

## Jarek Rossignac's peer reviewed publications

### 1984

1. "Constant-Radius Blending in Solid Modeling", J. Rossignac and A. Requicha, **ASME Computers In Mechanical Engineering** (CIME), Vol. 3, pp. 65-73, 1984. (*Google Scholar: 167 citations. Impacted surface/surface intersection technology in Unigraphics.*)

### 1986

2. "Constraints in Constructive Solid Geometry", J. Rossignac, Proc. *ACM Workshop on Interactive 3D Graphics*, ACM Press, pp. 93-110, Chapel Hill, 1986. (*Google Scholar: 82 citations.*)
3. "Offsetting Operations in Solid Modelling", J. Rossignac and A. Requicha, **Computer-Aided Geometric Design**, Vol. 3, pp. 129-148, 1986. (*Google Scholar: 232 citations.*)
4. "Depth Buffering Display Techniques for Constructive Solid Geometry", J. Rossignac and A. Requicha, **IEEE Computer Graphics&Applications**, Vol. 6, pp. 29-39, 1986. (*Google Scholar: 66 citations.*)

### 1987

5. "Piecewise-Circular Curves for Geometric Modeling," J. Rossignac and A. Requicha, **IBM Journal of Research and Development**, Vol. 13, pp. 296-313, 1987. (*Google Scholar: 73 citations.*)

### 1988

6. "Interactive Design with Sequences of Parameterized Transformations," J. Rossignac, P. Borrel, and L. Nackman, Proc. 2nd Eurographics *Workshop on Intelligent CAD Systems: Implementation Issues*, April 11-15, Veldhoven, The Netherlands, pp. 95-127, 1988. (*Google Scholar: 89 citations.*)
7. "Procedural Models for Design and Fabrication," J. Rossignac, P. Borrel, and L. Nackman, in *Automation in the Design and Manufacture of Large Marine Systems*, Ed. C. Chrissostomidis, pp. 147-175, Hemisphere Publishing Co., 1990. Proc. of the MIT Sea Grant Symposium, Boston, October 1988.

### 1989

8. "SGC: A Dimension-Independent Model for Pointsets with Internal Structures and Incomplete Boundaries", J. Rossignac and M. O'Connor, in *Geometric Modeling for Product Engineering*, Eds. M. Wosny, J. Turner, K. Preiss, North-Holland, pp. 145-180, Proceedings of the IFIP Workshop on CAD/CAM, 1989. (*Google Scholar: 256 citations. Has inspired advances in several commercial products (including CATIA) and several projects in Academia worldwide (including Sriram at NIST, Hardman at Kansas, Gomez, Lopes and Carvalho in Brazil, Rappoport in Israel, Kettner in Saarbrucken, Middleditch in the UK, Higashi in Japan, deFloriani in Italy, and Tan in China.)*)
9. "Relationship between S-bounds and Active Zones in Constructive Solid Geometry," S. Cameron and J. Rossignac. Proceedings of *Theory and Practice of Geometric Modeling*, pp. 369-348, Blaubeuren, Germany, October, 1988.
10. "Considerations on the Interactive Rendering of Four-dimensional Volumes," J. Rossignac, Proc. of the Chapel Hill *Workshop on Volume Visualization*, pp. 67-76, 1989.
11. "Active Zones in CSG for Accelerating Boundary Evaluation, Redundancy Elimination, Interference Detection and Shading Algorithms", J. Rossignac and H. Voelcker, **ACM Transactions on Graphics**, Vol. 8, pp. 51-87, 1989. (*Google Scholar: 74 citations.*)

### 1990

12. "Issues on feature-based editing and interrogation of solid models", J.R. Rossignac. **Computers&Graphics**, Vol. 14, No. 2, pp. 149-172, 1990. (*Best paper award. Google Scholar: 92 citations.*)

### 1991

13. "Constructive Non-Regularized Geometry", J. Rossignac, and A. Requicha. **Computer-Aided Design**, Vol. 23, No. 1, pp. 21-32, Jan./Feb. 1991. (*Google Scholar: 111 citations.*)

14. "Accurate scan-conversion of triangulated surfaces" J. Rossignac. In *Advances in Computer Graphics Hardware VI*, Ed. A. Kaufman, Springer Verlag, Berlin. Proc. of the 6th Eurographics *Workshop on Computer Graphics Hardware*, Vienna, September 1991.

