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# MARCO TARINI

## CURRICULUM VITAE

(Last update: June 25, 2019)

### Electronic version of this document:

<http://tarini.di.unimi.it/cv.pdf>

## Index

<b>1</b>	<b>Positions</b>	<b>2</b>
1.1	Current position . . . . .	2
1.2	Past positions . . . . .	2
1.3	Visiting professor . . . . .	2
1.4	Italian Habilitations . . . . .	3
<b>2</b>	<b>Education</b>	<b>3</b>
<b>3</b>	<b>Research</b>	<b>3</b>
3.1	Research interests . . . . .	3
3.2	Awards . . . . .	3
3.3	Talks and seminars . . . . .	4
3.4	Reviewing and organizational experience . . . . .	5
3.4.1	Journal Editorial Board . . . . .	5
3.4.2	Conference Organization / Chair . . . . .	5
3.4.3	Conference IPC / TPC . . . . .	6
3.4.4	Conference Organization / Other . . . . .	7
3.4.5	Reviewer . . . . .	7
3.5	Publications (selected) . . . . .	7
3.5.1	Bibliometric measures . . . . .	11
3.5.2	Affiliations of coauthors . . . . .	11
3.6	Main participated funded projects . . . . .	12
3.7	Open-Source developer . . . . .	12
<b>4</b>	<b>Teaching</b>	<b>13</b>
4.1	Courses . . . . .	13
4.2	PhD Programs . . . . .	15
4.3	Theses and PhD Supervisor / Jury . . . . .	15
<b>5</b>	<b>Etc</b>	<b>16</b>
5.1	Authored games . . . . .	16
5.2	Other skills and extracurricular interests . . . . .	16

# 1 Positions

## 1.1 Current position

- 01/01/2018 - *present*: **Associate Professor** (tenured)  
Università degli Studi di Milano (“La Statale”) (Italy).  
Department of Informatics Giovanni Degli Antoni.  
(It.: *Professore Associato* - SSD: INF/01 Informatica - SC: 01/B1)

## 1.2 Past positions

- 1/09/2016 - 31/12/2017: **Associate Professor** (tenured)  
Università degli Studi dell’Insubria (Varese, Italy).  
Department: DiSTA (Dept. of Theoretic and Applied Sciences).  
(It.: *Professore Associato* - SSD: INF/01 Informatica - SC: 01/B1 - Concorso: Mar 2016)
- 1/05/2004 - 31/12/2018: **Research Associate** (scientific collaboration contract)  
ISTI-CNR (Istituto di Scienze e Tecnologie dell’Informazione - National Research Council)  
Visual Computing Laboratory (led by Roberto Scopigno and Claudio Montani).  
Contracts: 2004-2006, 2006-2007, 2007-2008, 2009-2012, 2013-2014, 2014-2016, 1/1/2017-31/12/2017  
1/1/2018-31/12/2018  
(It.: “*Ricercatore Esterno*” in 2004-2006, “*Associato alla Ricerca*” after 2006).
- 1/03/2005 - 31/08/2016: **Assistant Professor** (faculty member)  
Università degli Studi dell’Insubria (Varese, Italy).  
Department: DiSTA (Dept. of Theoretic and Applied Sciences);  
formerly (before 2010) DICOM (Dept. of Informatics and Communication Sciences).  
(It.: *Ricercatore Universitario* - SSD: INF/01 Informatica - SC: 01/B1 - Concorso: Gen 2004 - confer-  
mato in ruolo 19/01/2009 con D.R. n. 14119)
- 05/2004 - 02/2005: **Researcher** (fixed-term contract).  
DICOM (Dept. of Informatics and Communication Sciences), Varese, Italy.  
(It.: *Contratto di Ricerca*) .
- 03 - 10/2001: **Researcher - Marie Curie Research Fellow** (research grant).  
Computer Graphics Group  
Max Plank Institute für Informatic, Saarbrücken, Germany.
- 08/1998 - 10/1998: **Researcher** (fixed-term contract).  
CNUCE-CNR (Centro Nazionale Univ. di Calcolo Elettronico - National Research Council, Pisa, Italy).  
(It.: *contratto di collaborazione co. co.*)
- 07/1997 - 09/1997: **Developer** (employee).  
Voxar Ltd (Edinburgh, UK);  
Graphical library developer. Game Designer and Developer.

## 1.3 Visiting professor

- 10/2018 - 12/2018: **UTS** - University of Technology Sydney - NSW, Australia  
at: Faculty of Engineering and Information Technology, School of Software
- 02/2018 - 04/2018: **NYU** - New York University - NY, USA  
at: Courant Institute of Mathematical Sciences, Geometric Computing Lab
- 01/2017 - 04/2017: **UVic** - University of Victoria - BC, Canada  
at: Dept of Computer Science, Faculty of Engineering, Graphics Lab

## 1.4 Italian Habilitations

(by Italian Ministry of University and Research (MIUR)- Italian law n. 240/2010, art. 16)

- 09/05/2019 - 09/05/2025: Habilitation as **full professor**, Computer Science (01/B1).
- 04/04/2017 - 04/04/2023: Habilitation as **full professor**, Information Elaboration System (09/H1).

## 2 Education

- 07/2003: **PhD in Computer Science**. - Università degli Studi di Pisa.  
Dissertation: “*Improving technology for the acquisition and interactive rendering of real world objects*”.  
Supervisors: Dr. Roberto Scopigno (ISTI-CNR) and Dr. Claudio Montani (ISTI-CNR).  
Jury: Prof. Marc Levoy (Stanford University) and Prof. Hans-Peter Seidel (MPI-Saarbrücken).
- 06/1998: **Computer Science Master Degree** - Università degli Studi di Pisa.  
(It.: *Laurea in Informatica*) - 5 years course - 110/110 cum Laude
- 10/1996 - 10/1997: **Erasmus Program** - University of Edinburgh.  
Computer Science Dept and Artificial Intelligence Dept.

