

List of Publications

Refereed Journal Articles:

Yutaka Ohtake, Alexander Belyaev, Hans-Peter Seidel: "A Composite Approach to Meshing Scattered Data", *Graphics Models*, 68(3), pp.255-267, 2006.

Yutaka Ohtake, Alexander Belyaev, Hans-Peter Seidel: "Sparse Surface Reconstruction with Adaptive Partition of Unity and Radial Basis Functions", *Graphical Models*, 68(1), pp.15-24, 2006.

Yutaka Ohtake, Alexander Belyaev, Hans-Peter Seidel: "3D Scattered Data Interpolation and Approximation with Multilevel Compactly Supported RBFs", *Graphical Models*, Vol.67, pp.150-165, 2005.

Yutaka Ohtake, Alexander Belyaev, Hans-Peter Seidel: "Ridge-Valley Lines on Meshes via Implicit Surface Fitting", *ACM Transaction on Graphics (Proceedings of ACM SIGGRAPH 2004)*, Vol.23, No.3, pp.609-612, 2004.

Yutaka Ohtake, Alexander Belyaev, Alexander Pasko: "Dynamic Mesh Optimization for Polygonized Implicit Surfaces with Sharp Features", *The Visual Computer*, Vol.19, No.2, pp.115-126, 2003.

Yutaka Ohtake, Alexander Belyaev: "Dual-Primal Mesh Optimization for Polygonized Implicit Surfaces with Sharp Features", *Journal of Computing and Information Science in Engineering*, Vol.2, No.4, pp. 277-284, 2002.

Yutaka Ohtake, Alexander Belyaev: "Mesh Optimization for Polygonized Isosurfaces", *Computer Graphics Forum (Proceedings of Eurographics 2001)*, Vol.20, No.3, pp.368-376, 2001.

Yutaka Ohtake, Alexander Belyaev, Ilia Bogoevski: "Mesh Regularization and Adaptive Smoothing", *Computer-Aided Design*, Vol.33, pp.789-800, 2001.

Book Chapters:

Yutaka Ohtake, Alexander Belyaev, Hans-Peter Seidel: "Multi-Scale and Adaptive CS-RBFs for Shape Reconstruction from Cloud of Points", *Advances in Multiresolution for Geometric Modeling*, Springer, pp.143-154, 2004.

Full Papers in Referred Conference Proceedings:

Takashi Kanai, Yutaka Ohtake, Hiroaki Kawata, Kiwamu Kase: "GPU-based Rendering of Sparse Low-degree Implicit Surfaces", 4th International Conference on Computer Graphics and Interactive Techniques in Australasia and the Southeast Asia (GRAPHITE 2006), pp.165-171, ACM Press, NY, 2006.

Arnaud Gelas, Yutaka Ohtake, Takashi Kanai, Remy Prost: "Approximation of Unorganized Point Set with Composite Implicit Surface", *Proc. 13th IEEE International Conference on Image Processing (ICIP)*, pp.1217-1220, IEEE CS Press, Los Alamitos, CA, 2006.

Takashi Kanai, Yutaka Ohtake, Kiwamu Kase: "Hierarchical Error-Driven Approximation of Implicit Surfaces from Polygonal Meshes", *Proc. 4th Eurographics/ACM SIGGRAPH Symposium on Geometry Processing*, pp.21-30, Eurographics Association, Aire-la-Ville, Switzerland, 2006.

Yutaka Ohtake, Takashi Kanai, Kiwamu Kase: "A Laplacian Based Approach for Free-Form Deformation of Sparse Low-degree Implicit Surfaces", *Proc. 8th International Conference on Shape Modeling and Applications*, pp.195-203, IEEE CS Press, Los Alamitos, CA, 2006.

Yutaka Ohtake, Alexander Belyaev, Marc Alexa: "Sparse Low-degree Implicit Surfaces with Applications to High Quality Rendering, Feature Extraction, and Smoothing", *Eurographics Symposium on Geometry Pro*

cessing (SGP2005), pp.145-158, 2005.

Yutaka Ohtake, Alexander Belyaev, Hans-Peter Seidel: “An Integration Approach to Meshing Scattered Point Data”, ACM Symposium on Solid and Physical Modeling (SPM2005), pp.61-69, 2005.

Hitoshi Yamauchi, Seungyong Lee, Yunjin Lee, Yutaka Ohtake, Alexander Belyaev, Hans-Peter Seidel, “Feature Sensitive Mesh Segmentation with Mean Shift”, International Conference on Shape Modeling and Applications (SMI2005), pp.236-243, 2005.

Yutaka Ohtake, Alexander Belyaev, Hans-Peter Seidel: “3D Scattered Data Approximation with Adaptive Compactly Supported Radial Basis Functions”, International Conference on Shape Modeling and Applications (SMI2004), pp.31-39, 2004.

Yutaka Ohtake, Alexander Belyaev, Marc Alexa, Greg Turk, Hans-Peter Seidel: “Multi-level Partition of Unity Implicits”, ACM Transaction on Graphics (Proceedings of ACM SIGGRAPH 2003), Vol.22, No.3, pp.463-470, 2003.