## 1992

15. "Correct Shading of Regularized CSG solids using a Depth-Interval Buffer", J. Rossignac and J. Wu. In *Advances in Computer Graphics Hardware V*, Eds. R.L. Grimsdale and A. Kaufman, Springer Verlag, pp. 117-138, 1992. Proc of the Eurographics Workshop on Graphics Hardware.
16. "M-Buffer: A flexible MISD Architecture for Advanced Graphics" B.O. Schneider and J. Rossignac. Proc. 7th *Eurographics Workshop on Computer Graphics Hardware*, Cambridge, UK, September 1992.
17. "Hidden contours on a frame-buffer" J. Rossignac and M. van Emmerik. Proceedings of the 7th *Eurographics Workshop on Computer Graphics Hardware*, Cambridge, UK, September 1992. (*Google Scholar: 30 citations.*)
18. "Interactive Inspection of Solids: Cross-Sections and Interferences" J. Rossignac, A. Megahed, and B.O. Schneider, **ACM Computer Graphics**, Vol. 26, No. 2, pp. 353-360, *Proc. ACM Siggraph*, July 1992. (*Google Scholar: 104 citations.*)
19. "Solid-Interpolating Deformations: Construction and Animation of PIPs", A. Kaul and J. Rossignac, Proc. *Eurographics*. Published as Journal paper in **Computers&Graphics**, Vol. 16, No. 1, pp. 107-115, 1991. (*Gunter Enderle Eurographics Best Paper Award. IBM's Award for the Best Paper in Computer Science. Google Scholar: 188 citations.*)
20. "Solid Modeling and Beyond" A. Requicha and J. Rossignac. Special issue on CAGD, **IEEE Computer Graphics & Applications**, pp. 31-44, September 1992. (*Best Paper Award. Google Scholar: 169 citations*)

## 1993

21. "Simplifying interactive design of solid models: A hypertext approach," M. van Emmerik, A. Rappoport, and J. Rossignac. **The Visual Computer**, vol. 9, No. 5, pp. 239-254, March 1993.
22. "Multi-resolution 3D approximations for rendering complex scenes" J. Rossignac and P. Borrel, pp. 455-465, in *Geometric Modeling in Computer Graphics*, Springer Verlag, Eds. B. Falcidieno and T.L. Kunii, Genova, Italy, June 28-July 2, 1993. (*Google Scholar: 888 citations. Used in several commercial products, including IBM's 3D Interaction Accelerator and SGI's OpenGL Optimizer.*)

## 1994

23. "Research Issues in Model-based Visualization of Complex Data Sets", J. Rossignac and M. Novak. **IEEE Computer Graphics & Applications**, Vol. 14, No 2., pp. 83-85, March 1994.
24. "AGRELS and BIPs: Metamorphosis as a Bezier curve in the space of polyhedra", J. Rossignac and A. Kaul, **Proc. Eurographics**, Oslo, Norway, **Computer Graphics Forum**, Vol 13, No 3, pp. C179-C184, Sept 1994. (*Google Scholar: 53 citations.*)
25. "Triangulating multiply-connected polygons: A simple, yet efficient algorithm", R. Ronfard and J. Rossignac, **Proc. Eurographics**, Oslo, Norway, **Computer Graphics Forum**, Vol 13, No 3, pp. C281-C292, Sept 1994. (*Best Paper Award, 2<sup>nd</sup> price.*)
26. "Processing Disjunctive forms directly from CSG graphs", J. Rossignac, in the proceedings of CSG 94: *Set-theoretic Solid Modelling Techniques and Applications*, Information Geometers, pp. 55-70, Winchester, UK, April 1994.