## 3 Research

### 3.1 Research interests

- **Computer Graphics:**
  - Geometry Processing  
(especially: Surface and Volume Representations, Remeshing, Parameterization, Optimization)  
[J6, C10, T26, T25, T24, T22, T19, T20, T17, T15, T18, E1, T14, T12, T11, T10, T9, T7, T6, T3, J1, C8, C4, J1];
  - Real Time Rendering [T27, J6, E2, T20, E1, C9, T13, J5, T5, T4, T3, T2, J4, J2, J1, T1, C5];
  - Real World 3D Model Acquisition and Fabrication [T23, T21, T16, T9, S4, J3, S2, C7, C3, C2, C1];
  - Pictures and Image Based Rendering / Modelling [J5, T8, S4, J1, S5, C1];
  - Computer Animations [T13, T12];
- and its **Applications:**
  - Video Games technologies [T25, T19, E2, T13, T1, T4, J4, J1, T1];
  - Cultural Heritage support (virtual museums, restoration support) [B1, J5, T2, S4];
  - Virtual and Augmented Reality [T16, J5, S5, C2];
  - Info and Scientific Visualization (esp. Molecular Graphics) [J6, T5, J2, C6].

### 3.2 Awards

- **SGP Software Award 2017** for MeshLab (see 3.7). Awarded by the Geometry Processing community to “*outstanding software projects [...] in order to feature some of the scientific highlights and breakthroughs in the field and to promote the reproducibility of research results*” (co-recipient of the award, with other MeshLab developers).

- **Eurographics Young Researcher Award 2006**

awarded by Eurographics, European Association for Computer Graphics “in recognition of his outstanding contributions to Computer Graphics”.

From the award text: “Marco is a prolific researcher who contributed to several areas within graphics, such as real time rendering, 3D acquisition techniques and visualization. [...] Eurographics is pleased to recognize Marco Tarini with the 2006 Young Researcher Award as an outstanding individual who will continue to shape Computer Graphics in the years to come”.

- **Computer and Graphics Top Cited Article 2005-2010** awarded by ELSEVIER, Nov 2010.
- **Best Paper Award 2005** - 1st place, Computer and Graphics (ELSEVIER); paper [J2]
- **Marie Curie Mobility Fellowship** (Research Training Grant) (Mar-Oct 2001).
- **Best Student Paper Award 2000**; for the article [T1].

### 3.3 Talks and seminars

- **Invited Presentations** (selected)
  - 14/12/2018: “Surface parametrization revisited for computational fabrication.” Faculty of Engineering & IT, UTS - University of Technology Sydney
  - 21/11/2018: “Online visualization of hexahedral meshes” Visualization Matters 2018, <http://visualisation.matters.today/2018/> UNSW - University of New South Wales, Sydney
  - 9/2/2017: “Applications of recent advancements in Geometry Processing.” DGP Group (Alla Shaffer), UBC - University of British Columbia, Canada
  - 22/10/2014: “Fun with the Graphics processing unit.” Eurographics Conference for Smart Tools and Apps for Graphics - keynote, Università di Cagliari, Italy <http://vcg.isti.cnr.it/stag/program.html>
  - 30/05/2014: “Rendering of animated characters in videogames.” Master Game Dev Day - opening talk, Università di Verona, Italy <http://www.mastergamedev.it/master-game-day/>
  - 04/11/2011: “Recent Trends in Surface Parameterization Design.” Interactive Geometry Lab (Olga Sorkine-Hornung), ETH Zürich, Switzerland <http://igl.ethz.ch/events/2011-11-04/>
  - 16/02/2010: “Attempting a seamless parametrization of everything, failing, and getting away with it.” Vision Learning Graphics group (Denis Zorin), New York University, USA
  - 14/07/2008: “Scientific Visualization of Molecular Structures.” TU Clausthal (Clausthal University of Technology), Germany
  - 26/04/2007: “Non Photorealistic Visualization of Molecules.” 3D.Computer.Graphics@ing, Dipartimento di Informatica e Sistemistica, Università di Roma “La Sapienza”, Italy
  - 20/04/2007: “3D Scanning and Parametrization.” Institut für Computergraphik und Algorithmen (Werner Purgathofer) Technische Universität Wien, Austria
  - 09/02/2006: “3D Scanning Technologies applied to Cultural Heritage” 3D.Computer.Graphics@ing (Marco Schaerf) Dipartimento di Informatica e Sistemistica Università di Roma “La Sapienza”, Italy
  - 24/09/2004: “Automatic Simplification and Hi-Freq Feature Preservation for Complex 3D Models.” VII SIMAI Congress, Italian Society for Applied and Industrial Mathematics, SIMAI, Venice, Italy.
- **Conference Speaker / Chair** (selected)  
(In each case, the presentation title matches the cited publication).

