

Hideki Todo

Associate Professor
Takushoku University, Japan
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Research Interests

Computer Graphics, mainly of Non-Photorealistic Rendering (NPR)

- Stylized Rendering, Character Animation, User Interaction, Image Analysis

Academic & Professional Experience

Apr 2022 - Current	Associate Professor Department of Computer Science Takushoku University , Japan Research Projects: Stylized Rendering, Image-Based Appearance Stylization
Apr 2020 - - Mar 2022	Assistant Professor Department of Integrated Information Technology Aoyama Gakuin University , Japan Research Projects: Stylized Rendering, Image-Based Appearance Stylization
Apr 2017 - Mar 2020	Assistant Professor Faculty of Liberal Arts Chuo Gakuin University , Japan Research Projects: Stylized Rendering, Image-Based Appearance Stylization
Apr 2017 - Mar 2018	Part-time Lecturer School of Media Science Tokyo University of Technology , Japan Seminar: Visual Computing Research Group (Kakimoto Laboratory)
Apr 2016 - Mar 2017	Assistant Professor School of Media Science Tokyo University of Technology , Japan Visual Computing Research Group (Kakimoto Laboratory) Research Projects: Stylized Rendering, Image-Based Appearance Stylization
Jul 2015 - Mar 2019	Co-Investigator Grant-in-Aid for Scientific Research on Innovative Areas MEXT: Ministry of Education, Culture, Sports, Science and Technology , Japan “Understanding human recognition of material properties for innovation in SHITSUKAN science and technology”

	Planned Research: “Modeling and Rendering of Appearance of Complex Objects by Computer Graphics Techniques”
Apr 2020 - Current	Part-time Lecturer College of Humanities and Sciences Nihon University , Japan Course: “Multimedia Information Processing”
Sep 2014 - Mar 2017	Part-time Lecturer School of Science and Technology Meiji University , Japan Course: “Computer Graphics”
Dec 2013 - Mar 2016	Project Researcher Graduate School of Arts and Sciences The University of Tokyo , Japan JST CREST Project “Computational Illusion” Visual Information Research Group (Yamaguchi Laboratory) Research Projects: Analysis and Synthesis of Artistic Stylization
Apr 2013 - Nov 2013	Project Researcher Graduate School of Information Science and Technology The University of Tokyo , Japan JST ERATO Project “IGARASHI Design Interface” User Interface Research Group (Igarashi Laboratory) Research Projects: Stylized Rendering, Character Animation
Apr 2011 - Mar 2013	Researcher R & D Division OLM Digital, Inc. , Japan JST CREST Project “Mathematics for Expressive Image Synthesis” Research Projects: Stylized Rendering, Facial Animation
Apr 2008 - Mar 2011	Research Fellow (DC1) JSPS Research Fellowships for Young Scientists Japan Society for the Promotion of Science , Japan Research Project: Artist-Friendly Framework for Computer Graphics Design
Jul 2006 - Mar 2007	Chief Developer of IPA MITOH Program Information - technology Promotion Agency (IPA) Exploratory Software Project , Japan Software Development: Directable Shading Design Tool for Cartoon Shader

Education

Apr 2008 - Mar 2011	Ph.D. in Information Science and Technology Graduate School of Information Science and Technology The University of Tokyo , Japan Advisor: Prof. Takeo Igarashi Thesis: “Artist-friendly Framework for Stylized Rendering” (Nov 2013)
Apr 2005 - Mar 2008	Master of Information Science and Technology

Graduate School of Information Science and Technology
The University of Tokyo, Japan
Advisor: Prof. Takeo Igarashi
Thesis: “Locally Controllable Stylized Toon Shader”

Apr 2003 - Mar 2005 | Bachelor of Science
School of Science
The University of Tokyo, Japan
Advisor: Prof. Takeo Igarashi
Thesis: “Designing Cel Animation Characters with View Dependent Appearance”

Publications (International Journal)

Hideki Todo, Tatsuya Yatagawa, Masataka Sawayama, Yoshinori Dobashi, Masanori Kakimoto. 2019. “Image-based translucency transfer through correlation analysis over multi-scale spatial color distribution”, *The Visual Computer*, Volume 35, Issue 6–8, pp.811–822 (May 2019). [Reviewed]

