Curriculum vitae of Enrico Puppo (May 2021)

Title: *Laurea* in Mathematics, University of Genova, 1986

Current position:

- Since November 2000 tenured *professor* at the Department of Computer Science, Bio-engineering, Robotics and Systems Engineering (formerly: Department of Computer and Information Sciences) of the University of Genova

Previous professional experience:

- From November 2014 to October 2020 *director* of the Department of Computer Science, Bio-engineering, Robotics and Systems Engineering of the University of Genova
- In December 2015 *visiting professor* at Universidad Nacional del Sur (Bahia Blanca, Argentina)
- From June 2014 to February 2018 *member of the Executive Board* of SIIT S.c.p.a.
- From May 2012 to October 2014 *delegate of the director for the School of Sciences* of the Department of Computer Science, Bio-engineering, Robotics and Systems Engineering of the University of Genova
- In August 2012 *visiting professor* at Universidad Nacional del Sur (Bahia Blanca, Argentina)
- From November 2010 to May 2012 *deputy director* of the Department of Computer and Information Sciences of the University of Genova
- From November 2005 to February 2013 *member* of the Executive Committee and Governing Board of the Institute for Advanced Studies in Information and Communication Technologies (ISICT)
- From November 2003 to October 2006 *president* of the Curriculum of Computer Science of the University of Genova
- From November 1998 to October 2000 *associate professor* at the Department of Computer and Information Sciences of the University of Genova
- In June 1998 *visiting professor* at Universidad Nacional del Sur (Bahia Blanca, Argentina).
- From November 1990 to October 1997 *adjunct professor* at the Department of Computer and Information Sciences of the University of Genova
- In the listed periods: 7-12/1989, 9-11/1990, 6/1991, 11-12/1992, *visiting research scientist* at the Center for Automation Research - University of Maryland at College Park
- From December 1988 to October 1998 *research scientist* (tenured) at the Institute for Applied Mathematics of the Italian National Research Council (CNR)
- From April 1987 to November 1988 *research assistant* at the Institute for Applied Mathematics of the CNR

Research activity:

- Main research interests: geometry processing, geometric modeling, multi-resolution and multi-scale structures; applications to: computer graphics, CAD, architecture, GIS, scientific visualization, and image processing.

- About one hundred and forty scientific publications in international journals, books, and conference proceedings (h-index:37, i10-index: 79, total citations: 5535 - Source Google Scholar).
- Projects:
  - During 2017 2020: head of unit in a project of the Italian Ministry of Education and University (PRIN 2015)
    item During 2004 - 2005: head of unit in a project of the Italian Ministry of Education and University (PRIN 2003)
  - During 2002 - 2003: head of unit in a project of the Italian Space Agency (ASI) item During 2001 - 2004: head of unit in a European Project (V FP)
  - During 1995 - 2001: head of unit in three Coordinate research projects of the Italian National Research Council (CNR)
  - During 1985 - 2021: participation in other ten international research projects, ten national research projects and several local research projects.
- Collaborations:
  - School of Software - University of Technology Sydney (Sydney, Australia) (2017-present)
  - Department of Computer Science - University of British Columbia (Vancouver, Canada) (2017-present)
  - Departamento de Ciencias e Ingenieria de la Computacion, Universidad Nacional del Sur (Bahia Blanca, Argentina) (2012-present)
  - New York University - Courant Institute of Mathematical Sciences (2011-present)
  - Università di Milano - Dipartimento di Informatica (2010-present)
  - Università di Cagliari - Dipartimento di Matematica e Informatica (2005-present)
  - CNR - Istituto di Matematica Applicata e Tecnologie Informatiche "Enrico Magenes" (1998-present)
  - CNR - Istituto di Scienza e Tecnologie dell'Informazione (1997-present)
  - Università di Pisa - Dipartimento di Ingegneria dell'Energia, dei Sistemi, del Territorio e delle Costruzioni (2014-2016)
  - ETH Zurich - Interactive Geometry Laboratory (2011-2015)
  - Weizmann Institute of Science - Department of Computer Science and Applied Mathematics (2011-2012)
  - University of Maryland Center for Automation Research e l'Institute for Advanced Computer Studies (1989-2007)
  - Universidad de Alcalá - Departamento de Fisica y Matematicas (2004-2006)
  - Università di Verona - Dipartimento di Informatica (2000-2004)
  - National Institute for Standard and Technology - Computing and Applied Mathematics Laboratory (1992-1993)
  - Rensselaer Polytechnic Institute (1990-1992)