Hirokazu Yagou, Yutaka Ohtake, Alexander Belyaev: “Mesh Denoising via Iterative Alpha-Trimming and Nonlinear Diffusion of Normals with Automatic Thresholding”, Computer Graphics International (CGI2003), pp.28-33, 2003

Yutaka Ohtake, Alexander Belyaev, Hans-Peter Seidel: “Interpolatory Subdivision Curves via Diffusion of Normals”, Computer Graphics International (CGI2003), pp.22-27, 2003

Yutaka Ohtake, Alexander Belyaev, Hans-Peter Seidel: “A Multi-scale Approach to 3D Scattered Data Interpolation with Compactly Supported Basis Function”, International Conference on Shape Modeling and Applications (SMI2003), pp.153-164, 2003.

Yutaka Ohtake, Alexander Belyaev, Hans-Peter Seidel: “Mesh Smoothing by Adaptive and Anisotropic Gaussian Filter”, Vision, Modeling, and Visualization (VMV2002), pp.203-210, 2002.

Hirokazu Yagou, Yutaka Ohtake, Alexander Belyaev: “Mesh Smoothing via Mean and Median Filtering Applied to Face Normals”, Geometric Modeling and Processing (GMP2002), pp.124-131, 2002.

Yutaka Ohtake, Alexander Belyaev: “Dual/Primal Mesh Optimization for Polygonized Implicit Surfaces”, 7th ACM Symposium on Solid Modeling and Applications (SM2002), pp.171-178, 2002

Yutaka Ohtake, Masahiro Horikawa, Alexander Belyaev: “Adaptive Smoothing Tangential Direction Fields on Polygonal Surfaces”, Pacific Graphics 2001 (PG2001), pp.189-197, 2001.

Yutaka Ohtake, Alexander Belyaev, Alexander Pasko: “Dynamic Meshes for Accurate Polygonization of Implicit Surfaces with Sharp Features”, International Conference on Shape Modeling and Applications (SMI2001), pp.74-81, 2001.

Alexander Belyaev, Yutaka Ohtake, Kasumi Abe: “Detection of Ridges and Ravines on Range Images and Triangular Meshes”, Vision Geometry IX, SPIE 4117, pp.146-154, 2000.

Alexander Belyaev, Yutaka Ohtake: “An Image Processing Approach to Detection of Ridges and Ravines on Polygonal Surfaces”, Eurographics 2000 short paper presentation, pp.19-18, 2000.

Yutaka Ohtake, Alexander Belyaev: “Polyhedral Surface Smoothing with Simultaneous Mesh Regularization”, Geometric Modeling and Processing (GMP2000), pp.229-237, 2000.

Yutaka Ohtake, Shuichi Yukita, and Toshiyasu L. Kunii: “A Dual Visualizer Method for Interactive Topology”, Multi Media Modeling 1998, pp.163-172, 1998.

Publications in Abstract-refereed Conference Proceedings:

Alexander Belyaev, Yutaka Ohtake: "A Comparison of Mesh Smoothing Methods", Israel-Korea Bi-National Conference on Geometric Modeling and Computer Graphics, pp.83-87, 2003.

Alexander Belyaev, Yutaka Ohtake: "Nonlinear Diffusion of Normals for Crease Enhancement", Vision Geometry X, SPIE Annual Meeting, pp.42-47, 2001.

Yutaka Ohtake, Alexander Belyaev: "Nonlinear Diffusion of Normals for Stable Detection of Ridges and Ravines on Range Images and Polygonal Models", IAPR Workshop on Machine Vision Applications (MV A2000), pp.469-489, 2000.

Domestic Journal Articles:

小野 謙二, 大竹 豊, 白崎 実: "ボリウムデータを用いた流体解析システムの可能性", シミュレーション, Vol.23, pp.286-291, 2004.

Yutaka Ohtake, Alexander Belyaev: "Generating Interpolatory Subdivision Curves via Averaging Normals", The Journal of Three Dimensional Images, Vol.15, No.4, pp.125-130, 2001.

Yutaka Ohtake, Alexander Belyaev: "Automatic Detection of Geodesic Ridges and Ravines on Polygonal Surfaces", The Journal of Three Dimensional Images, Vol. 15, No.1, pp.127-132, 2001.

Yutaka Ohtake, Alexander Belyaev, Ilia Bogavski: "Polyhedral Surface Smoothing with Modified Laplacian and Curvature Flows", The Journal of Three Dimensional Images, Vol.13, No.3, pp.19-24, 1999.

Domestic Conference Proceedings:

金井 崇, 大竹 豊, 川田 弘明, 加瀬 究: "GPU による点群ベース陰関数曲面の直接的レンダリング", グラフィクスと CAD / Visual Computing 合同シンポジウム, pp.5-10, 2006.

黄檗 雅也, 大竹 豊, 金井 崇, 近藤 邦雄: "MPU 陰関数曲面を用いたスケッチモデリング手法", グラフィクスと CAD / Visual Computing 合同シンポジウム, pp.89-94, 2006.

白崎 実, 大竹 豊, 小野 謙二: "陰関数と直交格子ソルバー群のカップリング", 第18回数値流体力学シンポジウム, 2004.

Academic Services:

Program committee member :

Shape Modeling International 2006, 2007.

Geometric Modeling and Processing 2006.