- 08/05/2019: EUROGRAPHICS - Annual Conf. of the Eu. Assoc. for Comp. Graphics - *speaker, presenting* [T27] - Genova, Italy, US
- 27/07/2016: ACM SIGGRAPH - *speaker, presenting* [T20] - Anaheim, California, US
- 10/04/2014: EUROGRAPHICS - Annual Conf. of the Eu. Assoc. for Comp. Graphics - *speaker, presenting* [T13] - Strasbourg, France
- 08/05/2013: EUROGRAPHICS - Annual Conf. of the Eu. Assoc. for Comp. Graphics - *session chair*. ("Shape Construction" session) - Girona, Spain
- 15/05/2012: EUROGRAPHICS - Eurographics State of The Art Program - *speaker, presenting* [C8] - Cagliari, Italy - then, 16/05/2012: *session chair*
- 12/12/2011: ACM SIGGRAPH ASIA - *speaker, presenting* [T10] - Hong Kong, PRC
- 09/05/2011: EUROGRAPHICS - Annual Conf. of the Eu. Assoc. for Comp. Graphics - *speaker, presenting* [T7] - Norrköping, Sweden
- 01/11/2006: VIS - IEEE Visualization conf. - *speaker, presenting* [T5] - Baltimore, Maryland, USA
- 30/08/2005: EUROGRAPHICS - Annual Conf. of the Eu. Assoc. for Comp. Graphics - *speaker, presenting* [T4] - Dublin, Ireland
- 10/08/2004: ACM SIGGRAPH - *speaker, presenting* [T3] - Los Angeles, California, USA
- 23/10/2003: VIS - IEEE Visualization conf. - *speaker, presenting* [C4] - Seattle, Washington, USA
- 21/11/2002: VMV - Workshop on Vision, Modeling and Visualization - *speaker, presenting* [C3] - Erlangen, Germany
- 25/07/2002: ACM SIGGRAPH - *speaker, presenting* [S2] - San Antonio, Texas, USA
- 28/05/2002: GI - Conf. on Human-Computer Interaction and Computer Graphics - *speaker, presenting* [C2] - Calgary, Alberta, Canada
- 22/11/2000: VMV - Workshop on Vision, Modeling and Visualization - *speaker, presenting* [C1] - Erlangen, Germany
- 20/08/2000: EUROGRAPHICS - Annual Conf. of the Eu. Assoc. for Comp. Graphics - *speaker, presenting* [T1] - Interlaken, Switzerland

### 3.4 Reviewing and organizational experience

#### 3.4.1 Journal Editorial Board

- 09-2017 - *present*: Elsevier Computer and Graphics (Associate Editor);
- 2016: Elsevier Computer and Graphics (Special Issue Guest Editor);
- 2013 - 2015: Journal of Graphic Tools (Associate Editor).

#### 3.4.2 Conference Organization / Chair

- 2019: Conference co-chair of **Symposium of Graphic Processing** [link]  
Milan, 2019
- 2019: Education Program co-chair of **EUROGRAPHICS** [link]  
Genova, 2019
- 2015: Program co-chair of STAG2015 - 7th Italian Chapter Conference - Smart Tools and Apps in computer Graphics [link]  
Venue: Verona, October 15,16 2015  
Proceedings: ISBN: 978-3-905674-97-2. Editors: Silvia Biasotti, Andrea Giachetti, Marco Tarini.

### 3.4.3 Conference IPC / TPC

International Program Committee / Technical Program Committee member of: (selected)

- PG 2019: Pacific Graphics: 27th annual international conference on computer graphics and applications;
- SGP 2018: 15th Symposium on Geometry Processing; (accepted papers published in Journal: Computer Graphics Forum);
- EUROGRAPHICS 2017: 37th Annual Conference of the European Association for Computer Graphics (accepted papers published in Journal: Computer Graphics Forum);
- SGP 2017: 15th Symposium on Geometry Processing; (accepted papers published in Journal: Computer Graphics Forum);
- SIGGRAPH ASIA 2016: The 10th ACM SIGGRAPH conference and exhibition on computer graphics and interactive techniques in Asia (accepted papers published in Journal: ACM Transactions of Graphics);
- EUROGRAPHICS 2016: 36th Annual Conference of the European Association for Computer Graphics (accepted papers published in Journal: Computer Graphics Forum);
- SMI 2016: Shape Modeling Intrational; (accepted papers published in Computer & Graphics Journal, Elsevier);
- SGP 2016: 14th Symposium on Geometry Processing; (accepted papers published in Journal: Computer Graphics Forum);
- EUROGRAPHICS 2016 STAR: State of The Art Program (accepted papers published in Journal: Computer Graphics Forum);
- CGI 2015 - Computer Graphics International
- ICIAP 2015: 18th International Conference on Image Analysis and Processing
- CAD/Graphics 2015: The 14th International Conference on Computer-Aided Design and Computer Graphics (accepted papers published in Computers and Graphics Journal - Elsevier);
- GRAPP 2014: International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications
- ISVC 2014: 10th International Symposium on Visual Computing
- CAD/Graphics 2013: 13th International Conference on Computer-Aided Design and Computer Graphics (accepted paper published in Computers and Graphics Journal - Elsevier);
- ISVC 2013: 9th International Symposium on Visual Computing
- EUROGRAPHICS 2013: 33rd Annual Conference of the European Association for Computer Graphics (accepted full papers published in Journal: Computer Graphics Forum);
- EUROGRAPHICS 2012: 32nd Annual Conference of the European Association for Computer Graphics (accepted full papers published in Journal: Computer Graphics Forum);
- GMP 2012: Biannual International Conference on Geometric Modeling and Processing (accepted papers published in Journal: Computer Aided Geometric Design and Graphical Models);
- PACIFIC GRAPHICS 2012: 20th Pacific Conference on Computer Graphics and Applications (accepted full papers published in Journal: Computer Graphics Forum);

- EUROGRAPHICS 2011 Short Paper Track;
- EUROGRAPHICS 2010 Short Paper Track;
- GRAPP 2010: International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications;
- WSCG 2010: International Conferences in Central Europe on Computer Graphics, Visualization and Computer Vision;
- VRIPHYS 2010: Workshop on Virtual Reality Interaction and Physical Simulation;
- VRIPHYS 2009: Workshop on Virtual Reality Interaction and Physical Simulation;
- VRIPHYS 2008: Workshop on Virtual Reality Interaction and Physical Simulation;
- VRIPHYS 2007: Workshop on Virtual Reality Interaction and Physical Simulation;
- VRIPHYS 2006: Workshop on Virtual Reality Interaction and Physical Simulation;
- VRIPHYS 2005: Workshop on Virtual Reality Interaction and Physical Simulation.