Editorial activity:

- Member of the Editorail Board: *Geoinformatica* (Springer)
- Secretary of the *Eurographics Association - Italian Chapter* - 2008-2012
- General Chairman: *8th Eurographics Italian Chapter Conference - 2010*

- Program Chairman: *Eurographics 2019 - Tutorials*; *International Conference on Image Analysis and Processing 2015 - Full papers*; *Eurographics 2015 - Posters*; *EuroVis 2015 - Short papers*; *Eurographics 2012 - Short papers*

- Scientific Coordinator: *8th International Conference on Image Analysis and Processing - 1995*

- Member of the scientific committee in the following international conferences: *Conference on Spatial Information Theory COSIT95, COSIT97*; *7th International Symposium on Spatial Data Handling*; *13th and 19th IAPR/IEEE International Conference on Pattern Recognition*; *EUROGRAPHICS '99*; *International Conference on Shape Modelling and Applications SMI2001*; *Eleventh ACM Symposium on Solid and Physical Modeling (2006)*; *Fourth International Conference on Geographic Information Science (2006)*; *International Conference on Computer Graphics Theory and Applications GRAPP06, GRAPP07, GRAPP08, GRAPP09, GRAPP10, GRAPP11, GRAPP12*; *International Conference in Central Europe on Computer Graphics, Visualization and Computer Vision (WSCG06, WSCG07, WSCG08, WSCG09, WSCG10, WSCG11, WSCG12, WSCG14)*; *VIII, XI e XII Workshop de Computación Gráfica, Imágenes y Visualización*; *Eurographics 2013 - Short papers*; *Computer Graphics International (CGI2013, CGI2014)*; *Eurographics/SIGGRAPH Symposium on Geometry Processing (SGP2013, SGP2014, SGP2021)*; *Geometric Modeling and Processing (GMP2014, GMP2015, GMP2016, GMP2017, GMP2018, GMP2019, GMP2020, GMP2021).*

- Reviewer for the following international journals: *Communications of the ACM*, *IEEE Transactions on Image Processing*, *IEEE Transactions on Industrial Informatics*, *IEEE Transactions on Knowledge and Data Engineering*, *IEEE Transactions on Pattern Amalysis and Machine Intellingence*, *IEEE Transactions on Systems, Man and Cybernetics*, *IEEE Transactions on Visualization and Computer Graphics*, *Computer Aided Design* (Elsevier), *Computer Aided Geometric Design* (Elsevier), *Computer & Graphics* (Pergamon Press), *Computer Graphics Forum* (North-Holland), *Computer Vision and Image Understanding* (Academic Press), *International Journal of Computer Vision* (Springer) *International Journal of Digital Multimedia Broadcasting* (Hindawi) *International Journal of Geographical Information Systems* (Taylor & Francis), *International Journal of Shape Modeling* (World Scientific) *Journal of Computing and Cultural Heritage* (ACM) *Pattern Analysis and Applications Journal* (Springer) *The Visual Computer* (Springer)

- Reviewer for about seventy international books and conferences, among which different editions of ACM SIGGRAPH, ACM SIGGRAPH Asia, ACM Symposium on Solid and Physical Modeling, IEEE Visualization, Eurographics, etc.

