

## Publications

### Journal papers

1. Zhenbao Liu, Zhongsheng Wang, Cunbao Ma, Chao Zhang, Jun Mitani, Yukio Fukui, "Shape alignment and shape orientation analysis-based 3D shape retrieval system", *Multimedia Systems Springer*, Vol.16, Iss.4-5, pp.319-333, 2010.
2. Takeo Igarashi and Jun Mitani, "Apparent Layer Operations for the Manipulation of Deformable Objects", *ACM Transactions on Graphics*, Vol.29, Issue.4, Article No. 110, July 2010.
3. Yohsuke FURUTA, Jun MITANI, Takeo IGARASHI and Yukio FUKUI, "Kinetic Art Design System Comprising Rigid Body Simulation", *Computer-Aided Design and Applications*, CAD in the Arts Special Issues, Vol.7, No.4, pp.533-546, 2010.
4. Jun Mitani, "A Design Method for 3D Origami Based on Rotational Sweep", *Computer-Aided Design and Applications*, Vol.6, No.1, pp.69-79, 2009.
5. Zhenbao Liu, Jun Mitani, Yukio Fukui, Seiichi Nishihara, "A 3D Shape Classifier with Neural Network Supervision", *International Journal of Computer Applications in Technology*, Vol.28, No.1-3, pp.134-143, 2010.
6. Jun Mitani, "An interface for editing a 3D model after the development is generated and providing support for understanding the way of assembling", *Journal of Graphic Science of Japan*, Vol.42, No.4, pp.3-9, 2008. (in Japanese)
7. Zhenbao Liu, Jun Mitani, Yukio Fukui and Seiichi Nishihara: "A New 3D Shape Retrieval Method Using Spherical Healpix", *Journal of Information Processing*, Vol.16, pp.190-200, 2008.
8. Yosuke Furuta, Haruo Motoki, Jun Mitani, Yukio Fukui: "Computer Model and Mouse Interface for Interactive Virtual Origami Operation", *IPSJ Journal*, Vol.48, No.12, pp.3658-3669, 2007. (in Japanese)
9. Jun Mitani: "Development of a Crease Pattern Editor for Origami Development of Origami Pattern Editor (ORIPA) and a Method for Estimating a Folded Configuration of Origami from the Crease Pattern", *IPSJ Journal*, Vol.48, No.9, pp.3309-3317, 2007. (in Japanese)
10. Jun Mitani: "Recognition and Modeling of Paper Folding Configuration Using 2D Bar Code", *IPSJ Journal*, Vol.48, No.8, pp.2859-2867, 2007. (in Japanese)
11. Jun Mitani: "Counting the number of unique configurations of flat folded origami reconstructed from a crease pattern", *Journal of Graphic Science of Japan*, Vol.41, No.1, pp.27-33, 2007. (in Japanese)
12. Jun Mitani, Hiromasa Suzuki: "A face-gathering approach for generating unfolded pattern of polyhedrons", *Journal of Graphic Science of Japan*, Vol.39, No.4, pp.3-9, 2005. (in Japanese)
13. Jun Mitani, Hiromasa Suzuki: "Model Construction and Rendering for Understanding the Conformation of Origami", *IPSJ Journal*, Vol.46, No.1, pp.247-254, 2005. (in Japanese)
14. Jun Mitani, Hiromasa Suzuki: "Making Use of a CG Based Pop-up Card Design System for Graphics Science Education", *Journal of Graphic Science of Japan*, Vol.38, No. 3, pp.3-8, 2004. (in Japanese)
15. Jun Mitani and Hiromasa Suzuki: "Making Papercraft Toys from Meshes using Strip-based Approximate Unfolding", *ACM Transactions on Graphics*, Vol. 23, No. 3, pp.259-263, 2004.