#### 3.4.4 Conference Organization / Other

- 2019: chair of Best Paper Award committee - EUROGRAPHICS, 2019 [link]
- 2018: member of Best Paper Award committee - SGP, 2018

#### 3.4.5 Reviewer

2000 - *present*: continued service as reviewer for all the main International Journals and Conferences of the field, including, but not limited to:

ACM-SIGGRAPH (every edition, 2004-2019); ACM-SIGGRAPH Asia [SIGASIA]; ACM Trans. on Graphics [TOG]; IEEE Transactions on Visualization and Computer Graphics [TVCG]; Eurographics [EG]; IEEE Visualization [IEEE-VIS]; Comp. Graph. Forum [CGForum]; ACM Journal on Computing and Cultural Heritage [JOCCH]; Graphical Models [GMOD]; Elsevier Computers And Graphics [CAG]; Pacific Conf. on Comp. Graph. and App. Pacific Graphics [PC]; Computer Graphics, Visualisation & Computer Vision [WSCG]; International Conference on 3-D Digital Imaging and Modeling [3DIM]; IEEE Eurographics Working Group on Data Visualization [EUROVIS]; Joint EUROGRAPHICS - IEEE TCVG Symp. on Visualization [VisSym]; Winter School of Computer Graphics [WSCG]; EG/ACM Symp. on Geometry Processing [SGP]; Eurographics Workshop on Rendering [EGWR]; American Symp. on Computer Graphics [SIBGRAPI/SIACG]; International Journal of Computers Applications; International Journal of Image and Graphics [IJIG].

### 3.5 Publications (selected)

Symbols:

[T-]: full papers in Top-Tier International Peer Reviewed Journals, i.e.:

**Top 3** Journals of the Computer Graphics field, according to Google Scholar [link]  
(Italian ANVUR classification: class **A**);

[J-]: full papers in other International Peer-Reviewed Journals;  
(Italian ANVUR classification: classes **A** and **B**);

[C-]: full papers in International Conference proceedings (peer reviewed);

[S-]: short papers and posters in International Conference proceedings (peer reviewed);

[B-]: book chapters;

[E-]: course notes, editorials, etc.

- [T27] Cem Yuksel, Sylvain Lefebvre, Marco Tarini:  
*Rethinking texture mapping*  
**Computer Graphics Forum** - issn::1467-8659, 38 (2), 535-551, 2019
- [T26] Nico Schertler, Stefan Gumhold, Daniele Panozzo, Marco Tarini:  
*Generalized motorcycle graphs for imperfect quad-dominant meshes*  
**ACM Transactions on Graphics** - issn:0730-0301 - (SIGGRAPH), 37 (4), 155 - 2018
- [T25] Roi Poranne, Marco Tarini, Sandro Huber, Daniele Panozzo, Olga Sorkine-Hornung:  
*Autocuts: Simultaneous Distortion and Cut Optimization for UV Mapping*  
**ACM Transactions on Graphics** - issn:0730-0301 - (SIGGRAPH ASIA), 36 (6) - 2017
- [T24] Baptiste Angles, Marco Tarini, Brian Wyvill, Loïc Barthe, Andrea Tagliasacchi:  
*Sketch-based Implicit Blending*  
**ACM Transactions on Graphics** - issn:0730-0301 - (SIGGRAPH ASIA), 36 (6) - 2017
- [T23] Nico Pietroni, Marco Tarini, Amir Vaxman, Daniele Panozzo, Paolo Cignoni:  
*Position-Based Tensegrity Design*  
**ACM Transactions on Graphics** - issn:0730-0301 - (SIGGRAPH ASIA), 36 (6) - 2017
- [T22] Xifeng Gao, Wenzel Jakob, Marco Tarini, Daniele Panozzo:  
*Robust Hex-Dominant Mesh Generation using Field-Guided Polyhedral Agglomeration*  
**ACM Transactions on Graphics** - issn:0730-0301 - (SIGGRAPH), 36 (4), 114 - 2017
- [T21] Nico Schertler, Marco Tarini, Wenzel Jakob, Misha Kazhdan, Stefan Gumhold, Daniele Panozzo:  
*Field-Aligned Online Surface Reconstruction*  
**ACM Transactions on Graphics** - issn:0730-0301 - (SIGGRAPH), 36 (4), 77 - 2017
- [T20] Marco Tarini:  
*Volume-encoded UV-maps.*  
**ACM Transactions on Graphics** - issn:0730-0301 - (SIGGRAPH), 35 (4), 107 - 2016
- [T19] Claudio Calabrese, Gabriele Salvati, Marco Tarini, Fabio Pellacini:  
*cSculpt: A System for Collaborative Sculpting.*  
**ACM Transactions on Graphics** - issn:0730-0301 - (SIGGRAPH), 35 (4), 91 - 2016
- [T18] Francesco Usai, Marco Livesu, Enrico Puppo, Marco Tarini, Riccardo Scateni:  
*Extraction of the Quad Layout of a Triangle Mesh Guided by its Curve-Skeleton.*  
**ACM Transactions on Graphics** - issn:0730-0301, 35 (1), 6, 2015
- [T17] Wenzel Jakob, Marco Tarini, Daniele Panozzo, Olga Sorkine-Hornung:  
*Instant Field-Aligned Meshes.*  
**ACM Transactions on Graphics** - issn:0730-0301 - (SIGGRAPH ASIA), 34 (6), 189, 2015
- [T16] Daniele Panozzo, Olga Diamanti, Sylvain Paris, Marco Tarini, E. Sorkine, Olga Sorkine-Hornung:  
*Texture Mapping Real World Objects with Hydrographics.*  
**Computer Graphics Forum** - issn:1467-8659 - (SGP), 34 (5), 65-75, 2015
- [T15] Marco Livesu, Alla Sheffer, Nicholas Vining, Marco Tarini:  
*Practical hex-mesh optimization via edge-cone rectification.*  
**ACM Transactions on Graphics** - issn:0730-0301 - (SIGGRAPH), 34 (4), 141, 2015
- [T14] Daniele Panozzo, Erico Puppo, Marco Tarini, Olga Sorkine-Hornung:  
*Frame Fields: Anisotropic and Non-Orthogonal Cross Fields.*  
**ACM Transactions on Graphics** - issn:0730-0301 - (SIGGRAPH), 33 (4), 134, 2014