Teaching activity:

- Undergraduate courses (University of Genova - Computer Science): Programming (2001-02), Algorithms and data structures (1999-2003, 2008-2010), Interactive computer graphics (2002-2010), Introduction to programming (2010-2014)

- Graduate courses (University of Genova - Computer Science): Computer graphics (1990-2002), Geometric algorithms (2003-2010), Computer graphics (2011-2021), Data visualisation (2017-2021), Geometric Modeling (2015-2021)

- PhD courses Geometric Modeling (1994-95, University of Genova - Computer Science), Computer Graphics (1995-96, University of Pisa - Computer Science), Medical Imaging (1996-97, University of Genova - Physics), Computer graphics (1999, National PhD School Bertinoro), Multi-resolution Geometric Modeling (2003, National PhD School Bertinoro), Geometric Meshes Modeling and Processing (2014, Università of Genova - Computer Science and Systems Engineering)

- Post-graduate courses: *International Post-Graduate Course on Geographic Information Systems* (1994, San Miniato), *National School on Machine Vision* (1996, Fermo), *Tutorial Courses Eurographics Conference* (1997, Budapest, Hungary), *Tutorial Courses IEEE Visualization Conference* (1998, Research Triangle Park, USA), *Tutorial Courses Eurographics Conference* (1999, Milano),

Computational Methods for Shape Modelling and Analysis (2004, Genova), *STAR Courses Eurographics Conference* (2012, Cagliari), *Graduate School 11th Symposium on Geometry Processing* (2013, Genova).

Publications of Enrico Puppo

- **International Journals**

1. M. Ancona, A. Clematis, L. De Floriani, E. Puppo, 1987, A hardware description language based on a hierarchical graph model, *Microprocessing and Microprogramming - The Euromicro Journal*, North-Holland, Amsterdam (NL), N.20 (Conference Issue), pp.183-188.
2. M. Ancona, A. Clematis, L. De Floriani, E. Puppo, 1991, HIDEL: a language for hierarchical VLSI design, *The Computer Journal*, Citrus Heights, CA (USA), 34(3), pp.195-206.
3. L. De Floriani, E. Puppo, 1992, An on-line algorithm for constrained Delaunay triangulation, *CVGIP - Graphical Models and Image Processing*, Academic Press, Duluth, MN (USA), 54(4), pp.290-300.
4. L. De Floriani, D. Mirra, E. Puppo, 1993, Extracting contour lines from a hierarchical surface model, *Computer Graphics Forum*, Blackwell, Cambridge, MA (USA), 12(3) (Eurographics Conference Issue), pp.249-260.
5. E. Puppo, L.S. Davis, D. DeMenthon, A. Teng, 1994, Parallel terrain triangulation, *International Journal of Geographical Information Systems*, Taylor & Francis, London (UK), 8(2), pp.105-128.
6. L. De Floriani, P. Marzano, E. Puppo, 1994, Line-of-sight communication on terrain models, *International Journal of Geographical Information Systems*, Taylor & Francis, London (UK), 8(4), pp.329-342.
7. L. De Floriani, E. Puppo, 1995, Hierarchical triangulation for multiresolution surface description, *ACM Transactions on Graphics*, ACM Press, New York, NY (USA), 14(4), October 1995, pp.363-411.
8. L. De Floriani, P. Marzano, E. Puppo, 1996, Multiresolution models for topographic surface description, *The Visual Computer*, Springer-Verlag, Berlin (D), 12(7), pp.317-345.
9. E. Puppo, P. Marzano, 1997, Discrete visibility problems and graph algorithms, *International Journal of Geographical Information Science*, Taylor & Francis, London (UK), 11(2), pp.139-161.
10. P. Cignoni, P. Marino, C. Montani, E. Puppo, R. Scopigno, 1997, Speeding up isosurface extraction using interval trees, *IEEE Tansactions on Visualization and Computer Graphics*, IEEE Computer Society Press, Washington, DC (USA), 3(2), April-June 1997, pp.158-170.
11. P. Cignoni, E. Puppo, R. Scopigno, 1997, Representation and visualization of terrain surfaces at variable resolution, *The Visual Computer*, Springer-Verlag, Berlin (D), 13(5), July 1997, pp.199-217.
12. Y.A. Teng, D. Mount, E. Puppo, L.S. Davis, 1997, Parallelizing an algorithm for visibility on polyhedral terrain, *International Journal of Computational Geometry and Applications*, World Scientific, Singapore, 7(1-2), February 1997, pp.75-84.
13. P. Cignoni, C. Montani, E. Puppo, R. Scopigno, 1997, Multiresolution representation and visualization of volume data, *IEEE Transactions on Visualization and Computer Graphics*, IEEE Computer Society Press, Washington, DC (USA), 3(4), October-December 1997, pp.352-369.
14. E. Puppo, 1997, On the topological representation of line drawings, *Pattern Recognition Letters*, Elsevier Science, Amsterdam (NL), 18, pp.575-582.
15. E. Puppo, 1998, Variable resolution triangulations, *Computational Geometry Theory and Applications*, Elsevier Science, Amsterdam (NL), 11(3-4), December 1998, pp.219-238.
16. L. De Floriani, P. Magillo, E. Puppo, 2000, Compressing Triangulated Irregular Networks, *GeoInformatica*, Kluwer Academic Publishers, Dordrecht (NL), 4(1), March 2000, pp.67-88.
17. L. De Floriani, P. Magillo, E. Puppo, 2000, VARIANT: A System for Terrain Modeling at Variable Resolution, *GeoInformatica*, Kluwer Academic Publishers, Dordrecht (NL), 4(3), October 2000, pp.287-315.

