

Hideki Todo

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Tokyo University of Technology, 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

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| Apr 2016 - Current | 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 - Current | 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” |
| Sep 2014 - Current | 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 |

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| | 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

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| 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, Ken Anjyo, Shun'ichi Yokoyama. 2013. “Lit-Sphere extension for artistic rendering”, *The Visual Computer* (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)

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, “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 Symposium 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 Symposium 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 Symposium 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

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

Reviewer Experience

- 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

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| 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) |
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Technical Skills

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