- [T13] Marco Tarini, Daniele Panozzo, Olga Sorkine-Hornung:  
*Accurate and Efficient Lighting for Skinned Models.*  
**Computer Graphics Forum** - issn::1467-8659 - (EUROGRAPHICS), 33 (2), 421-428, 2014
- [T12] David Bommes, Bruno Lévy, Nico Pietroni, Enrico Puppo, Claudio Silva, Marco Tarini, Denis Zorin:  
*Quad-Mesh Generation and Processing: A Survey.*  
**Computer Graphics Forum** - issn::1467-8659, 32 (6), 51-76, 2013
- [T11] Daniele Panozzo, Enrico Puppo, Marco Tarini, Nico Pietroni, Paolo Cignoni:  
*Automatic Construction of Adaptive Quad-Based Subdivision Surfaces Using Fitmaps.*  
**IEEE Trans. on Visualization and Comp. Graph.** - issn::1077-2626, 17 (10), 1510-1520, 2011
- [T10] Marco Tarini, Enrico Puppo, Daniele Panozzo, Nico Pietroni, Paolo Cignoni:  
*Simple quad domains for field aligned mesh parametrization.*  
**ACM Transactions on Graphics** - issn::0730-0301 - (SIGGRAPH ASIA), 30 (6), 142, 2011
- [T9] Nico Pietroni, Marco Tarini, Olga Sorkine, Denis Zorin:  
*Global parametrization of range image sets.*  
**ACM Transactions on Graphics** - issn::0730-0301 - (SIGGRAPH ASIA), 30 (6), 149, 2011
- [T8] Paolo Brivio, Marco Tarini, Paolo Cignoni:  
*Browsing large image datasets through Voronoi diagrams.*  
**IEEE Trans. on Visualization and Comp. Graph.** - issn::1077-2626, 16 (6), 1261-1270, 2010
- [T7] Marco Tarini, Nico Pietroni, Paolo Cignoni, Daniele Panozzo, Enrico Puppo:  
*Practical quad mesh simplification.*  
**Computer Graphics Forum** - issn::1467-8659, (EUROGRAPHICS), vol. 29 (2), 407-418, 2010
- [T6] Nico Pietroni, Marco Tarini, Paolo Cignoni:  
*Almost isometric mesh parameterization through abstract domains.*  
**IEEE Trans. on Visualization and Comp. Graph.** - issn::1077-2626, vol. 16 (4), 621-635, 2010
- [T5] Marco Tarini, Paolo Cignoni, Claudio Montani:  
*Ambient Occlusion and Edge Cueing to Enhance Real Time Molecular Visualization.*  
**IEEE Trans. on Visualization and Comp. Graph.** - issn::1077-2626, vol. 12 (5), 1237-1244, 2006
- [T4] Marco Tarini, Paolo Cignoni:  
*Pinchmaps: textures with customizable discontinuities.*  
**Computer Graphics Forum** - issn::1467-8659 - (EUROGRAPHICS), vol. 24 (3), 557 – 568, 2005
- [T3] Marco Tarini, Kai Hormann, Paolo Cignoni, Claudio Montani:  
*PolyCube-Maps.*  
**ACM Transactions on Graphics** - issn::0730-0301 - (SIGGRAPH), vol. 23 (3), 850-857, 2004
- [T2] David Koller, Michael Turitzin, Marc Levoy, Marco Tarini, Giuseppe Croccia, P.Cignoni, R.Scopigno:  
*Protected Interactive 3D Graphics via Remote Rendering.*  
**ACM Transactions on Graphics** - issn::0730-0301 - (SIGGRAPH), vol. 23 (3), 692-700, 2004
- [T1] Marco Tarini, Paolo Cignoni, Claudio Rocchini, Roberto Scopigno:  
*Real Time, Accurate, Multi-Featured Rendering of Bump Mapped Surfaces.*  
**Computer Graphics Forum** - issn::1467-8659 - (EUROGRAPHICS), vol. 19 (3), 119-130, 2000
- [J6] Matteo Bracci, Marco Tarini, Nico Pietroni, Marco Livesu, Paolo Cignoni *HexaLab.net: an online viewer for hexahedral meshes*  
**Computer-Aided Design** - issn::0010-4485 - vol. 110, 24-36, 2019

