Researcher Selection Committee
2022	Member of the KAUST Visual Computing Center evaluation committee
2017 – 2022	Member of the **ACM Turing Award Committee** Served as Vice-Chair for 2019 and Chair for 2020
2018 – 2020	Member of the ACM SIGGRAPH Awards Committee
2018 – present	Member of the Media Technology Center Steering Committee
2012 – 2017	Member of the EUROGRAPHICS Executive Committee

Service on grant panels

2023	ERC Consolidator Grant panel
2009	NSF FODAVA panel

Service on misc. advisory boards

2024-2025	EUROGRAPHICS 2024 Technical Papers Advisory Board
2022 – 2023	SIGGRAPH 2023 Technical Papers Advisory Board
2021 – 2022	SIGGRAPH 2022 Technical Papers Advisory Board
2021	SIGGRAPH ASIA 2021 Technical Papers Advisory Board
2021 – present	ACM SIGGRAPH Papers Advisory Group (PAG)
2020 – 2021	SIGGRAPH 2021 Technical Papers Advisory Board

2020	SIGGRAPH ASIA 2020 Technical Papers Advisory Board
2019	SIGGRAPH ASIA 2019 Technical Papers Advisory Board
2016 – 2019	Advanced Innovation Center for Future Visual Entertainment, Beijing Film Academy

Event organization

2021	SketchDL, CVPR 2021 Workshop on Sketch-Oriented Deep Learning (with Peng Xu and others)
2018	Fields Institute Workshop on Robust Geometric Algorithms for Computational Fabrication (with Alec Jacobson and Alla Sheffer)
2013	Dagstuhl Seminar "Real-World Visual Computing" (with Marcus Magnor, Oliver Grau and Christian Theobalt)
2010	ECCV Workshop on Media Retargeting (with Thomas Deselaers and Alexander Hornung)

Program committee member

SIGGRAPH, technical papers: 2008, 2009, 2011, 2012, 2014, 2017, 2018 (PC and sorter), 2019 (chair), 2021, 2024 (sorter)

SIGGRAPH ASIA, technical papers: 2010, 2017 (sorter)

EUROGRAPHICS, technical papers: 2007, 2008, 2011, 2012, 2014, 2015 (co-chair)

EUROGRAPHICS, short papers: 2008, 2009, 2013 (co-chair)

Eurographics Symposium on Geometry Processing: 2008–2018 (2010 co-chair), 2020–2024

Pacific Graphics, technical papers: 2007, 2008, 2011–2013, 2017 (co-chair)

ACM Symposium on Interactive 3D Graphics and Games (I3D): 2010–2013

ACM/SIAM Symposium on Solid and Physical Modeling: 2008–2013

Shape Modeling International: 2008, 2009, 2011 (co-chair), 2013

SIBGRAPI, technical papers: 2009, 2011, 2012

SIGGRAPH, sketches & posters: 2007

SIGGRAPH ASIA, sketches & posters 2008 (advisory board), 2009

SIGGRAPH, Student research competition Jury: 2010

International Symposium on Sketch-based Interfaces and Modeling: 2010, 2012, 2013

3D Data Processing, Visualization and Transmission (3DPVT): 2008, 2010, 2012 co-chair

CVPR Workshop on Non-rigid Shape Analysis and Deformable Image Alignment: 2010, 2011

Geometric Modeling and Processing (GMP): 2012

ICSE Workshop on Games and Software Engineering: 2012

Computer Animation and Social Agents (CASA): 2008

International Symposium on Visual Computing (ISVC): 2009, 2010

Asia-Pacific Signal and Information Processing Association (APSIPA): 2009

IADIS International Conference on Computer Graphics and Visualization: 2007, 2008

Reviewer

Journals:	ACM Transactions on Graphics, IEEE Transactions on Visualization and Computer Graphics, IEEE Computer Graphics and Applications, IEEE Transactions on Systems Man & Cybernetics, IEEE Transactions on Circuits and Systems for Video Technology, Computer Graphics Forum, Computers & Graphics, The Visual Computer, Graphical Models, Computer Aided Geometric Design, Computer Aided Design, Journal of Computational Physics.

