

UNIVERSITÀ DEGLI STUDI DI MILANO

Procedura di valutazione per la chiamata a professore di I fascia da ricoprire ai sensi dell'art. 24, comma 6, della Legge n. 240/2010 per il settore concorsuale 01/B1 - Informatica ,
(settore scientifico-disciplinare INF/01 - Informatica)

presso il Dipartimento di Dipartimento di INFORMATICA "GIOVANNI DEGLI ANTONI", Codice concorso 4310

MARCO TARINI CURRICULUM VITAE

INFORMAZIONI PERSONALI (NON INSERIRE INDIRIZZO PRIVATO E TELEFONO FISSO O CELLULARE)


COGNOME	TARINI
NOME	MARCO
DATA DI NASCITA	11/01/1975

Data

21/04/2020

Luogo

MILANO



web-page: <http://tarini.di.unimi.it/>
e-mail: marco.tarini@unimi.it

MARCO TARINI

CURRICULUM VITAE

Last update: April 21, 2020

Electronic version of this document: <http://tarini.di.unimi.it/cv.pdf>

Index

1	Positions	3
1.1	Current position	3
1.2	Past positions	3
1.3	Visiting professor	3
1.4	Italian Habilitations	4
2	Education	4
3	Research	4
3.1	Research interests	4
3.2	Awards	4
3.3	Talks and seminars	5
3.4	Reviewing and organizational experience	6
3.4.1	Journal Editorial Board	6
3.4.2	Conference Organization / Chair	6
3.4.3	Conference IPC / TPC member	7
3.4.4	Conference Organization / Etc.	8
3.4.5	Reviewer	8
3.5	Publications (selected)	9
3.5.1	Top-tier journals in Computer Graphics	9
3.5.2	Top-tier journals in other fields	11
3.5.3	Other international journals on Computer Graphics	11
3.5.4	International conferences	11
3.5.5	Short papers / posters	12
3.5.6	Book chapters	13
3.5.7	Other publications	13
3.5.8	Bibliometric measures	13
3.5.9	Affiliations of coauthors	13
3.6	Main participated funded projects	14
3.7	Open-Source developer	14
4	Teaching	14
4.1	Courses	14
4.2	PhD Programs	17
4.3	Theses and PhD Supervisor / Jury	17
5	Etc	17
5.1	Authored games & game-tools	17
5.2	Other skills and extracurricular interests	18

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.
(Ita: *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).
(Ita: *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
(Ita: “*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).
(Ita: *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.
(Ita: *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).
(Ita: *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.
(Ita: *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, Mappings) [S6, O2, O1, 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, O1, 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 Animation [T13, T12, S4];
- 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) [S6, O1, 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].
- In addition, two supervised students won national awards for their thesis: **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.

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 (prof. 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 (prof. 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 (prof. 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 / Session 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: General co-chair of **Symposium of Geometry 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 member

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

- EUROGRAPHICS 2020: 40th Annual Conference of the European Association for Computer Graphics (accepted papers published in Journal: Computer Graphics Forum);
- EG-EDU 2019: Eurographics - Education program (at the same conference above);
- SMI 2020: Shape Modeling International 2020 (accepted papers published in Journal: Computer & Graphics, Elsevier);
- 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 / Etc.

- 2019: chair of Best Paper Award committee - EUROGRAPHICS, 2019 [link]
- 2018 - 2020: member of Best Paper Award committee - SGP, 2018, and at EUROGRAPHICS, 2020
- 2015 - *present*: treasurer of Eurographics (European Association for Computer Graphics) - Italian Chapter [link]

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, 2004-2020); ACM-SIGGRAPH Asia [SIGASIA]; ACM Trans. on Graphics [TOG]; IEEE Transactions on Visualization and Computer Graphics [TVCG]; Eurographics [EG]; IEEE Visualization [IEEE-VIS]; Computer Graphics Forum [CGForum]; Shape Modelling International [SMI]; ACM Journal on Computing and Cultural Heritage [JOCCH]; Elsevier Graphical Models [GMOD]; Elsevier Computers & Graphics [CAG]; Elsevier Computer Aided Geometric Design [CAGD]; Pacific Conf. on Comp. Graph. and App. Pacific Graphics [PG]; 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 Image and Graphics [IJIG].

3.5 Publications (selected)

3.5.1 Top-tier journals in Computer Graphics

Publications in the three Top-Tier International Journals in the Computer Graphics fields, which are:

- 1st:* ACM Transaction on Graphics
- 2nd:* IEEE Transaction on Visualization and Computer Graphics
- 3rd:* Computer Graphics Forum

- [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 Crocchia, 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

3.5.2 Top-tier journals in other fields

Publications in top-tier International Journals focused in fields other than Computer Graphics (personal contributions pertains Computer Graphics and Geometry Processing).

- [O2] Tobias Lendenmann, Teseo Schneider, Jérémie Dumas, Marco Tarini, Costanza Giampietro, Apratim Bajpai, Weiqiang Chen, Julia Gerber, Dimos Poulikakos, Aldo Ferrari, Daniele Panozzo:
Cellogram: On-the-Fly Traction Force Microscopy
Nano Letters - issn:1530-6984 - vol. 19, issue 10, 6742-6750, 2019
- [O1] 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

3.5.3 Other international journals on Computer Graphics

Publications in other peer-reviewed International Journals on Computer Graphics.

- [J6] Simone Melzi, Riccardo Marin, Pietro Musoni, Filippo Bardon, Marco Tarini, Umberto Castellani:
Intrinsic/extrinsic embedding for functional remeshing of 3D shapes
Computers & Graphics - issn:0097-8493, Elsevier, vol. 88, pp. 1-12, 2020
- [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

3.5.4 International conferences

Full papers in Proceedings of International Conferences on Computer Graphics (peer reviewed).