18. L. De Floriani, P. Magillo, F. Morando, E. Puppo, 2000, Dynamic view-dependent multiresolution on a client-server architecture, *Computer-Aided Design*, Elsevier Science, Amsterdam (NL), 32(13), November 2000, pp.805-823.

19. L. De Floriani, M.M. Mesmoudi, F. Morando, E. Puppo, 2003, Decomposing non-manifold objects in arbitrary dimension, *Graphical Models*, 65(1-3), pp.2-22. Academic Press - Elsevier Science (USA).

20. P. Cignoni, L. De Floriani, P. Magillo, E. Puppo, R. Scopigno, 2004, Selective Refinement Queries for Volume Visualization of Unstructured Tetrahedral Meshes, *IEEE Transactions on Visualization and Computer Graphics*, 10(1), pp.29-45. IEEE Computer Society Press, Washington, DC (USA).

21. L. De Floriani, P. Magillo, E. Puppo, D. Sobrero, 2004, A Multi-Resolution Topological Representation for Non-Manifold Meshes, *Computer-Aided Design*, 36(2), pp. 141-159, Elsevier Science, Amsterdam (NL).

22. U. Castellani, A. Fusiello, V. Murino, L. Papaleo, E. Puppo, M. Pittore, 2005, A complete system for on-line 3D modeling from acoustic images, *Signal Processing: Image Communication*, 20(9-10), October-November 2005, pp. 832-852, Elsevier Science, Amsterdam (NL)., New York, NY (USA)

23. E. Danovaro, L. De Floriani, P. Magillo, E. Puppo, D. Sobrero, 2006, Level-of-detail for data analysis and exploration: A historical overview and some new perspectives, *Computers and Graphics*, 30(3), pp. 334-344. Elsevier Science, Amsterdam (NL).

24. R. Viaña, P. Magillo, E. Puppo, P.A. Ramos, 2006, Multi-VMap: a Multi-Scale Model for Vector Maps, *GeoInformatica*, 10(3), September 2006, pp./ 359-394, Springer Netherlands (NL).