Tatsuya Yatagawa, **Hideki Todo**, Yasushi Yamaguchi, Shigeo Morishima. 2019. “Data compression for measured heterogeneous subsurface scattering via scattering profile blending”, *The Visual Computer*, pp.1–18 (February 2019). [Reviewed]

Takashi Ijiri, **Hideki Todo**, Akira Hirabayashi, Kenji Kohiyama, Yoshinori Dobashi. 2018. “Digitization of natural objects with micro CT and photographs”, *PLoS ONE* 13(4):e0195852 (April 2018). [Reviewed]

Yoshinori Dobashi, Kei Iwasaki, Makoto Okabe, Takashi Ijiri, **Hideki Todo**. 2017. “Inverse appearance modeling of interwoven cloth”, *The Visual Computer*, Volume 35, Issue 2, pp.1–16 (December 2017). [Reviewed]

Hideki Todo, Yasushi Yamaguchi. 2017. “Estimating reflectance and shape of objects from a single cartoon-shaded image”, *Computational Visual Media*, Volume 3, Issue 1, pp.21–31 (March 2017). [Reviewed]

Hideki Todo, Ken Anjyo, Shun'ichi Yokoyama. 2013. “Lit-Sphere extension for artistic rendering”, *The Visual Computer*, Volume 29, Issue 6, pp.473–480 (June 2013). [Reviewed]

Ken Anjyo, **Hideki Todo**, J.P. Lewis. 2012. “A Practical Approach to Direct Manipulation Blendshapes”, *Journal of Graphics Tools*, Volume 16, Issue 3 (August 2012), pp.160–176. [Reviewed]

Hideki Todo, Ken Anjyo, Takeo Igarashi. 2009. “Stylized Lighting for Cartoon Shader”, *The Journal of Computer Animation and Virtual World*, Volume 20, Issue 2–3 (June 2009), pp.143–152. [Reviewed]

Hideki Todo, Ken-ichi Anjyo, William Baxter, Takeo Igarashi. 2007. “Locally Controllable Stylized Shading”, *ACM Transactions on Graphics*, Volume 26, Issue 3, Article 17 (July 2007). [Reviewed]

Publications (International Conference)

Hideki Todo*, Kunihiro Kobayashi*, Jin Katsuragi, Haruna Shimotahira, Shizuo Kaji, Yonghao Yue. “Stroke Transfer: Example-based Synthesis of Animatable Stroke Styles”, *SIGGRAPH 2022 Conference Proceedings*, Vancouver, BC, Canada, August 2022. [Reviewed]

Hideki Todo, Tatsuya Yatagawa, Masataka Sawayama, Yoshinori Dobashi, Masanori Kakimoto. “Image-based translucency transfer through correlation analysis over multi-scale spatial color distribution”, *CGI 2019 Visual Computer Session*, Calgary, Canada, June 2019. [Reviewed]

Hideki Todo. “Design and Analysis of Stylized Shading”, *MEIS 2017 Invited Speakers*, Fukuoka, Japan, November 2017. [Invited]

Hideki Todo, Yasushi Yamaguchi. “Reflectance and Shape Estimation for Cartoon Shaded Objects”, *Pacific Graphics 2016 Short Paper*, Okinawa, Japan, October 2016. [Reviewed]

Muhammad Arief, **Hideki Todo**, Kunio Kondo, Koji Mikami, Yasushi Yamaguchi. “Controllable Region via Texture Projection for Stylized Shading”, *VRCAI 2015*, Kobe, Japan, October 2015. [Reviewed]

Muhammad Arief, **Hideki Todo**, Kunio Kondo, Koji Mikami, Yasushi Yamaguchi. “Practical Region Control in Projective Texture for Stylized Shading”, *SIGGRAPH ASIA 2014 Poster*, Shenzhen, December 2014. [Reviewed]

Ryohei Tanaka, Yuki Morimoto, **Hideki Todo**, Tokiichiro Takahashi. “Parametric stylized highlight for character animation based on 3D scene data”, *SIGGRAPH 2014 Poster*, Vancouver, August 2014. [Reviewed]

Hideki Todo, Ken Anjyo, Shun'ichi Yokoyama. “Lit-Sphere extension for artistic rendering”, *CGI 2013, Hannover*, Germany, June 2013. [Reviewed]

Hideki Todo, Ken Anjyo. “Hybrid Framework for Blendshape Manipulations”, *SIGGRAPH ASIA 2011 Poster*, Hong Kong, December 2011. [Reviewed]