- [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)
ISBN 3-905673-15-0, - issn:1997-0471, DOI = 10.2312/3dor.20191063 Italy 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

- [C8] David Bommes, Bruno Lévy, Nico Pietroni, Enrico Puppo, Claudio Silva, Marco Tarini, Denis Zorin:
Quad Meshing.
Eurographics 2012-State of the Art Reports (EG-STAR), 159-182, 2012
- [C7] Davide Portelli, Fabio Ganovelli, Marco Tarini, Paolo Cignoni, Matteo Dellepiane, Roberto Scopigno:
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
- [C6] Pietro Colombo, Emanuele Grosso, Marco Tarini:
A Web-based solution supporting the integration of virtual reality environments in logistics applications.
Eurosis Euromedia, EUROSIS-ETI, Porto (Portugal), 2008
- [C5] Kai Hormann, Marco Tarini:
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:
Marching Intersections: An Efficient Approach to Shape-from-Silhouette.
Proc. of the 5th IEEE Workshop on **Vision, Modeling, and Visualization** (VMV), Erlangen, Germany, pp. 283-290, 2002
- [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, 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

3.5.5 Short papers / posters

Short papers and posters appeared in proceedings of International Conferences on Computer Graphics (peer reviewed).

- [S6] Simone Melzi, Riccardo Marin, Pietro Musoni, Umberto Castellani, Marco Tarini:
Visual Assessments of Functional Maps.
Proc. of **Eurographics Symposium on Geometry Processing - Posters**, - issn:1727-8384, 2019
- [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.
 Proceedings of the short paper program of **EUROGRAPHICS**, Saarbrücken, Germany, pp. 95-104, 2002

3.5.6 Book chapters

- [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

3.5.7 Other publications

- [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

3.5.8 Bibliometric measures

According to Google Scholar [link]:

H-Index:**25** - Citations:**2582**

According to Scopus [link]:

H-Index:**18** - Citations:**1547**

3.5.9 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: 9(15),
 Università di Genova: 7(10),
 Università dell’Insubria, Varese: 7(7),
 ETH Zurich: 6(18),
 MPI, Max Planck Institut, Saarbrücken: 4(12),
 INRIA / ALICE, Grenoble: 4(4),
 Università di Verona: 3(9),
 Polytechnic Institute of NYU: 3(4),
 TU Dresden: 2(3),
 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),
 EMPA, Dubendorf: 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 (Ita: *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; avalialbe online at <https://www.hexalab.net/> (dev team member).

(all projects available from sourceforge.net or github. 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.
- “GEOMETRY PROCESSING” - *in charge for organization / exams only; lectures held by other lecturers.*
Linked to the SGP International School 2019. University of Milan, 07/2019
https://sgp2019.di.unimi.it/graduate_school.html

2nd level University Master courses:

(Ita: *Master universitario*)

- “ADVANCED GRAPHIC PROGRAMMING” - 16 h (×3 years),
University Master in Computer Game development
University of Verona, A.Y. 2017/2018, 2018/2019, and 2019/2020 (*pending*)
- “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 - Computer Science

(Ita: *Laurea Magistrale / Specialistica in Informatica*)

- “3D VIDEO GAMES” - 6 ETCS (×2 years),
Università “La Statale” - Milano - A.Y. 2018/2019 and 2019/2020
- “GAME DEVELOPMENT” - 6 ETCS (×3 years),
Università dell’Insubria - Varese - A.Y. 2017/2018, 2015/2016 and 2013/2014
- “COMPUTER GRAPHICS” - 6 ETCS (×6 years),
Università dell’Insubria - Varese - A.Y. 2010/2011, 2009/2010, 2008/2009, 2007/2008, 2006/2007 and 2005/2006
- “SISTEMI MULTIMEDIALI II” - 6 ETCS,
(Multimedia Systems II)
Università dell’Insubria - Varese - A.Y. 2004/2005

Postgraduate courses: master degree - Humanities Computing

(Ita: *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

(Ita: *Laurea Triennale in Informatica*)

- “COMPUTER GRAPHICS” - 6 ETCS,
Università “La Statale” - Milano - A.Y. 2019/2020
- “ARCHITTETTURE DEGLI ELABORATORI I” - 9 ETCS,
(Computer Architecture)
Università “La Statale” - Milano - A.Y. 2019/2020
- “GRAFICA E IMMAGINI DIGITALI” - 9 ETCS (**×2 years**),
(Computer Graphics and Digital Images)
Università “La Statale” - Milano - A.Y. 2017/2018 and 2018/2019
- “LABORATORIO DI ARCHITTETTURE 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, and 2016/2017
- “ARCHITTETTURE 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 and 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 (Ita: *Collegio dei Docenti del Dottorato di Ricerca*) :

- 15/03/2018 - *present*: PhD Program in Computer Science, (Ita: *Informatica*) - Università di Milano “La Statale”
- 09/2015 - 12/2017: PhD Program in Computer Science and Computational Mathematics, (Ita: *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), Insubria (from 2004 to 2018), and Milan (2019 to present). They include winners of awards as best Italian theses on Computer Graphics (see Sec. 3.2).
- **PhD supervisor**:
 - Andrea Maggiordomo (PhD candidate, Univeristy of Milan, 2019-present).
 - 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: “Mesostructure Acquisition With Planar Illuminants.”
Hasselt University, Belgium

5 Etc

5.1 Authored games & game-tools

- “**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 (designer, developer). Published by Voxar Ltd.

- **“OpenBRF”** (a tool to organize and edit video-game assets), 2009. Downloaded more than 45K times and de-facto standard game-tool in the “Mount&Blade” modding community. [link to forum]
- 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.

April 21, 2020

Marco Tarini