25. E. Puppo, D. Panozzo, 2009, RGB Subdivision, *IEEE Transactions on Visualization and Computer Graphics*, 15(2), pp.295–310. IEEE Computer Society Press, Washington, DC (USA).

26. M. Tarini, N. Pietroni, P. Cignoni, D. Panozzo, E. Puppo, 2010, Practical quad mesh simplification, *Computer Graphics Forum*, Volume 29, Number 2 (Eurographics 2010), pp.407-418.

27. D. Panozzo, E. Puppo, 2011, Implicit hierarchical quad-dominant meshes, *Computer Graphics Forum*, Volume 30, Number 6, pp. 1617-1629, DOI: 10.1111/j.1467-8659.2011.01847.x

28. D. Panozzo, E. Puppo, M. Tarini, N. Pietroni, P. Cignoni, 2011, Automatic construction of quad-based subdivision surfaces using Fitmaps, *IEEE Transactions on Visualization and Computer Graphics*, Volume 17, Number 10, pp.1510-1520, IEEE Computer Society Press, Washington, DC (USA), DOI: 10.1109/TVCG.2011.28.

29. Tarini M., Puppo E., Panozzo D., Pietroni N., Cignoni P., 2011, Simple Quad Domains for Field Aligned Mesh Parametrization, *ACM transactions on Graphics (SIGGRAPH Asia 2011)*, Volume 30, Number 6, pp.142:1-142:12, DOI: 10.1145/2070781.2024176.

30. Panozzo D., Lipman Y., Puppo E., Zorin D., 2012, Fields on Symmetric Surfaces, *ACM transactions on Graphics (SIGGRAPH 2012)*, Volume 31, Number 3, pp.111:1–111:12, DOI: 10.1145/2185520.2185607.

31. Giorgio Marcias, Nico Pietroni, Daniele Panozzo, Enrico Puppo, Olga Sorkine-Hornung, 2013, Animation-Aware Quadrangulation, *Computer Graphics Forum*, Volume 32, Number 5 (EUROGRAPHICS/ACM SIGGRAPH Symposium on Geometry Processing), pp.167–175, John Wiley and Sons, DOI: 10.1111/cgf.12183.

32. David Bommes, Bruno Lévy, Nico Pietroni, Enrico Puppo, Claudio Silva, Marco Tarini, Denis Zorin, 2013, Quad-Mesh Generation and Processing: a survey, *Computer Graphics Forum*, Volume 32, Number 6, pp.51–76, John Wiley and Sons, DOI: 10.1111/cgf.12014.

33. Daniele Panozzo, Enrico Puppo, Marco Tarini, Olga Sorkine-Hornung, 2014, Frame Fields: Anisotropic and Non-Orthogonal Cross Fields, *ACM Transactions on Graphics (SIGGRAPH 2014)*, 33(4).