## 1995

27. "BRUSH as a Walkthrough System for Architectural Models", B.-O. Schneider, P. Borrel, J. Menon, J. Mittleman, J. Rossignac, Proc. 5th *Eurographics Workshop on Rendering*, Darmstadt (Germany), June 1994. In *Rendering Techniques'95*, Springer-Verlag, 389-399, New York, 1995. (*Google Scholar: 22 citations.*)
28. "M-Buffer: a flexible MISD architecture for advanced graphics", B.-O. Schneider and J. Rossignac, **Computers & Graphics**, Volume 19, Issue 2, March-April 1995, Pages 239-246.

## 1996

29. "Full-range approximations of triangulated polyhedra", Remi Ronfard and Jarek Rossignac, Proceedings of **Eurographics'96**, Published as Journal paper in **Computer Graphics Forum**, pp. C-67, Vol. 15, No. 3, August 1996. (*Google Scholar: 352 citations.*)
30. "Topologically exact evaluation of polyhedra defined in CSG with loose primitives", R. Banerjee and J. Rossignac, **Computer Graphics Forum**, Vol. 15, No. 4, pp. 205-217, 1996.
31. "A Road Map to Solid Modeling", C. Hoffmann and J. Rossignac. **IEEE Transactions on Visualization and Computer Graphics**, vol. 2, No. 1, pp. 3-10, March 1996. (*Google Scholar: 53 citations.*)
32. "MAGISET: Architecture and Programming Interface for a Universal Modeler, J. Rossignac, Proceedings of the *Blaubeuren Workshop on Graphics and Modeling*, Germany 1996.

## 1997

33. "Structured Topological Complexes: A feature-based API for non-manifold topologies", J. Rossignac, Proceedings of the *ACM Symposium on Solid Modeling*, pp. 1-9, 1997. (*Top conference in the area, 30% acceptance rate.*)

## 1998

34. "Geometric Compression through Topological Surgery", G. Taubin and J. Rossignac. **ACM Transactions on Graphics**, Volume 17, Number 2, pp. 84-115, April 1998. (*IBM's Award for the Best Paper in Computer Science.*) *Google Scholar: 757 citations. CiteSeer: The most cited amongst all of the articles published by the ACM Transactions on Graphics that year. Listed in the "Most cited 1998 articles in Computer Science" <<http://citeseer.ist.psu.edu/articles1998.html>>. Adopted as the MPEG-4 standard for 3D shape compression.*)
35. "Geometry coding and VRML", G. Taubin, W. Horn, F. Lazarus, and J. Rossignac, **Proceedings of the IEEE**, pp. 1228-1243, vol. 96, no. 6, June 1998. (*Google Scholar: 199 citations.*)

## 1999

36. "Edgebreaker: Connectivity compression for triangle meshes", J. Rossignac. **IEEE Transactions on Visualization and Computer Graphics**, Vol. 5, No. 1, pp. 47-61, January - March 1999. (*Sigma Xi Best Paper Award for the best paper published by a Georgia Tech Faculty in 1999. Google Scholar: 637 citations. Top referenced article in IEEE TVCG that year. Was incorporated in several products, including Hoops3D.*)
37. "Tribox-based simplification of three-dimensional objects", A. Crosnier and J. Rossignac. **Computers&Graphics**, Vol. 23, No. 3, pp. 429-438, March 1999. (*Best Paper Award, 2<sup>nd</sup> Prize.*)
38. "Optimal Bit Allocation in Compressed 3D Models", D. King and J. Rossignac, **Journal of Computational Geometry, Theory and Applications**. Volume 14, Issue 1-3, pp. 91-118. November 1999. (*Google Scholar: 23 citations.*)
39. "Wrap&Zip decompression of the connectivity of triangle meshes compressed with Edgebreaker", J. Rossignac and A. Szymczak, **Journal of Computational Geometry, Theory and Applications**, Volume 14, Issue 1-3, pp. 119-135, November 1999. (*Google Scholar: 94 citations.*)
40. "Matchmaker: Manifold BReps for non-manifold r-sets", J. Rossignac and D. Cardoze. Proceedings of the **ACM Symposium on Solid Modeling**, pp. 31-41, June 1999. (*Top conference in the area, 30% acceptance rate. Google Scholar: 71 citations*)
41. "Grow&Fold: Compression of Tetrahedral Meshes", A. Szymczak and J. Rossignac. Proc. **ACM Symposium on Solid Modeling**, June 1999, pp. 54-64. (*Top conference in the area, 30% acceptance rate. Google Scholar: 94 citations*)
42. "Implant Sprays: Compression of Progressive Tetrahedral Mesh Connectivity", R. Pajarola, J. Rossignac, and A. Szymczak, **IEEE Visualization 1999**, San Francisco, October 24-29, 1999. (*47 papers were selected out of the 130 submitted. Google Scholar: 35 citations.*)
43. "Guaranteed 3.67V bit encoding of planar triangle graphs" D. King and J. Rossignac, 11th **Canadian Conference on Computational Geometry** (CCCG'99), pp. 146-149, Vancouver, CA, August 15-18, 1999. (*Google Scholar: 105 citations.*)