- [J5] Paolo Brivio, Luca Benedetti, Marco Tarini, Federico Ponchio, Paolo Cignoni, Roerto Scopigno:  
*PhotoCloud: interactive remote exploration of large 2D-3D datasets.*  
**IEEE Computer Graphics and Applications** - issn::0272-1716, 33 (2), 86-96, 2013
- [J4] Marco Tarini:  
*Cylindrical and toroidal parameterizations without vertex seams.*  
**Journal of Graphics Tools** 16 (3), 144-150, 2012  
doi:10.1080/2151237X.2012.654054
- [J3] Marco Tarini, Hendrik P.A. Lensch, Michael Gösele, Hans-Peter Seidel:  
*3D Acquisition of Mirroring Objects using Striped Patterns.*  
**Graphical Models** - issn:: 1524-0703, Elsevier Science, vol 67 (4), pp. 233-259, 2005
- [J2] Paolo Cignoni, Roberto Scopigno, Marco Tarini:  
*A Simple Normal Enhancement Technique for Interactive Non-photorealistic Renderings.*  
**Computers & Graphics** - issn::0097-8493, Elsevier, vol. 29 (1), pp. 125-133, 2005
- [J1] Paolo Cignoni, Claudio Montani, Claudio Rocchini, Roberto Scopigno, Marco Tarini:  
*Preserving attribute values on simplified meshes by re-sampling detail textures.*  
**The Visual Computer** - issn::0178-2789, Springer, Vol. 15 (10), 519-539, 1999
- [C10] Riccardo Marin, Simone Melzi, Pietro Musoni, Filippo Bardon, Marco Tarini, Umberto Castellani:  
*CMH: Coordinates Manifold Harmonics for Functional Remeshing*  
**Eurographics Workshop on 3D Object Retrieval (3DOR)**, Italy, ISBN 3-905673-15-0, ISSN = 1997-0471, DOI DOI = 10.2312/3dor.20191063 2019,
- [C9] Dario Marco, Paolo Cignoni, Marco Tarini:  
*Anisotropic MatCap: Easy Capture and Reproduction of Anisotropic Materials.*  
**Eurographics Italian Chapter** Conference (EG-it), Genova, Italy, 2016
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*A framework for User-Assisted Sketch-Based Fitting of Geometric Primitives.*  
Proc. of WSCG, 18th Int. Conference on **Computer Graphics, Visualization and Computer Vision**, Plzeň-Bory, Czech Republic, 2009
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*A Web-based solution supporting the integration of virtual reality environments in logistics applications.*  
**Eurosis Euromedia**, EUROSIS-ETI, Porto (Portugal), 2008
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*A Quadrilateral Rendering Primitive.*  
Workshop on **Graphics Hardware**, Grenoble (France), (ISBN 3-905673-15-0) pp. 7-14, 2004
- [C4] Marco Tarini, Paolo Cignoni, Roberto Scopigno:  
*Visibility based methods and assessment for detail-recovery.*  
Proc. of **Visualization**, Seattle, USA, (ISBN 0-7695-2030-8), 457-464, 2003
- [C3] Marco Tarini, Marco Callieri, Claudio Montani, Claudio Rocchini, Karin Olsson, Therese Persson:  
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- [C2] Marco Tarini, Hitoshi Yamauchi, Jorg Haber, Hans-Peter Seidel:  
*Texturing Faces*.  
Proc. of **Graphics Interfaces** (GI), Calgary, Canada, pp. 89-98, 2002
- [C1] Marco Tarini, Paolo Cignoni, Claudio Rocchini and Roberto Scopigno:  
*Computer Assisted Reconstruction of Buildings from Photographic Data*.  
Proc. of the 5th IEEE Workshop on **Vision, Modeling and Visualization** (VMV), pp. 213-220  
Saarbrücken, Germany, 2000
- [S5] Paolo Brivio, Marco Tarini, Paolo Cignoni, Roberto Scopigno:  
*Joint interactive visualization of 3D models and pictures in walkable scenes*.  
Proc. of **Eurographics Posters**, 2012
- [S4] Paolo Brivio, Marco Tarini:  
*Picture-driven procedural modelling - building an animated model of Ghirla watermill (18th cen.)*.  
Short Paper at **Eurographics Italian Chapter Conference** (EG-it), 2009
- [S3] Paolo Brivio, Gianfranco Femia, Maurizio Macchi, Matteo Lo Prete, Marco Tarini:  
*Modelling of Virtual Compressed Structures Through Physical Simulation*.  
Proc. of 3D-ARCH, Int. Arc. of **Photogrammetry, Remote Sensing and Spatial Inf. Sci.**, Nafplio, Greece, - ISSN 1682-1777, 2009
- [S2] Marco Tarini, Hendrik Lensch, Michael Gösele, Hans-Peter Seidel:  
*Shape from Distortion: 3D Range Scanning of Mirroring Objects*.  
Technical Sketch, in Conference Abstracts and Applications, **SIGGRAPH**, S.Antonio, Texas, p. 248, 2002
- [S1] Paolo Cignoni, Roberto Scopigno, Marco Tarini:  
*Normal Enhancement for Interactive NPR*.  
Short paper proc. of **EUROGRAPHICS**, Saarbrücken, Germany, pp. 95-104, 2002
- [B1] Marco Tarini:  
*Sala del Grechetto: ricostruzione virtuale*. (in Italian)  
in: "Lo spazio del collezionismo nello stato di Milano, secoli XVII-XVIII", Andrea Spiriti (curator), pages 119-124. ISBN 9788867280896. Viella, Rome, 2013
- [E2] Marco Tarini, Cem Yuksel, Sylvain Lefebvre:  
*Rethinking texture mapping*.  
**SIGGRAPH 2017 Courses** (notes), Los Angeles, 2017
- [E1] Silvia Biasotti, Andrea Giachetti, Marco Tarini:  
*Foreword to the Special Section on Smart Tools and Applications in Computer Graphics*.  
**Computers & Graphics**, pp. A3-A4, 2015

### 3.5.1 Bibliometric measures

According to Google Scholar [link]:

H-Index:**24** - Citations:**2303**

According to Scopus [link]:

H-Index:**18** - Citations:**1403**

### 3.5.2 Affiliations of coauthors

as they appear in co-published articles, reported with the number of coauthored publications (in parenthesis, the total number of co-author occurrences over all coauthored publications).