34. Nico Pietroni, Davide Tonelli, Enrico Puppo, Maurizio Froli, Roberto Scopigno, Paolo Cignoni, 2015, Static Aware Gris Shells, *Computer Graphics Forum*, (Eurographics 2015), 34 (2), 627-641.
35. Giorgio Marcias, Kenshi Takayama, Nico Pietroni, Daniele Panozzo, Olga Sorkine-Hornung, Enrico Puppo, Paolo Cignoni, 2015, Data Driven Interactive Quadrangulation, *ACM Transactions on Graphics (SIGGRAPH 2015)*, 34(4):65.
36. F. Usai, M. Livesu, E. Puppo, M. Tarini, R Scateni, 2015, Extraction of the quad layout of a triangle mesh guided by its curve skeleton, ACM Transactions on Graphics (TOG) 35 (1):6.
37. M. Livesu, A. Muntoni, E. Puppo, R. Scateni, 2016, Skeleton-driven Adaptive Hexahedral Meshing of Tubular Shapes, Computer Graphics Forum, 35(7):237-246.
38. N. Pietroni, E. Puppo, G. Marcias, R. Roberto, P. Cignoni, 2016, Tracing Field-Coherent Quad Layouts, Computer Graphics Forum, 35(7):485-496.
39. D. Tonelli, N. Pietroni, E. Puppo, M. Froli, P. Cignoni, G. Amendola, R. Scopigno, 2016, Stability of statics aware voronoi grid-shells, Engineering Structures, 116:70-82.
40. L. Rocca, B. Jenny, E. Puppo, 2017, A continuous scale-space method for the automated placement of spot heights on maps, Computers and Geosciences, 109:216-227.
41. C. Mancinelli, M. Livesu, E. Puppo, 2019, A Comparison of Methods for Gradient Field Estimation on Simplicial Meshes, Computers and Graphics, 80:37-50.
42. S. Casti, M. Livesu, N. Mellado, N.A. Rumman, R. Scateni, L. Barthe, E. Puppo, 2019, Skeleton Based Cage Generation Guided by Harmonic Fields, Computers and Graphics, 81:140-151.
43. N. De Giorgis, E. Puppo, P. Alborno, A. Camurri, 2019, Evaluating movement quality through intra-personal synchronisation, IEEE Transactions on Human Machine Systems, 49(4):304-313.
44. Livesu, Marco and Pietroni, Nico and Puppo, Enrico and Sheffer, Alla and Cignoni, Paolo, 2020, LoopyCuts: Practical Feature-Preserving Block Decomposition, ACM Trans. on Graphics (Siggraph 2020), 4(390.
45. F. Corda, J. M. Thiery, M. Livesu, E. Puppo, T. Boubekeur, R. Scateni, 2020, Real Time Deformation with Coupled Cages and Skeletons, Computer Graphics Forum, 39(6):19-32.

- **Monographies**

1. E. Puppo, R. Scopigno, 1997, Simplification, LOD, and Multiresolution - Principles and Applications, *EUROGRAPHICS'97 Tutorial Notes*, PS97 TN4, ISSN 1017-4656, Eurographics Association, Aire-la-Ville (CH).
2. V. Murino, E. Puppo (Eds.), 2015, Image Analysis and Processing – ICIAP2015, *Lacture Notes in Computer Science*, N.9279-9280, Springer, Berlin-Heidelberg.
3. V. Murino, E. Puppo, D. Sona, M. Cristani, C. Sansone (Eds.), 2015, New Trends in Image Analysis and Processing – ICIAP2015 Workshops, *Lacture Notes in Computer Science*, N.9281, Springer, Berlin-Heidelberg.

- **International book chapters**

1. L. De Floriani, E. Puppo, 1989, A survey of constrained delaunay triangulation algorithms for surface representation, in *Issues on Machine Vision*, G.G. Pieroni (Editor), Springer-Verlag, Wien - New York, *CISM Courses and Lectures*, N.307, pp.95-104.
2. E. Bruzzone, L. De Floriani, E. Puppo, 1989, Manipulating three-dimensional triangulations, in *Foundations of Data Organization and Algorithms*, W. Litwin, H.J. Schek (Editors), Springer-Verlag, Berlin Heidelberg (D), *Lecture Notes in Computer Science*, N.367, pp.340-353.
3. E. Bruzzone, L. De Floriani, E. Puppo, 1990, Reconstructing three-dimensional shapes through Euler operators, in *Progress in Image Analysis and Processing*, V. Cantoni, L.P. Corderlla, S. Levialdi, G. Sanniti di Baja (Editors), World Scientific, Singapore, pp.407-414.

4. L. De Floriani, E. Puppo, 1991, Hybrid models and conversion algorithms for solid object representation, in *Scientific Visualization of Physical Phenomena*, N.M. Patrikalakis (Editor), Springer-Verlag, Hong Kong, pp.457-484.