## 2000

44. "Compressed Progressive Meshes", R. Pajarola and J. Rossignac, **IEEE Transactions on Visualization and Computer Graphics**, Volume 6, No. 1, pp. 79-93, January-March 2000. (*Google Scholar: 401 citations.*)
45. "Grow&Fold: Compressing the connectivity of tetrahedral meshes", A. Szymczak and J. Rossignac. **Computer-Aided Design**. 32(8/9), 527-538, July/August, 2000.
46. "Screw motions for the animation and analysis of mechanical assemblies", J. Kim and J. Rossignac, **International Journal of the Japan Society of Mechanical Engineers**, 2000.
47. "Squeeze: Fast and Progressive Decompression of Triangle Meshes", R. Pajarola and J. Rossignac, **Computer Graphics International Conference**, Switzerland, pp. 173-182, June 2000. (*Google Scholar: 27 citations.*)
48. "An Edgebreaker-based efficient compression scheme for regular meshes", A. Szymczak, D. King, J. Rossignac, 12th **Canadian Conference on Computational Geometry**, Fredericton, New Brunswick, August 16-19, pp. 218-225, 2000. (*Google Scholar: 63 citations.*)
49. "Registration of multimodal 3D cardiac information using the iterative closest point approach", T. Faber (Emory), F. Chiron, N. Ezquerro, J. Rossignac; J. Klein (Emory), R. Folks (Emory), E. Garcia (Emory). **Mathematical Modeling, Estimation, and Imaging Conference**, San Diego CA. SPIE Proceedings series. Vol. 4121, pp. 233-241, 2000.

## 2001

50. "Hoops: 3D curves as conservative occluders for cell visibility", P. Brunet, J. Rossignac, I. Navazo, C. Saona-Vazquez, **Computer Graphics Forum**, 19(3):499-506, Proc. **Eurographics 2001**. (Collaboration with UPC Barcelona in Spain).
51. "Computing and visualizing pose-interpolating 3-D motions", J. Rossignac and J. Kim, **Computer-Aided Design**, vol. 33, no. 4, pp. 279-291, April 2001. (*Google Scholar: 34 citations.*)
52. "Surface simplification and Edgebreaker compression for 2D Cell Animations", Vivek Kwatra and Jarek Rossignac, **Shape Modeling International**, 2001.
53. "A prototype system for visualizing time-dependent volume data", L. Kettner, A. Mascarenhas, J. Rossignac and J. Snoeyink. 17th European **Workshop on Computational Geometry**, pp. 13-16, 2001.
54. "An Edgebreaker-based Efficient Compression Scheme for Connectivity of Regular Meshes", A. Szymczak, D. King, J. Rossignac. Special issue of Journal of **Computational Geometry: Theory and Applications**, Vol 20, No 2, Oct 2001. (*Google Scholar: 73 citations.*)