CNR / ISTI, Pisa: 27(62),  
 NYU, New York University: 8(11),  
 Università di Genova: 7(10),  
 Università dell'Insubria, Varese: 7(7),  
 ETH Zurich: 5(14),  
 MPI, Max Planck Institut, Saarbrücken: 4(12),  
 INRIA / ALICE, Grenoble: 4(4),  
 Università di Verona: 2(5),  
 TU Dresden: 2(3),  
 Polytechnic Institute of NYU: 2(2),  
 INRIA / ALICE, Sofia Antipolis: 2(2),  
 EPFL Lausanne: 2(2),  
 CNR / IMATI, Genova: 2(2),

Utha University, Salt Lake City: 2(2),  
 UBC, Univ. of British Columbia, Vancouver: 1(3),  
 Stanford University: 1(3),  
 Victoria University: 1(3),  
 La Sapienza University, Rome: 1(3),  
 Università di Cagliari: 1(3),  
 Adobe Research, Cambridge: 1(1),  
 Johns Hopkins University, Baltimore: 1(1),  
 UTS University of Technology Sydney: 1(1),  
 Universiteit Utrecht: 1(1),  
 Politecnico di Milano: 1(1),

### 3.6 Main participated funded projects

- 12/2015 - *present*: **D-Surf**: Scalable Computational Methods for 3D Printing Surfaces (PRIN 2015B8TRFM - 36 months) - Research Unit Director (It.: *Responsabile dell'Unità di Ricerca*) .  
 Funding available for the Reserach Unit: 70K€.
- 2013 - 2015: **Harvest 4D**: Harvesting Dynamic 3D Worlds from Commodity Sensor Clouds (EU FP7 project ICT FET, Grant Agreement 323567)
- 2010 - 2012: “Collezionismo e spazi del collezionismo aristocratico nel XVII e nel XVIII sec.” (virtual museums) (PRIN 2008C7P2LY 003 - 24 months).
- 2009 - 2013: : **VISITO** Tuscany (POR CREO FESR 2007-2013): VIsual Support to Interactive TOurism in Tuscany (financed by Regione Toscana - 48 months)
- 2008 - 2012: : **3D Coform**: Tools and Expertise for 3D Collection Formation (EG 7FP IP, EU IST-231809 - 48 months)
- 2003 - 2004: **MACROGeo**: Metodi Algoritmici e Computazionali per la Rappresentazione di Oggetti Geometrici (MIUR - 24 months)
- 2002 - 2005: **ViHAP3D** - Virtual Heritage: High-Quality 3D Acquisition and Presentation (EU IST-2001- 32641 - 36 months)
- 2000 - 2003: **Digital Michelangelo Project**, Stanford Computer Graphics Lab e Sovrintendenza ai beni artistici e storici per le province di Firenze, Pistoia, e Prato

### 3.7 Open-Source developer

In the context of his research activities, Marco Tarini has worked at the development of several Open-Source projects with a significant impact in the scientific community, including:

- **MeshLab**: a popular tool for mesh-based geometry processing (core dev team, 1.86M downloads); SPG Software Award 2017
- **QuteMol**: molecular software visualization tool (main developer, 42K downloads)  
 QuteMol was used for example for the covers of Science Magazine (April 2009) [link] and The EMBO Journal (July 2013) [link].
- **VCG lib** - Visual and Computer Graphics Library: one of the principal C++ libraries for mesh-based geometry processing (dev team member).

- **HexaLab**: an online 3D visualizer and repository of hexa-meshes; available online at <https://www.hexalab.net/> (dev team member).

(all projects available from [sourceforge.net](https://sourceforge.net) or [github](https://github.com). Download counts updated at Sept 2017).

## 4 Teaching

### 4.1 Courses

#### At International Conferences (peer reviewed):

- “RETHINKING TEXTURE MAPPING”  
Marco Tarini, Cem Yuksel, Sylvain Lefebvre  
SIGGRAPH 2017 Course. Aug 03, 2017 (half day)  
Los Angeles, CA, USA

#### PhD courses:

- “SURFACE PARAMETRIZATION”  
STAG Ph.D School 2018: Graphics and Geometry Processing for Digital Manufacturing  
(Eurographics Italian Chapter), Brescia, Italy, 10/2018. <http://egit-school2018.unibs.it/index.php/lectures/>
- “QUAD MESH PROCESSING”  
SGP - Geometry Processing school for PhD students  
(Eurographics / ACM). Genova, Italy, 07/2013.
- “GRAPHICS HARDWARE”  
Eurographics Winter School for PhD students  
(Eurographics Italian Chapter). Pisa, Italy, 02/2005.

#### Postgraduate courses: master degree - Computer Science

(It.: *Laurea Magistrale / Specialistica in Informatica*)

- “3D VIDEO GAMES” - 6 ETCS  
Università “La Statale” - Milano - A.Y. 2018/2019
- “GAME DEVELOPMENT” - 6 ETCS (×3 years),  
Università dell’Insubria - Varese - A.Y. 2017/2018, 2015/2016, 2013/2014
- “COMPUTER GRAPHICS” - 6 ETCS (×6 years),  
Università dell’Insubria - Varese - A.Y. 2010/2011, 2009/2010, 2008/2009, 2007/2008, 2006/2007, 2005/2006
- “SISTEMI MULTIMEDIALI II” - 6 ETCS,  
(Multimedia Systems II)  
Università dell’Insubria - Varese - A.Y. 2004/2005

#### 2nd level University Master courses:

(It.: *Master universitario*)

- “ADVANCED GRAPHIC PROGRAMMING” - 16 h (×2 years),  
University Master in Computer Game development  
University of Verona, A.Y. 2017/2018 and 2018/2019

- “GAME ENGINES” - 16 h (×2 years),  
University Master in Computer Game development  
University of Verona, A.Y. 2014/2015 and 2015/2016
- “GAME TOOLS PROGRAMMING” - 16 h (×2 years)  
University Master in Computer Game development  
University of Verona, A.Y. 2012/2013 and 2013/2014

**Postgraduate courses: master degree - Humanities Computing**

(It.: *Laurea Magistrale in Informatica Umanistica*)

- “MODELLAZIONE 3D” - 6 ETCS,  
(3D modelling - introductory course on technologies for 3D modelling)  
Università di Pisa - A.Y. 2013/2014

**Undergraduate courses: bachelor - Computer Science**

(It.: *Laurea Triennale in Informatica*)