5. M. Cazzanti, L. De Floriani, G. Nagy, E. Puppo, 1992, Visibility computation on a triangulated terrain, in *Progress in Image Analysis and Processing II*, V. Cantoni, M. Ferretti, S. Levialdi, R. Negrini, R. Stefanelli (Editors), World Scientific, Singapore, pp.721-728.

6. L. De Floriani, E. Puppo, 1992, Extraction and representation of shape features for CAD/CAM applications, in *Visual Form - Analysis and Recognition*, C. Arcelli, L.P. Cordella, G. Sanniti di Baja (Editors), Plenum Press, New York, pp.187-196.

7. L. De Floriani, E. Puppo, 1992, A hierarchical triangle-based model for terrain description, in *Theories and Methods of Spatio-Temporal Reasoning in Geographic Space*, A.U. Frank, I. Campari, U. Formentini (Editors), Springer-Verlag, Berlin Heidelberg (D), *Lecture Notes in Computer Science*, N.639, pp.236-251.

8. L. De Floriani, P. Marzano, E. Puppo, 1993, Spatial queries and data models, in *Spatial Information Theory - A Theoretical Basis for GIS*, A.U. Frank, I. Campari (Editors), Springer-Verlag, Berlin Heidelberg (D), *Lecture Notes in Computer Science*, N.716, pp.113-138.

9. M. Bertolotto, E. Bruzzone, L. De Floriani, E. Puppo, 1994, Multiresolution representation of volume data through hierarchical simplicial complexes, in *Aspects of Visual Form Processing*, C. Arcelli, L.P. Cordella, G. Sanniti di Baja (Editors), World Scientific, Singapore, pp.73-82.

10. M. Bertolotto, L. De Floriani, E. Puppo, 1994, Hierarchical Hypersurface Modeling, in *IGIS'94: Geographic Information Systems*, J. Nievergelt, T. Roos, H. Schek, P. Widmayer (Editors), Springer-Verlag, Berlin Heidelberg (D), *Lecture Notes in Computer Science*, N.884, pp.88-97.

11. M. Bertolotto, L. De Floriani, E. Puppo, 1994, Multiresolution topological maps, in *Advanced Geographic Data Modelling - Spatial Data Modelling and Query Languages for 2D and 3D Applications*, M. Molenaar, S. De Hoop (Editors), Netherland Geodetic Commission, Deflt (NL), *Publications on Geodesy - New Series*, N.40, pp.179-190.

12. E. Puppo, G. Dettori, 1995, Towards a Formal Model for Multiresolution Spatial Maps, in *Advances in Spatial Databases*, Max J. Egenhofer, John R. Herring (Editors), Springer-Verlag, Berlin Heidelberg (D), *Lecture Notes in Computer Science*, N.951, pp.152-169.

13. E. Puppo, 1995, Segmentation/reconstruction of range images based on piecewise-linear approximation, in *Image Analysis and Processing*, C. Braccini, L. De Floriani, G. Vernazza (Editors), Springer-Verlag, Berlin Heidelberg (D), *Lecture Notes in Computer Science*, N.974, pp.367-372.

14. L. De Floriani, P. Marzano, E. Puppo, 1996, Multiresolution modeling in geographical information systems, in *Innovations in GIS 3*, D. Parker (Editor), Taylor & Francis, London (UK), pp.9-19.

15. L. De Floriani, E. Puppo, P. Magillo, 1997, A formal approach to multiresolution hypersurface modeling, *Geometric Modeling: Theory and Practice*, W. Straßer, R. Klein, R. Rau (Editors), Springer-Verlag, Berlin Heidelberg (D), pp.302-323.

16. L. De Floriani, P. Magillo, E. Puppo, 1997, Multiresolution representation and reconstruction of triangulated surfaces, in *Advances in Visual Form Analysis*, C. Arcelli, L. Cordella, G. Sanniti di Baja (Editors), World Scientific, Singapore, pp.140-149.