16. Jun Mitani, Ryuhei Uehara: Polygons Folding to Plural Incongruent Orthogonal Boxes, IEICE Technical Report, COMP2008-23, pp. 1-8, 2008/9/11.
17. Jun Mitani, Hiromasa Suzuki: " Computer Aided Design for Origamic Architecture Models with Polygonal Representation", IPSJ Journal Vol.45, No. 3, pp.969-976, 2004. (in Japanese)
18. Jun Mitani, Hiromasa Suzuki: "Computer Aided Design for 180-degree Flat Fold Origamic Architecture with Lattice-type Cross Sections", Journal of Graphic Science of Japan, Vol.37, No. 3, pp.3-8, 2003. (in Japanese)
19. Jun Mitani, Hiromasa Suzuki, Hiroshi Uno: "Computer Aided Design for Origamic Architecture Models with Voxel Data Structure", IPSJ Journal Vol.44, No. 5, pp.1372-1379, 2003. (in Japanese)
20. P.A.C. Varley, H. Suzuki, J. Mitani and R.R. Martin: "Interpretation of Single Sketch Input for Mesh and Solid Models", Int. J. Shape Modeling, Vol. 6, No. 2, pp.207-241, 2001.
21. Takashi Kanai, Hiromasa Suzuki, Jun Mitani, Fumihiko Kimura: " Triangular Mesh Fusion Based on Local 3D Metamorphosis ", IPSJ Journal, Vol.41, No.3, pp.541-550, 2000.

#### Refereed International Conferences

1. Greg Saul, Manfred Lau, Jun Mitani, and Takeo Igarashi, SketchChair?: An All-in-one Chair Design System for End-users the fifth International conference on Tangible, Embedded and Embodied Interaction (TEI2011), Jan. 23-26, 2011, Portugal (to appear).
2. Nobuyuki Umetani, Jun Mitani, Takeo Igarashi, Kenshi Takayama, "Designing Custommade Metallophone with Concurrent Eigenanalysis", the Proceedings of NIME 2010: New Interfaces for Musical Expression, 2010.
3. Juncong Lin, Takeo Igarashi, Jun Mitani, Greg Saul, "A Sketching Interface for Sitting-Pose Design", Eurographics Symposium on Sketch-based Interfaces and Modeling (SBIM) 2010.
4. Yuki Endo, Yoshihiro Kanamori, Jun Mitani, and Yukio Fukui, "An Interactive Design System for Water Flow Stains on Outdoor Images", 10th International Symposium on Smart Graphics, June 24-26, 2010, Banff, Canada. (to appear)
5. Jun Mitani: "A design method for axial symmetrical curved origami with triangular prism protrusions", The 5th International Conference on Origami in Science, Mathematics and Education, July, 13-17, 2010.
6. Naoya Tsuruta, Jun Mitani, Yoshihiro Kanamori and Yukio Fukui: "A CAD system for diagramming origami with a prediction of folding processes", The 5th International Conference on Origami in Science, Mathematics and Education, July, 13-17, 2010.
7. Jun Mitani: "A Method for Designing Crease Patterns for Flat-foldable Origami with Numerical Optimization", 14th International Conference on Geometry and Graphics, Kyoto, August 5-9, 2010, DVD (Article No.182).
8. Nobuyuki Umetani, Jun Mitani, Takeo Igarashi and Kenshi Takayama, "Designing Custommade Metallophone with Concurrent Eigenanalysis", New Interfaces for Musical Expression++ (NIME++), Australia, 15-18th June, 2010.