## 2002

55. "Piecewise Regular Meshes: Construction and Compression", A. Szymczak, J. Rossignac, and D. King. **Graphical Models**, Volume 64, pp.183-198, May 2002. (*Google Scholar: 30 citations.*)
56. "Space-time surface simplification and Edgebreaker compression of cel animations", Vivek Kwatra and Jarek Rossignac, **International Journal of Shape Modeling**, vol. 8, No. 2, December 2002.
57. "An Unequal Error Protection Method for Packet Loss Resilient 3-D Mesh Transmission," 21<sup>st</sup> **IEEE INFOCOM**, New York, June 23-25, 2002. <http://www.ieee-infocom.org/2002/>
58. "An Unequal Error Protection Method for Progressively Compressed 3-D Meshes", Ghassan Al-Regib, Yucel Altunbasak (ECE, Georgia Tech) and Jarek Rossignac. **International Conf. on Acoustics, Speech and Signal Processing ICASSP'02**. Multimedia Communications and Networking II Session. May 2002.
59. "A Joint Source and Channel Coding Approach for Progressively Compressed 3-D Model Transmission", Yucel Altunbasak, Ghassan Al-Regib (ECE, Georgia Tech) and Jarek Rossignac. **IEEE International Conference on Image Compression** (ICIP), pp. 161-164, Rochester NY, Sept 22-25, 2002.
60. "Encoding of 3D animations for efficient delivery", Ghassan Al-Regib, Yucel Altunbasak, Jarek Rossignac, and Russell Mersereau. **IEEE International Conference on Multimedia and Expo** (ICME), Session on Encoding of 3D Models for Efficient Delivery, Lausanne, Switzerland, August 26-29, 2002.
61. "Edgebreaker: A Simple Compression Algorithm for Surfaces with Handles", Hélio Lopes, Jarek Rossignac, Alla Safonova (CMU), Andrzej Szymczak and Geovan Tavares (Pontifical Catholic University, Rio de Janeiro, RJ, Brazil), Seventh **ACM Symposium on Solid Modeling**, pp. 289-296, June 2002. (*Google Scholar: 21 citations.*)

## 2003

62. “Compact Robot-Generated 3D Maps for Efficient Wireless Transmission”, Michael Kaess, Ronald C. Arkin, Jarek Rossignac, 11th *International Conference on Advanced Robotics (ICAR-03)*, pp. 218-225, Jan 2003.
63. “Collision Prediction for Polyhedra under Screw Motions”, ByungMoon Kim and Jarek Rossignac, *ACM Symposium on Solid Modeling*, pp. 4-10, 2003. (*Google Scholar: 54 citations.*)
64. “Twister: A space-warp operator for the two-handed editing of 3D shapes”, Ignacio Llamas, ByungMoon Kim, Joshua Gargus, Jarek Rossignac, and Chris D. Shaw. Proc. *ACM SIGGRAPH*, pp. 663, 2003. (*Google Scholar: 111 citations.*)
65. “Out-of-core compression & decompression of large n-dimensional scalar fields”, Lorenzo Ibarria, Peter Lindstrom (LLNL), Jarek Rossignac, Andrzej Szymczak. *Computer Graphics Forum*, Proc. of *Eurographics 2003* (20% acceptance rate. *Google Scholar: 22 citations.*)
66. “ShieldTester: Cell-to-cell visibility test for surface occluders”, Isabel Navazo (UPC Barcelona, Spain), Jarek Rossignac, Joan Jou (UPC Barcelona, Spain), Rahim Shariff. *Computer Graphics Forum*, Proc. of *Eurographics 2003* (20% acceptance rate).
67. “An efficient subdivision inversion for Wavemesh-based progressive compression of 3D triangle meshes”, Sebastien Valette, Jarek Rossignac, Remy Prost. (Collaboration with CREATIS, INSA Lyon, France). *IEEE International Conference on Image Processing (ICIP) 2003*, pp. 777-780, Barcelona, Spain, September 14-17, 2003.
68. “Dynapack: Space-Time compression of the 3D animations of triangle meshes with fixed connectivity”, L. Ibarria and J. Rossignac. Tech Report GIT-GVU-03-08. April 2003. *ACM Symposium on Computer Animation (SCA)*, July 2003. (*Google Scholar: 132 citations.*)
69. “Edge-Sharpener: A geometric filter for recovering sharp features in uniform triangulations”, Marco Attene (IME Genova, Italy), Bianca Falcidieno (IME Genova, Italy), Jarek Rossignac, and Michela Spagnuolo (IME Genova, Italy). *Eurographics Symposium on Geometry Processing (SGP)*, pp. 62. June 2003. Aachen, Germany. (*Google Scholar: 18 citations.*)
70. “The Safari Interface for Visualizing Time-dependent Volume Data Using Iso-Surfaces and Contour Spectra”, Lutz Kettner, Jarek Rossignac, Jack Snoeyink. *Computational Geometry Theory and Applications (CGTA)*, vol. 25. No 1-2, pp. 97-116, 2003.
71. “Compressed Piecewise Circular Approximation of 3D Curves”, A. Safonova and J. Rossignac. *Computer-Aided Design*, Volume 35, Issue 6, Pages 533-547, May 2003.
72. “SwingWrapper: Retiling Triangle Meshes for Better Compression”, Marco Attene, Bianca Falcidieno, Michela Spagnuolo (IMA – CNR, Genova – ITALY) and Jarek Rossignac. *ACM Transactions in Graphics*, Volume 22, No. 4, pp. 982 – 996, (October 2003). (*Google Scholar: 38 citations.*)
73. “Edgebreaker: A Simple Compression Algorithm for Surfaces with Handles”, Hélio Lopes, Jarek Rossignac, Alla Safonova (CMU), Andrzej Szymczak and Geovan Tavares (Pontifical Catholic University, Rio de Janeiro, RJ, Brazil), *Computers & Graphics*, Vol. 27, No. 4, pp. 553-567, 2003. (*Runner up for Best Paper award, ranked 4<sup>th</sup> out of 80. Google Scholar: 48 citations.*)
74. “Collision Prediction”, ByungMoon Kim and Jarek Rossignac. *The ASME Journal of Computing and Information Science in Engineering (JCISE)*, vol. 3, no. 4, pp: 295-301, Dec. 2003. ([Prediction.pdf](#)).