- “GRAFICA E IMMAGINI DIGITALI” - 9 ETCS (×2 years),  
(Computer Graphics and Digital Images)  
Università “La Statale” - Milano - A.Y. 2017/2018, 2018/2019
- “LABORATORIO DI ARCHITETTURE 2” - 3 ETCS,  
(Computer Architecture 2 Lab)  
Università “La Statale” - Milano - A.Y. 2018/2019
- “COMPUTER GRAPHICS AND IMAGE PROCESSING”, 1.5 Units,  
*In collaboration with Prof. Andrea Tagliasacchi*  
UVIC - University of Victoria - Canada. A.Y. 2016/2017
- “GRAFICA COMPUTAZIONALE” - 6 ETCS (×4 years),  
(Computer Graphics)  
Università dell’Insubria - Varese A.Y. 2011/2012, 2012/2013, 2014/2015, 2016/2017
- “ARCHITETTURE DEGLI ELABORATORI” - 9 ETCS (×2 years),  
(Computer Architecture)  
Università dell’Insubria - Varese A.Y. 2016/2017 and 2017/2018
- “SVILUPPO APPLICAZIONI WEB” - 6 ETCS,  
(Web Application Development)  
Università dell’Insubria - Varese - A.Y. 2015/2016
- “LABORATORIO DI GRAFICA COMPUTAZIONALE” - 3 ETCS,  
(Computer Graphics Lab)  
Università dell’Insubria - Varese A.Y. 2011/2012
- “ALGORITMI E STRUTTURE DATI” - 15 ETCS,  
(Algorithms and Data Structures)  
Università dell’Insubria - Varese - A.Y. 2009/2010  
(in charge for 3 ETCS)
- “LABORATORIO DI LINGUAGGI” - 3 ETCS (×3 years),  
(C programming course)  
Università dell’Insubria - Varese - A.Y.: 2004/2005, 2006/2007, 2007/2008.

- “FONDAMENTI DI INFORMATICA” - 6 ETCS,  
(Computer Science Foundations),  
Università dell’Insubria - Varese A.Y. 2005/2006

#### Other courses:

- “APPLICAZIONI WEB” - (16h),  
(Web Application Development)  
Laurea in Apprendistato - Università dell’Insubria - Varese - A.Y. 2016/2017
- “LEARNING WEEK” (40 h)  
(Orientation and training for the International Olympiad in Informatics for High School pupils)  
Financed by Regione Lombardia. Busto Arsizio (Va) 02/2009.

## 4.2 PhD Programs

Member of the Boards of the PhD Programs (It.: *Collegio dei Docenti del Dottorato di Ricerca*) :

- 15/03/2018 - *present*: PhD Program in Computer Science, (It.: *Informatica*) - Università di Milano “La Statale”
- 09/2015 12/2017 - P: hD Program in Computer Science and Computational Mathematics, (It.: *Informatica e Matematica del Calcolo*) - Università dell’Insubria

## 4.3 Theses and PhD Supervisor / Jury

- **Supervisor** of 40+ Italian Laurea theses (Computer Science Course), both bachelor and master degrees, at the universities of Pisa (in 2004 and 2014) and Insubria (from 2004 to present). A few of them won **national awards**: best Computer Graphics Master Italian thesis award 2014 (student: Andrea Bernabei) and best Computer Graphics Bachelor Italian thesis (student: William Casola) - awarded in 2015 by Eurographics - Italian Chapter.
- **PhD supervisor**: Paolo Brivio (PhD, Univeristy of Insubria, 2008-2012). *Dissertation title*: “Management and Visualization of Large Heterogeneous 2D-3D Datasets”. *Jury*: Prof. Micheal Goesele, Prof. Andrea Fusiello, Prof. Roberto Ranon
- **PhD Jury member**:
  - 19/06/2016: *Candidate*: dr. Simone Melzi – *Supervisor*: Prof. Umberto Castellani  
*Dissertation title*: “Local Geometry Processing for Deformations of Non-Rigid 3D Shapes.”  
Università degli studi di Verona, Italy
  - 06/12/2016: *Candidate*: dr. Randolph Schärfig – *Supervisor*: Prof. Kai Hormann  
*Dissertation title*: “Efficient Multi-Bounce Lightmap Creation Using GPU Forward Mapping.”  
Università di Lugano, Switzerland
  - 03/02/2016: *Candidate*: dr. Nadine Abu Rumman – *Supervisor*: Prof. Marco Schaerf  
*Dissertation title*: “Position-based Skin Deformations for Interactive Character Animation.”  
La Sapienza University, Rome, Italy
  - 22/05/2015: Università degli Studi di Cagliari (4 candidates).
  - 23/10/2012: *Candidate*: dr. Francisco González García – *Supervisor*: Prof. Gustavo Patow  
*Dissertation title*: “Parallel spatial data structures for interactive rendering.”  
Universitat de Girona, Spain
  - 22/12/2009: *Candidate*: dr. Yannick Francken – *Supervisor*: Prof. dr. Philippe Bekaert  
*Dissertation title*: “Mesostucture Acquisition With Planar Illuminants.”  
Hasselt University, Belgium

## 5 Etc

### 5.1 Authored games

- **“The Last Days of the Third Era”** (videogame, *Warbands* modification), 2015. Core dev-team member. Ranked 76 of 37,588 titles on ModDB (as of 24-12-2018).
- **“Elemental Wars”** (card-game), 1997, Luigi Ferrini, Millo Franzoni, Marco Tarini (designers) and Luigi Castellani (artist). Published by Quality Games.
- **“Tumble Bugs”** (videogame), 1997, Marco Tarini (sole designer & developer). Published by Voxar Ltd.
- Developer of open-source game modding tools (such as **“OpenBRF”**, a tool to design video-game assets, downloaded more than 45K times and de-facto standard game-tool in the “Mount&Blade” modding community).
- Indie game developer (various minor titles).

### 5.2 Other skills and extracurricular interests

- Advanced programming (several languages).
- Computers as tools to boost creativity.
- 05/2000 - 08/2000: Civil service (military service substitute) at the Biophysics Institute, CNR: web-master, system administrator.

June 25, 2019

Marco Tarini  