Conferences:	SIGGRAPH, SIGGRAPH ASIA, EUROGRAPHICS, EUROGRAPHICS/ACM SIGGRAPH Symposium on Geometry Processing, EUROGRAPHICS Symposium on Rendering, EUROGRAPHICS/ACM SIGGRAPH Symposium on Computer Animation, Pacific Graphics, IEEE Visualization, Shape Modeling International, Symposium on Interactive 3D Graphics and Games, Point-based Graphics, ACM Solid and Physical Modeling Symposium, Geometric Modeling and Processing, Computer Graphics International, Afrigraph, SIBGRAPI, Computer Animation and Social Agents.
Grants:	National Science Foundation (USA), Israel Science Foundation, Swiss National Science Foundation, European Research Council, Austrian Science Fund, Research Grants Council (RGC) of Hong Kong.

Keynote talks

09.2024	Vision, Modeling and Visualization (VMV) 2024, Munich, Germany.
06.2024	DLGC@CVPR 2024, the CVPR Workshop on Deep Learning for Geometric Computing. Seattle, USA.
03.2023	SIAM International Meshing Roundtable 2023, Amsterdam, Netherlands.
09.2021	SIAM Conference on Geometric and Physical Modeling (GD/SPM) 2021, virtual.
09.2021	Geometry Workshop Obergurgl 2021, Obergurgl, Austria.
05.2021	Graphics Interface 2021, virtual.
06.2020	International Symposium on Computational Geometry (SoCG) 2020, virtual.
09.2019	Design Modelling Symposium 2019, Berlin, Germany.
07.2018	Symposium on Geometry Processing 2018, Paris, France.
11.2017	Symposium on Geometry and Computational Design 2017, Vienna, Austria.
06.2017	International Conference on Computational Science 2017, Zurich, Switzerland.
09.2014	ECCV Workshop on Non-Rigid Shape Analysis and Deformable Image Alignment (NORDIA) 2014, Zurich, Switzerland. "Interactive mesh deformation with reality-inspired constraints".
09.2013	Vision, Modeling and Visualization (VMV) 2013, Lugano, Switzerland. "Reality-inspired constraints for shape modeling and editing".
06.2013	Computer Graphics International 2013, Hannover, Germany. "Challenges in interactive mesh modeling".
05.2013	EUROGRAPHICS 2013, Girona, Spain. "Interactive shape modeling: progress and challenges".
12.2012	European Conference on Media Production (CVMP) 2012, London, UK. "Really real-time 3D shape modeling and animation".
05.2012	Spring Conference on Computer Graphics (SCCG) 2012, Smolenice, Slovakia. "Really real-time mesh editing".
07.2010	Euroscience Open Forum 2010, Turin, Italy. "Shape spaces: representation, interpolation and editing of 3D objects".
10.2009	SIBGRAPI 2009, Rio de Janeiro, Brazil. "Modeling and editing shapes: from local structure to high-level features".
02.2007	Imagina'07, Monte Carlo, Monaco. "Geometric manipulation in shape and image domain".

Invited talks, conference presentations and seminars (external)

08.2022	50th Anniversary Celebration of the Computer Science Department at TU Dortmund, Germany: "Interactive 3D modeling and digital fabrication using computation-friendly variational methods".
11.2020	3DGV: Seminar on 3D Geometry & Vision (virtual, https://3dgv.github.io/): "Shape deformation for 3D modeling and learning".
10.2020	Toronto Geometry Colloquium (virtual, https://toronto-geometry-colloquium.github.io/): "Discrete developable surfaces: 3D shapes from 2D sheets".

