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## RESEARCH INTERESTS

- Computer graphics, user interface, volumetric modeling, texture synthesis, geometric modeling, image editing, animation

## CURRENT OCCUPATION

- **Postdoctoral Research Fellow** (April 2012 – present)  
Interactive Geometry Lab, ETH Zürich  
Mentor: Prof. Olga Sorkine  
Funding: JSPS Postdoctoral Fellowship for Research Abroad

## EDUCATION

- **Ph.D., The University of Tokyo** (March 2012)  
Advisor: Prof. Takeo Igarashi  
Thesis title: Volumetric Modeling of Natural Objects with Compact and Consistent Representations  
Funding: JSPS Research Fellowship for Young Scientists (DC1)
- **M.Sc., The University of Tokyo** (March 2009)  
Advisor: Prof. Takeo Igarashi  
Thesis title: Lapped Solid Textures: Filling a Model with Anisotropic Textures
- **B.Sc., The University of Tokyo** (March 2007)  
Advisor: Prof. Takeo Igarashi  
Thesis title: Sketch Based Interface for Designing Volumetric Vector Fields

## JOURNAL PUBLICATIONS

- **Kenshi Takayama**, Daniele Panozzo, Alexander Sorkine-Hornung, Olga Sorkine-Hornung. *Sketch-Based Generation and Editing of Quad Meshes*. ACM Transactions on Graphics, 32(4) (proceedings of ACM SIGGRAPH 2013), pp. 97:1–97:8.
- Nobuyuki Umetani, **Kenshi Takayama**, Jun Mitani, Takeo Igarashi. *A Responsive Finite Element Method to Aid Interactive Geometric Modeling*. IEEE Computer Graphics and Applications, 31(5), pp. 43–53, 2011.
- **Kenshi Takayama**, Ryan Schmidt, Karan Singh, Takeo Igarashi, Tamy Boubekeur, Olga Sorkine. *GeoBrush: Interactive Mesh Geometry Cloning*. Computer Graphics Forum, 30(2) (proceedings of Eurographics 2011), pp. 613–622.
- **Kenshi Takayama**, Olga Sorkine, Andrew Nealen, Takeo Igarashi. *Volumetric Modeling with Diffusion Surfaces*. ACM Transactions on Graphics, 29(6) (proceedings of ACM SIGGRAPH Asia 2010), Article No.180.
- Takashi Ijiri, **Kenshi Takayama**, Hideo Yokota, Takeo Igarashi. *ProcDef: Local-to-global Deformation for Skeleton-free Character Animation*. Computer Graphics Forum, 28(7) (proceedings of Pacific Graphics 2009), pp. 1821–1828.
- **Kenshi Takayama**, Takashi Ashihara, Takashi Ijiri, Takeo Igarashi, Ryo Haraguchi, Kazuo Nakazawa. *A sketch-based interface for modeling myocardial fiber orientation that considers the layered structure of the ventricles*. The Journal of Physiological Sciences, 58(7), pp. 487–492, 2008.
- Takashi Ijiri, Takashi Ashihara, Takeshi Yamaguchi, **Kenshi Takayama**, Takeo Igarashi, Tatsuo Shimada, Tsunetoyo Namba, Ryo Haraguchi, Kazuo Nakazawa. *A procedural method for modeling the Purkinje fibers of the heart*. The Journal of Physiological Sciences, 58(7), pp. 481–486, 2008.
- **Kenshi Takayama**, Makoto Okabe, Takashi Ijiri, Takeo Igarashi. *Lapped Solid Textures: Filling a Model with Anisotropic Textures*. ACM Transactions on Graphics, 27(3) (proceedings of ACM SIGGRAPH 2008), Article No.53.

## CONFERENCE PAPERS AND TALKS

- Yuki Koyama, **Kenshi Takayama**, Nobuyuki Umetani, Takeo Igarashi. *Real-Time Example-Based Elastic Deformation*. Symposium on Computer Animation (SCA), pp. 19–24, 2012.
- Nobuyuki Umetani, Jun Mitani, Takeo Igarashi, **Kenshi Takayama**. *Designing Custommade Metallophone with Concurrent Eigenanalysis*. New Interfaces for Musical Expression++ (NIME++) 2010.
- **Kenshi Takayama**, Takeo Igarashi. *Layered Solid Texture Synthesis from a Single 2D Exemplar*. ACM SIGGRAPH

2009 Posters.

- Makoto Okabe, **Kenshi Takayama**, Takashi Ijiri, Takeo Igarashi. *Light Shower: A Poor Man's Light Stage Built with an Off-the-shelf Umbrella and Projector*. ACM SIG-GRAPH 2007 Sketches.
- **Kenshi Takayama**, Takeo Igarashi, Ryo Haraguchi, Kazuo Nakazawa. *A sketch-based in-terface for modeling myocardial fiber orientation*. *Smart Graphics*, pp. 1–9, 2007.

## RESEARCH VISITS

- **Dynamic Graphics Project (DGP), University of Toronto** (August 2011 – November 2011)  
Host: Prof. Karan Singh  
Funding: Overseas Visit Program, Graduate School of Information Science and Technology, The University of Tokyo
- **VLG group, New York University** (March 2010 – September 2010)  
Host: Prof. Olga Sorkine  
Funding: JSPS Excellent Young Researchers Overseas Visit Program
- **VLG group, New York University** (March 2009 – June 2009)  
Host: Prof. Olga Sorkine

## WORK EXPERIENCE

- **Research Assistant** (October 2008 – February 2009)  
JST ERATO Igarashi Design Interface Project, Japan
- **Chief Developer** (April 2007 – December 2007)  
Information-technology Promotion Agency (IPA) Exploratory Software Project, Japan

## AWARDS

- NICOGRAPH International CG Awards (March 2009)

## INVITED TALKS

- *Interactive 3D Modeling: Surfaces and Volumes*  
Autodesk Research, hosted by Ryan Schmidt (November 2011)
- *Interactive 3D Modeling: Surfaces and Volumes*  
University of Toronto, hosted by Prof. Karan Singh (September 2011)
- *Volumetric Modeling of Internal Textures and Structures*  
University of Manitoba, hosted by Prof. James Young (August 2011)
- *Volumetric Modeling of Internal Textures and Structures*  
University of Calgary, hosted by Prof. James Young (June 2010)
- *Volumetric Modeling of Internal Textures and Structures*  
Harvard University, hosted by Prof. Hanspeter Pfister (May 2010)
- *3D Modeling of Internal Structures*  
New York University, hosted by Prof. Olga Sorkine (March 2009)

## REFERENCE

- (Upon request)