9. Yohsuke Furuta, Nobuyuki Umetani, Jun Mitane, Takeo Igarashi and Yukio Fukui, "A Film Balloon Design System Integrated with Shell Element Simulation", EUROGRAPHICS 2010, Sweden, 3-7 May, 2010.
10. Karl D.D. Willis, Juncong Lin, Jun Mitani, and Takeo Igarashi, "Spatial Sketch: Bridging Between Movement & Fabrication", In Proceedings of the Fourth International Conference on Tangible, Embedded and Embodied Interaction, Cambridge, MA, USA, Jan.25-27, 2010.
11. Jun Mitani:"A Design Method for 3D Origami Based on Rotational Sweep", CAD Conference, Nevada, June 8-12, 2009.
12. Yohsuke Furuta, Jun Mitani, Yukio Fukui:"A Rendering Method for 3D Origami Models using Face Overlapping Relations", Smart Graphics 2009, Salamanca Spain, 28-30th May 2009, Lecture Notes in Computer Science (LNCS) vol.5531, pp.193-202, Springer-Verlag.
13. Zhenbao Liu, Jun Mitani, Yukio Fukui and Seiichi Nishihara:"Multiresolution Wavelet Analysis of Shape Orientation for 3D Shape Retrieval", ACM International Conference on Multimedia Information Retrieval, Oct.30-31, 2008, Vancouver, Canada.
14. Jun Mitani and Ryuhei Uehara: "Polygons Folding to Plural Incongruent Orthogonal Boxes", Canadian Conference on Computational Geometry (CCCG 2008), pp. 39-42, Montreal, Canada, 2008/8/13.
15. Jun Mitani: "The Folded Shape Restoration and the CG Display of Origami From the Crease Pattern", 13th International Conference on Geometry and Graphics, Dresden, Germany, August 4-8, 2008 (Invited talk)(in CD-ROM).
16. Yoshie Kakinura, Emiko Tsutsumi, Kunio Kondo, Jun Mitani, Susumu Miyahara, Hiroyuki Suzuki and Yoshiyuki Iida: "Customized Garment Design Supporting System for Aged People using Digital Dress Form Model ", 13th International Conference on Geometry and Graphics, Dresden, Germany, August 4-8, 2008 (in CD-ROM).
17. Yosuke Furuta, Jun Mitani, Yukio Fukui: "Modeling and animation of 3D Origami using spring-mass simulation", NICOGRAPH International 2008, CD-ROM, Pattaya Thailand, May 2008.
18. Jun Mitani: "Rendering method for flat Origami", the 29th annual conference of the European Association for Computer Graphics, (Eurographics'08: Annex to the Conference Proceedings, pp.291-294, 2008), Crete, Greece, Apr. 14-18 2008. (Short Paper)
19. Zhenbao Liu, Jun Mitani, Yukio Fukui and Seiichi Nishihara: "3D Shape Retrieval Using Point Spatial Distributions on the Surface", NICOGRAPH International 2007, CD-ROM, Nagoya, Japan, May. 2007.
20. Zhenbao Liu, Jun Mitani, Yukio Fukui, Seiichi Nishihara: "A 3D Shape Retrieval Method based on Continuous Spherical Wavelet Transform", CGIM 2007, pp.21-26, Innsbruck, Austria, February 13-15, 2007.
21. Jun Mitani: "Recognition, modeling and rendering method for Origami using 2D bar codes", 4OSME, Origami<sup>4</sup>, pp.251-258, California Institute of Technology, Pasadena, USA, Sep. 2006.

22. Jun Mitani: "Strip creation for designing curved papercraft models adopting mesh subdivision scheme", NICOGRAPH International 2006, CD-ROM, Korea University, Seoul, Korea, June 2006.
23. Jun Mitani: "A Simple-to-Implementation Method for Cutting a Mesh Model by a Hand-Drawn Stroke", 2nd Eurographics Workshop on Sketch-Based Interfaces and Modeling, pp.35-41, Trinity College Dublin, Ireland, Aug. 2005.
24. Weizhong Liu, Kunio Kondo, Jun Mitani: "An Interactive Sketch-based Modeling by T-LIB with Subdivision Surface", 2nd Eurographics Workshop on Sketch-Based Interfaces and Modeling, pp.89-98, Trinity College Dublin, Ireland, Aug. 2005.
25. Weizhong Liu, Kunio Kondo, Jun Mitani: "Geometric Modeling by Using Freehand Sketch Input with Template Topology Library.", Applications of Digital Techniques in Industrial Design Engineering---CAID&CD'2005, Proceedings of the 6th international conference on Computer-Aided Industrial Design & Conceptual Design, pp. 135-140, 2005.5.
26. Jun Mitani, Hiromasa Suzuki: "Computer aided design for Origamic Architecture models with polygonal representation", Computer Graphics International 2004, Crete, Greece, June16-19, pp.93-99, 2004.
27. P. A. C. Varley, Y. Takahashi, J. Mitani, H. Suzuki: "A Two-Stage Approach for Interpreting Line Drawings of Curved Objects", Eurographics Symposium Proceedings", Eds. J. F. Hughes, J. A. Jorge, pp.117-126, Eurographics Association, 2004. ISBN 3905673169.
28. Jun Mitani, Hiromasa Suzuki, Fumihiko Kimura: "3D Sketch: Sketch-Based Model Reconstruction and Rendering", Proc. Seventh IFIP WG 5.2 Workshop on Geometric Modeling GEO-7, pp.85-112, Parma, Italy, Oct. 2-4, 2000.
29. Takashi Kanai, Hiromasa Suzuki, Jun Mitani, Fumihiko Kimura: "Interactive Mesh Fusion Based on Local 3D Metamorphosis", Proc. Graphics Interface '99 (Kingston, Ontario, Canada), pp.148-156, Morgan Kaufmann Publishers, San Francisco, CA, 1999.