10.2019	Berlin Brandenburg Academy of Sciences and Humanities, Berlin, Germany. Public lecture and podium discussion: "Virtuelle Welten – zwischen Wissenschaft, Kunst und Unterhaltung", together with Markus Gross.
10.2019	Peking University, Center on Frontiers of Computing Studies, School of Electronics Engineering and Computer Science, Beijing, China.
06.2019	Oxford Women in CS Distinguished Seminar Series at University of Oxford, UK.
11.2017	Invited talk at Google Zurich.
10.2014	Colloquium of the School of Computer and Communication Sciences (IC) at EPFL, Lausanne, Switzerland (invited talk). "3D shape modeling, animation and fabrication using computation-friendly variational methods ".
06.2014	Mathematical Institute, University of Graz, Austria (invited talk). "Reality-inspired constraints for shape modeling and editing".
03.2014	IMAGINE research seminar, INRIA Rhône-Alpes, Grenoble, France (invited talk). "Reality-inspired constraints for shape modeling and editing".
01.2014	French-German Mathematical Image Analysis Conference, Institut Henri Poincaré. Paris, France (invited talk). "Variational warping for multi-image editing".
11.2013	Discrete Curvature: Theory and Applications, workshop at Centre International de Rencontres Mathématiques, Marseille, France (invited talk). "Reality-inspired constraints for shape modeling".
06.2013	Adidas, Herzogenaurach, Germany (invited talk). "Research at the Interactive Geometry Lab".
05.2013	Max Planck Institute for Intelligent Systems, Tuebingen, Germany (invited talk). "Interactive shape modeling: progress and challenges".
03.2013	Symposium Innovative und interdisziplinäre Arbeitswelten, Novartis Campus Basel, Switzerland (invited talk). "Digital 3D modeling and animation: from physical to virtual desktop and back".
11.2012	SIGGRAPH ASIA, Singapore. "Modern approaches to media retargeting" (invited half-day course, together with Alexander Hornung and Ariel Shamir).
06.2012	Berlin Colloquium for Scientific Visualization, Freie Universität Berlin, Germany (invited talk). "Fast shape deformation using skinning".
03.2012	Phonak AG, Stäfa, Switzerland (invited talk). "Interactive real-time shape modeling with irregular meshes using variational techniques".
12.2011	SIGGRAPH ASIA, Hong Kong. "How to write a serious SIGGRAPH paper and get away with it", invited speaker at the special course "How to write a SIGGRAPH paper".
11.2011	LiberoVision AG, Zurich, Switzerland (invited talk). "Research at the Interactive Geometry Lab".
11.2011	ETH Zurich, Switzerland. Inaugural lecture: "Modeling and animation of digital shapes".
08.2011	SIGGRAPH, Vancouver, Canada. Award talk: "Shape modeling in scale: from local to global".
08.2011	Pixar Animation Studios, Emeryville, USA (invited talk). "bounded biharmonic weights for skinning deformations".
05.2011	FMX 2011, Stuttgart, Germany (invited talk). "GeoBrush: interactive mesh geometry cloning".
02.2011	MFO Workshop "Trends in Mathematical Imaging and Surface Processing", Oberwolfach, Germany (invited talk). "Smooth weights for real-time shape deformation".
10.2010	MIT Graphics Group annual retreat, Boston, USA (invited talk). "GeoBrush: interactive mesh geometry cloning".
07.2010	SIGGRAPH, Los Angeles, USA. "Motion-based video retargeting with optimized crop-and-warp".
05.2010	RWTH Aachen, Germany (invited talk). "Topology-based smoothing of 2D scalar fields with C^1-continuity".
12.2009	SIGGRAPH ASIA, Yokohama, Japan. "Half-day course: Visual media retargeting".

07.2009	Disney Research/ETH Zurich, Switzerland (invited talk). "iWires: an analyze-and-edit approach to shape manipulation".
04.2009	Adobe Systems, Boston, USA (invited talk). "iWires: an analyze-and-edit approach to shape manipulation".
04.2009	Massachusetts Institute of Technology, Boston, USA (invited talk). "iWires: an analyze-and-edit approach to shape manipulation".
03.2009	EUROGRAPHICS Conference, Munich, Germany. "Tutorial: Interactive shape modeling and deformation".
12.2008	Workshop on City Modeling, Simulation and Visualization, Shenzhen, China. "Optimized scale-and-stretch for image resizing".
11.2008	Princeton University, USA (invited talk). "Optimized scale-and-stretch for image resizing".
09.2008	University of Zaragoza, Spain (invited talk). "Optimized scale-and-stretch for image resizing".
06.2008	University of Konstanz, Germany (invited talk). "The art and science of skeletal shape defomation".
04.2008	University of Magdeburg, Germany (invited talk). "Context-aware skeletal shape deformation".
02.2008	Universitat Politècnica de Catalunya, Barcelona, Spain (invited talk). "Interfaces and algorithms for the creation and animation of surface meshes".
08.2007	University of Montreal, Canada. " Interfaces and algorithms for the creation and editing of surface meshes".
07.2007	EUROGRAPHICS/ACM SIGGRAPH Symposium on Geometry Processing, Barcelona, Spain. "As-rigid-as-possible surface modeling".
11.2006	ETH Zurich, Switzerland. "Feature-aware texturing and 3D collages".
10.2006	Helsinki University of Technology, Finland (invited talk). "Linear rotation-invariant coordinates".
08.2006	Max-Planck-Institut für Informatik, Saarbrücken, Germany (invited talk). "Feature-aware texturing and 3D collages".
07.2006	SIGGRAPH Conference, Boston, USA. "Color harmonization".
10.2005	The University of Tokyo, Japan (invited talk). "Laplacian mesh processing".
09.2005	EUROGRAPHICS Conference, Dublin, Ireland (State-of-the-art report). "Laplacian mesh processing".
01.2005	Tel Hai Academic College, Israel (invited talk).
07.2004	EUROGRAPHICS/ACM SIGGRAPH Symposium on Geometry Processing, Nice, France. "Laplacian surface editing".
06.2004	International Conference on Shape Modeling and Applications, Genoa, Italy. "Least-squares meshes".
07.2003	Max-Planck-Institut für Informatik, Saarbrücken, Germany. "Ray space factorization for from-region visibility".
06.2003	EUROGRAPHICS/ACM SIGGRAPH Symposium on Geometry Processing, Aachen, Germany. "High-pass quantization for mesh encoding".
06.2003	Center for Graphics and Geometric Computing Seminar, Israel Institute of Technology (Technion). "High-pass quantization for mesh encoding".
02.2003	The 4th Israel-Korea Bi-National Conference on Geometric Modeling and Computer Graphics, Tel Aviv, Israel. "Bounded-distortion piecewise mesh parameterization".
12.2002	Center for Graphics and Geometric Computing Seminar, Israel Institute of Technology (Technion). "Ray space factorization for from-region visibility".
10.2002	IEEE Visualization Conference, Boston, USA. "Bounded-distortion piecewise mesh parameterization".
10.2002	Massachusetts Institute of Technology, Boston, USA (invited talk). "Ray space factorization for from-region visibility".
10.2002	Princeton University, USA (invited talk). "Ray space factorization for from-region visibility".