## 2004

75. “Blowing Bubbles for the Multiscale Analysis and Decomposition of Triangle-Meshes”, Michela Mortara, Giuseppe Patane, Michela Spagnuolo, Bianca Falcidieno, and Jarek Rossignac. *Algorithmica*. vol 38, no. 1, January 2004. GVU Tech. Report GIT-GVU-03-27. ([Taylor.pdf](#)) (*Google Scholar: 33 citations.*)
76. “Delphi Encoding: Improving Edgebreaker by Geometry based Connectivity Prediction”, Volker Coors and Jarek Rossignac. *The Visual Computer*. 20(8-9)507-520, November 2004. GVU Tech. Report GIT-GVU-03-30. ([Delphi.pdf](#)) (*Google Scholar: 15 citations.*)
77. “Education-Driven Research in CAD”, Jarek Rossignac. *Computer-Aided Design Journal (CAD)*, Vol 36/14 pp 1461-1469, December 2004. GVU Tech. Report GIT-GVU-03-26. ([EDR.pdf](#))



78. “Computing Maximal Tiles and Applications to Impostor-Based Simplification”, Carlos Andujar, Pere Brunet, Antoni Chica, Jarek Rossignac, Isabel Navazo, Alvar Vinacua, **Computer Graphics Forum** (Proc. *Eurographics*), pp. 401, Grenoble, France. September 2004.
79. “Optimal Iso-Surfaces”, Carlos Andujar, Pere Brunet, Antoni Chica, Isabel Navazo, Jarek Rossignac, Alvar Vinacua. **CAD Conference**, pp. 503-512, May 2004. (*Best Paper Award 1<sup>st</sup> Prize*). ([Iso.pdf](#)).
80. “Plumber: A method for a multi-scale decomposition of 3D shapes into tubular primitives and bodies” M. Mortara, G. Patane, M. Spagnuolo, B. Falcidieno, J. Rossignac. **ACM Symposium on Solid Modeling**, 2004 (Short paper). GVU Tech. Report GIT-GVU-03-26. ([Plumber.pdf](#)).
81. “Tightening: Curvature-Limiting Morphological Simplification” (Extended Abstract), Jason Williams and Jarek Rossignac. 14th Annual Fall *Workshop on Computational Geometry*. MIT. Boston, November 2004. GVU Tech. Report GIT-GVU-04-27. (Tightening.pdf)
82. “OrthoMap: Homeomorphism-guaranteeing normal-projection map between surfaces” (Extended Abstract), F. Chazal, A. Lieutier, and J. Rossignac. 14th Annual Fall *Workshop on Computational Geometry*. MIT. Boston, November 2004. GVU Tech. Report GIT-GVU-04-28. (Orthomap.pdf)
83. “Efficient Edgebreaker for surfaces of arbitrary topology”, T. Lewiner (INRIA, Sophia Antipolis, France), H. Lopes (PUC–Rio, Brazil), J. Rossignac and A. Wilson-Vieira (CCET–UNIMONTES, Brazil). **SIBGRAPI/SIACG**, October 2004.

## 2005

84. “TetStreamer: Compressed Back-to-Front Transmission of Delaunay Tetrahedra Meshes”, Urs Bischoff and Jarek Rossignac, **Data Compression Conference**, pp. 93-102, March 2005.