Shunichi Yokoyama, **Hideki Todo**, Ken Anjyo. “Light-based Mapping for Non-photorealistic Rendering”, *Forum Math-for-Industry 2011, Hawaii Poster*, October 2011. **Best Poster Award.**

Hideki Todo, Ken Anjyo, Takeo Igarashi. “Stylized Lighting for Cartoon Shader”, *CASA 2009*, Amsterdam, the Netherlands, June 2009. [Reviewed]

Hideki Todo, Ken-ichi Anjyo, William Baxter, Takeo Igarashi. “Locally Controllable Stylized Shading”, *SIGGRAPH 2007*, San Diego, USA, August 2007. [Reviewed]

Publications (Domestic Conference)

Hideki Todo, Yasushi Yamaguchi, “Reflectance and Shape Estimation for Cartoon Shaded Objects”, *VC/GCAD Symposium 2016*, Tokyo, Japan, June 2016. [Reviewed]

Hideki Todo, Yasushi Yamaguchi, “Seamless Normal Mapping for Layering Approach to Hand-Drawn Cartoons”, *VC/GCAD Symposium 2015*, Himeji, Japan, June 2015. [Reviewed]

Muhammad Arief, **Hideki Todo**, Yasushi Yamaguchi, Kunio Kondo, Koji Mikami. “Texture Projection Control for Hand-Drawn Gradient Shading”, *Autumn Symposium of JSGC 2014*, Tokyo, Japan, November 2014.

Hideki Todo, Yasushi Yamaguchi, “Shading Model from Hand-Drawn Cartoons for Interactive Shading Design”, *VC/GCAD Simposium 2014*, Tokyo, Japan, June 2014. [Reviewed]

Ryohei Tanaka, Yuki Morimoto, **Hideki Todo**, Tokiichiro Takahashi, “Parametric stylized highlight for character animation based on 3D scene data”, *VC/GCAD Simposium 2014 Poster*, Tokyo, Japan, June 2014.

Hideki Todo, Ken-ichi Anjyo, William Baxter, Takeo Igarashi, “Shading Model from Hand-Drawn Cartoons for Interactive Shading Design”, *VC/GCAD Simposium 2007*, Osaka, Japan, June 2007. [Invited]

Misc

Hideki Todo, “Inverse Toon Shading: Interactive Normal Field Modeling with Isophotes”, *Mathematics and Implementation of Computer Graphics Techniques 2015*, Hukuoka, July - October 2015. [Workshop]

Hideki Todo. “Research & Development with Live2D - for lighting effect application -”, *alive 2015*, Tokyo, Japan, June 2015. [Demonstration]

Hideki Todo, “Decoupling Noise and Features via Weighted l1 Analysis Compressed Sensing”, *Mathematics and Implementation of Computer Graphics Techniques 2014*, Hukuoka, July - October 2014. [Workshop]

Hideki Todo, Ken-ichi Anjyo, OLM Digital, Inc., “Image Processing System and Program”, *Japanese Published Patent Application 2007-159779*, December 2008. [Patent]

Academic Services

Program Committee

- VRST 2018 (Demo/Poster Chairs)
- Pacific Graphics 2016 (Local Executive Committee)
- VC/GCAD Simposium 2014, 2015, 2016 (Program Committee)
- IEVC 2014 (Technical Program Committee Executive Members)

Reviewer Experience

- CGI 2019
- IEVC 2019
- VRST 2017 (Primary)
- IEVC 2014 (Primary)
- SIGGRAPH 2011, 2013 (Secondary)
- Pacific Graphics 2012 (Secondary)
- NPAR 2011, 2012 (Secondary)
- SBIM 2011 (Secondary)

- SCA 2011, 2012 (Secondary)
- SIGGRAPH ASIA 2011, 2012 (Secondary)

Awards

Oct 2007 | The 22nd Digital Contents Grand Prix Technical Achievement Award
Digital Content Association of Japan, Japan
“LoCoStySh (Locally Controllable Stylized Shading)”
OLM Digital, Inc. (Ken Anjyo, Yosuke Katsura, William Baxter), The
University of Tokyo (Hideki Todo, Takeo Igarashi)

Technical Skills

Programming: C++, Python, C, C#, Java, OpenGL, OpenCV, Qt
Software: Autodesk Maya, Unity, Adobe After Effects, Adobe Photoshop, Adobe Illustrator