09.2002	WSI/GRIS, University of Tübingen, Germany (invited talk). "Bounded-distortion piecewise mesh parameterization".
09.2002	Max-Planck-Institut für Informatik, Saarbrücken, Germany. "Bounded-distortion piecewise mesh parameterization".
09.2002	RWTH Aachen, Germany (invited talk). "Ray space factorization for from-region visibility".
08.2002	AT&T Research Labs at Florham Park, USA. "Bounded-distortion piecewise mesh parameterization".
08.2002	State University of New York at Stony Brook, USA (invited talk). "Bounded-distortion piecewise mesh parameterization".
09.2001	EUROGRAPHICS Conference, Manchester, England. "Warped textures for uv-mapping encoding".

Extended research visits and collaborations (selection)

06.2012 – 07.2012	Freie Universität Berlin, Germany Prof. Konrad Polthier Digital shape analysis
11.2009	REVES/INRIA Sophia-Antipolis, France Dr. George Drettakis Image based rendering
07.2009	ETH Zurich and Disney Research Zurich, Switzerland Dr. Alexander Hornung and Prof. Markus Gross Media retargeting
09.2008	University of Zaragoza, Spain Prof. Diego Gutierrez Reverse tone mapping
06.2007	REVES/INRIA Sophia-Antipolis, France Dr. Sylvain Lefebvre and Dr. George Drettakis Interactive image editing
11.2006	ETH Zurich, Switzerland Dr. Mario Botsch and Prof. Markus Gross Variational deformation methods
08.2005 – 10.2005	Microsoft Research Asia (Beijing), internship in the Internet Graphics Group Dr. Baining Guo and Dr. Ying-Qing Xu Color harmonization
07.2005	Imager Laboratory, University of British Columbia, Canada Prof. Alla Sheffer and Tiberiu Popa Expressive non-realistic modeling of 3D collages
07.2004	Discrete Geometric Modeling Group, Technishe Universität Darmstadt, Fraunhofer Institute, Germany Prof. Marc Alexa and Andrew Nealen Interactive shape editing
07.2003 – 09.2003	Max-Planck-Institut für Informatik, Germany Prof. Hans-Peter Seidel and Dr. Christian Rössl Feature-sensitive surface representation and editing

09.2002	Max-Planck-Institut für Informatik, Germany Prof. Alexander Belyaev and Prof. Hans-Peter Seidel Surface parameterization

Associations

2014 – present	Member of ACM. ACM Fellow as of 2020.
2012 – present	Member of the ETH Women Professors Forum.
2007 – present	Member of ACM SIGGRAPH.
2007 – present	Member of Eurographics. Fellow of the Eurographics Association as of 2015.

Languages

Hebrew, English, Russian, German, basic French.

Hobbies

Hiking, knitting, chocolate and patisserie, INGVERIT.