85. “Bender: Deforming and animating 3D shapes by bending and twisting a virtual ribbon with both hands”, Ignacio Llamas, Alex Powell, Jarek Rossignac, Chris Shaw. **ACM Symposium on Solid and Physical Modeling**, MIT, pp. 89-99, June 2005. GVU Tech. Report GIT-GVU-04-15. (Bender.pdf)
86. “Orthomap: Homeomorphism-guaranteeing normal projection map between surfaces”, Frederic Chazal, Andre Lieutier, and Jarek Rossignac. **ACM Symposium on Solid and Physical Modeling**, MIT, pp. 9-14, June 2005.
87. “Tightening: Curvature Limiting Morphological Simplification”, Jason Williams and Jarek Rossignac. **ACM Symposium on Solid and Physical Modeling** (Sketch), MIT, pp. 107-112, June 2005.
88. “FlowFixer: Using BFECC for Fluid Simulation”, ByungMoon Kim, Yingjie Liu, Ignacio Llamas, Jarek Rossignac. *Eurographics Workshop on Natural Phenomena*, pp 51-56. September 2005. GVU Tech Report GIT-GVU-05-24. (*Science Applications International Corporation Best Georgia Tech Student Paper Recognition*).
89. “GeoFilter: Geometric Selection of Mesh Filter Parameters”, ByungMoon Kim and Jarek Rossignac. **Eurographics, Computer Graphics Forum**, 24:295-302, September 2005.
90. “PhotoMeter: Easy-to-use MonoGraphoMetrics”, Hendrik Mueller and Jarek Rossignac. **Central Europe Multimedia and Virtual Reality Conference**, June 2005. GVU Tech Report GIT-GVU-04-19.
91. “Filleting and rounding using a point-based method”, Yong Chen, Hongqing Wang, David Rosen, Jarek Rossignac. **ASME Design Engineering Technical Conferences**, DETC05/DAC-85408. September 2005.
92. “Error-Resilient Transmission of 3D Models” Ghassan Al-Regib, Yucel Altunbasak, (ECE, Georgia Tech), Jarek Rossignac, **ACM's Transactions on Graphics**, 24(2)182:208. April 2005.
93. “Optimizing the topological and combinatorial complexity of isosurfaces”, Carlos Andujar, Pere Brunet, Antoni Chica, Isabel Navazo, Jarek Rossignac, Alvar Vinacua. **Computer-Aided Design**, 37(8): 847-857, 2005.
94. “Sharpen&Bend: Recovering curved edges in triangle meshes produced by feature-insensitive sampling”, Marco Attene, Bianca Falcidino, Michela Spagnuolo, Jarek Rossignac. GVU Tech. Report GIT-GVU-03-34. (Sharpen&Bend.pdf). **IEEE Transactions on Visualization and Computer Graphics** (TVCG), vol. 11, no. 1, pp. 181-192, March/April 2005.
95. “Mason: Morphological Simplification”, Jason Williams, and Jarek Rossignac, GVU Tech. Report GIT-GVU-04-05. **Graphical Models**. 67(4)285:303, 2005. (Mason.pdf)