17. L. De Floriani, P. Magillo, E. Puppo, 1997, Visualizing Parametric Surfaces at Variable Resolution, in *Image Analysis and Processing*, A. Del Bimbo (Editor), Springer-Verlag, Berlin Heidelberg (D), *Lecture Notes in Computer Science*, N.1311, pp.308-315.

18. P. Magillo, E. Puppo, 1998, Algorithms for parallel terrain modelling and visualisation, Chapter 16 in *Parallel Processing Algorithms for GIS*, R.G. Healey, S. Dowers, B.M. Gittings, M.J. Mineter (Editors), Taylor & Francis, London (UK), pp.351-386.

19. L. De Floriani, P. Magillo, E. Puppo, 1999, Multiresolution Representation of Shapes Based on Cell Complexes, in *Discrete Geometry for Computer Imagery*, G. Bertrand, M. Couprie,

L. Perroton (Editors), Springer-Verlag, Berlin Heidelberg (D), *Lecture Notes in Computer Science*, N.1568, pp.3-18.

20. L. De Floriani, P. Magillo, E. Puppo, 1999, Data Structures for Simplicial Multi-Complexes, in *Advances in Spatial Databases* R.H. Güting, D. Papadias, F. Lochovsky (Editors), Springer-Verlag, Berlin Heidelberg (D), *Lecture Notes in Computer Science*, N.1651, pp.33-51.
21. L. De Floriani, E. Puppo, P. Magillo, 1999, Applications of Computational Geometry to Geographic Information Systems, Chapter 7 in *Handbook of Computational Geometry*, J.R. Sack, J. Urrutia (Editors), Elsevier Science, pp.333-388.
22. L. De Floriani, E. Puppo, 2000, Representation and Conversion issues in Solid Modeling, in *Intelligent Systems and Robotics*, G.W. Zobrist, C.Y. Ho (Editors), Gordon and Breach Science Publications, pp.374-431.
23. L. De Floriani, P. Magillo, F. Morando, E. Puppo, 2001, Non-Manifold Multi-Tessellation: from Meshes to Iconic Representations of 3D Objects, in *Visual Form 2001*, C. Arcelli, L.P. Cordella, G. Sanniti di Baja (Editors), Springer-Verlag, Berlin Heidelberg (D), *Lecture Notes in Computer Science*, N.2059, pp.654-664.
24. E. Danovaro, L. De Floriani, P. Magillo, E. Puppo, 2001, Compressing Multiresolution Triangle Meshes, *Advances in Spatial and Temporal Databases*, Jensen, Schneider, Seeger, Tsotras (Editors) Springer-Verlag, Berlin Heidelberg (D), *Lecture Notes in Computer Science,* N.2121, pp. 345-364.
25. E. Danovaro, L. De Floriani, P. Magillo, E. Puppo, 2001, Representing vertex-based multiresolution simplicial complexes, in *Digital and Image Geometry*, G. Bertrand, A. Imiya, R. Klette (Editors), Springer-Verlag, Berlin Heidelberg (D), *Lecture Notes in Computer Science,* N.2243, pp.129-149.
26. L. De Floriani, M.M. Mesmoudi, F. Morando, E. Puppo, 2002, Non-Manifold Decomposition in Arbitrary dimensions, *Discrete Geometry for Computer Imagery*, A.J.-P. Braquelaire, J.-O. Lauchaud, A. Vialard (Editors), Springer-Verlag, Berlin Heidelberg (D), *Lecture Notes in Computer Science,* N.2301, pp.69-80.
27. L. De Floriani, F. Morando, E. Puppo, 2003, A Representation for Abstract Simplicial Complexes: an Analysis and a Comparison, *Discrete Geometry for Computer Imagery*, I. Nyström, G. Sanniti di Baja, S. Svensson (Editors), Springer-Verlag, Berlin Heidelberg (D), *Lecture Notes in Computer Science,* N.2886, pp.454-464.
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