#### Book

1. Jun Mitani, "Wonder Origami", Futami-Shobo, 2010. (in Japanese)
2. Jun Mitani, "Java 1, Let's start programming", Shoeisha, 2010. (in Japanese)
3. Jun Mitani, "Java 2, Elements of making application", Shoeisha, 2010. (in Japanese)
4. Jun Mitani, "Spherical Origami", Futami-Shobo, 2009", Futami-Shobo, 2009. (in Japanese)
5. Jun Mitani, "Self-study for Java", Shoeisha, 2005. (in Japanese)
6. Design Factory, Jun Mitani, "Making papercraft using a PC", Socym, 2003. (in Japanese)
7. Jun Mitani, "JSP programming. Step up learning", Gijutu-Hyohron, 2002. (in Japanese)

#### Award

1. JSIAM2010 Annual Convention, Outstanding Presentation Award, Jun Mitani 2010. (in Japanese)
2. JSGS2010 Autumn Convention, Encouraging Prize, Naoya Tsuruta, Jun Mitani, 2010. (in Japanese)

3. WISS2010, Best Paper Award, Nobuyuki Umetani, Kenshi Takayama, Jun Mitani, Takeo Igarashi, 2010
4. SBIM, Best Paper Award, Manfred Lau, Greg Saul, Jun Mitani, and Takeo Igarashi, 2010
5. 9<sup>th</sup> NICOGRAPH Spring Convention, Outstanding Paper Award, Naoya Tsuruta, Jun Mitani, Hiroyuki Kanamori, Yukio Fukui, 2010. (in Japanese)
6. JSGS, 4<sup>th</sup> JSGS Paper Award, Jun Mitani, 2009. (in Japanese)
7. JSGS2009 Spring Convention, Encouraging Prize, Jun Mitani, 2009. (in Japanese)
8. IPSJ2008, Paper Award, Yosuke Furuta, Haruo Kimoto, Jun Mitani, Yukio Fukui, 2008. (in Japanese)
9. 8<sup>th</sup> NICOGRAPH Spring Convention, Best Poster Award, Yosuke Furuta, Jun Mitani, Takeo Igarashi, Yukio Fukui, 2009. (in Japanese)
10. 8<sup>th</sup> NICOGRAPH Spring Convention, Outstanding Poster Award, Jun Mitani, 2009. (in Japanese)
11. IPSJ GCAD Society, Outstanding Presentation Award, Jun Mitani, 2007. (in Japanese)
12. Digital Contents Symposium, Funai Award, Jun Mitani, 2007. (in Japanese)
13. JSGS, JSGS Award, Jun Mitani, 2007. (in Japanese)
14. JSGS, 2<sup>nd</sup> JSGS Paper Award, Jun Mitani, Hiromasa Suzuki, 2007. (in Japanese)
15. CGAC2007, Outstanding International Paper Award, Jun Mitani and Hiromasa Suzuki, 2007.
16. IPSJ GCAD Society, Outstanding Presentation Award, Jun Mitani, 2006. (in Japanese)
17. IPSJ, Yamashita Award, Jun Mitani and Hiromasa Suzuki, 2003. (in Japanese)
18. IPSJ GCAD Society, Outstanding Presentation Award, Jun Mitani, 2002. (in Japanese)