96. "An unequal error protection method for progressively compressed 3D models", Ghassan Al-Regib, Yussel Altunbasak and Jarek Rossignac. **IEEE Transactions on Multimedia**, 7(4):766:776, August 2005.
97. "Blister: GPU-based rendering of Boolean combinations of free-form triangulated shapes", John Hable and Jarek Rossignac. **ACM Transactions on Graphics**, Proceedings of **ACM SIGGRAPH**. 24(3):1024-1031. July 2005. (*Ranked 4<sup>th</sup> out of some 450 submissions by the reviewers. Google Scholar: 33 citations*).
98. "Shape Complexity", Jarek Rossignac, **The Visual Computer**, Special Anniversary Issue: 20 Years of The Visual Computer, 21:985-996, 2005. Springer.

## 2006

99. "PlugMatch: Computer-Assisted surface mapping for Talus Osteochondral Transplant", Dr. S. Labib (Emory) and Dr. B. McGehee (Emory), J. Rossignac, A. Powell, B. Whited, and J. Williams, 6th **International Cartilage Repair Society (ICRS) Symposium**, January 8-11, 2006, in San Diego, CA, USA.
100. "Comparative CFD study of hemi-fontan and glenn anastomosis: idealized and anatomical models with free-form deformed variations", Vasu Yermeni (BME), Kerem Pekkan (BME), Paymon Nourparvar (BME), Diane De Zelicourt (BME), Jarek Rossignac, Fotis Sotiropoulos (U. Minesota), Ajit Yoganathan (BME), Lakshmi Dasi (BME). **ASME Summer Bioengineering Conference (BIO 2006)**, session: "Cardiovascular Fluid Mechanics", June 21-25, Florida, 2006.
101. "SURGEM: Next generation CAD tools targeting anatomical complexity for patient-specific surgical planning", Jarek Rossignac, Kerem Pekkan (BME), Brian Whited, Kirk Kanter (Emory), Ajit Yoganathan (BME). **ASME Summer Bioengineering Conference (BIO2006)**, session: "Cardiovascular Solid Mechanics", June 21-25, Florida, 2006.

## 2007

102. "Advections with Significantly Reduced Dissipation and Diffusion", B.M. Kim, Y. Liu, I. Llamas, J. Rossignac. **IEEE Transactions on Visualization and Computer Graphics**, 13(1):135-144, Jan/Feb 2007.
103. "Spectral prediction", L. Ibarria, P. Lindstrom, and J. Rossignac. **Data Compression Conference (DCC)**, pp. 163-172. March 2007.
104. "Simulation of bubbles in foam with the volume control method", B.M. Kim, Y. Liu (Math), I. Llamas, X. Jiao, J. Rossignac. **ACM SIGGRAPH**. Published as a journal paper in the **ACM Transactions on Graphics**, 26(3):98, July 2007.
105. "Boundaries of volumes swept by free-form solids in screw motion", J. Rossignac, J. J. Kim, S.C. Song, K.C. Suh, C.B. Jeong. **Journal of Computer-Aided Design (JCAD)**, 39(9):745-755, Sep. 2007.
106. "CST: Constructive Solid Trimming for rendering BReps and CSG models" J. Hable and J. Rossignac. **IEEE Transactions on Visualization and Computer Graphics**, 13(5):1004-1014, Sept/Oct 2007.
107. "Anatomically Realistic Patient-Specific Surgical Planning of Complex Congenital Heart Defects Using MRI and CFD", K. Sundareswaran, D. de Zelicourt, K. Pekkan, G. Jayaprakash, D. Kim, J. Rossignac, M. Fogel, K. Kanter, A. Yoganathan. **29th International Conference of the IEEE in Engineering in Medicine and Biology Society (EMBS)**, Aug. 23-26, 2007.
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