Daisuke Miyazaki

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Graduate School of Information Sciences

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Education

Ph.D. Information Science and Technology, The University of Tokyo, 2005.3

M.S. Information Science and Technology, The University of Tokyo, 2002.3

B.S. Science, The University of Tokyo, 2000.3

Employment

Associate Professor, Hiroshima City University, 2011.4-present.

Lecturer, Hiroshima City University, 2008.10-2011.3

Project Research Assistant, The University of Tokyo, 2008.4-2008.9

Visiting Researcher, Microsoft Research Asia, 2007.9-2008.3

Project Research Assistant, The University of Tokyo, 2006.4-2007.8

JSPS Research Fellow, The University of Tokyo, 2004.4-2006.3

Publications

International Journals

Daisuke Miyazaki, Mia Nakamura, Masashi Baba, Ryo Furukawa, Shinsaku Hiura, "Optimization of LED illumination for generating metamerism," Journal of Imaging Science and Technology, vol. 60, no. 6, pp. 60502-1-60502-15, 2016.11

Daisuke Miyazaki, Takuya Shigetomi, Masashi Baba, Ryo Furukawa, Shinsaku Hiura, Naoki Asada, "Surface normal estimation of black specular objects from multiview polarization images," SPIE Optical Engineering, vol. 56, no. 4, 2016.9

Masashi Baba, Tomoe Nakane, Shinsaku Hiura, Ryo Furukawa, Daisuke Miyazaki, Masahito Aoyama, "Simulation of real tilted lenses using distributed ray tracing," IIEEJ Transactions on Image Electronics and Visual Computing, vol. 3, no. 2, pp. 143-148, 2015.12

Daisuke Miyazaki, Yasuyuki Matsushita, Katsushi Ikeuchi, "Interactive removal of

shadows from a single image using hierarchical graph cut,"   IPSJ Transactions on Computer Vision and Applications, vol. 2, pp. 235-252. 2010.12

Daisuke Miyazaki, Kenji Hara, Katsushi Ikeuchi, "Median photometric stereo as applied to the Segonko Tumulus and museum objects," International Journal of Computer Vision, vol. 86, no. 2-3, pp. 229-242, 2010.1

Daisuke Miyazaki, Takushi Shibata, Katsushi Ikeuchi, "Wavelet-texture method: Appearance compression by polarization, parametric reflection model, and Daubechies wavelet," International Journal of Computer Vision, vol. 86, no. 2-3, pp. 171-191, 2010.1

Daisuke Miyazaki, Mahdi Ammar, Rei Kawakami, Katsushi Ikeuchi, "Estimating sunlight polarization using a fish-eye lens," IPSJ Transactions on Computer Vision and Applications, vol. 1, pp. 288-300, 2009.12

Daisuke Miyazaki, Katsushi Ikeuchi, "Shape estimation of transparent objects by using inverse polarization raytracing," IEEE Transactions on Pattern Analysis and Machine Intelligence, vol. 29, no. 11, pp. 2018-2030, 2007.11

Daisuke Miyazaki, Masataka Kagesawa, Katsushi Ikeuchi, "Transparent surface modeling from a pair of polarization images," IEEE Transactions on Pattern Analysis and Machine Intelligence, vol. 26, no. 1, pp. 73-82, 2004.1

Daisuke Miyazaki, Megumi Saito, Yoichi Sato, Katsushi Ikeuchi, "Determining surface orientations of transparent objects based on polarization degrees in visible and infrared wavelengths," Journal of Optical Society of America A, vol. 19, no. 4, pp. 687-694, 2002.4

Japanese Journals

Ryo Furukawa, Masahito Naito, Masaki Mizomori, Daisuke Miyazaki, Masashi Baba, Shinsaku Hiura, Yoji Sanomura, Shinji Tanaka, Hiroshi Kawasaki, "---," The IEICE Transactions on Information and Systems, 15 pages, 2018.5

Yu Kawamoto, Shinsaku Hiura, Daisuke Miyazaki, Ryo Furukawa, Masashi Baba, "---," Journal of Information Processing, vol. 57, no. 2, pp. 783-793, 2016.2

Daisuke Miyazaki, Takafumi Saneshige, Masashi Baba, Ryo Furukawa, Masahito Aoyama, Shinsaku Hiura, "---," The Journal of the Institute of Image Electronics Engineers of Japan, vol. 44, no. 4, pp. 649-654, 2015.9

Daisuke Miyazaki, Kanami Takahashi, Masashi Baba, Hirooki Aoki, Ryo Furukawa, Masahito Aoyama, Shinsaku Hiura, "---," The IEICE Transactions on Information and Systems, vol. J97-D, no. 8, pp. 1250-1262, 2014.8

Tomoaki Higo, Daisuke Miyazaki, Katsushi Ikeuchi, "---," The Journal of The Institute

of Image Information and Television Engineers, vol. 64, no. 1, pp. 112-119, 2010.6

Daisuke Miyazaki, Katsushi Ikeuchi, "---," Journal of Information Processing, vol. 1, no. 1, pp. 64-72, 2008.6

Daisuke Miyazaki, Takushi Shibata, Katsushi Ikeuchi, "---," The IEICE Transactions on Information and Systems, vol. J90-D, no. 8, pp. 2081-2093, 2007.8

Daisuke Miyazaki, Katsushi Ikeuchi, "---," Journal of Information Processing, vol. 47, no. SIG9, pp. 87-106, 2006.6

Daisuke Miyazaki, Katsushi Ikeuchi, "---," The IEICE Transactions on Information and Systems, vol. J88-D-II, no. 8, pp. 1432-1439, 2005.8

Daisuke Miyazaki, Katsushi Ikeuchi, "---," Journal of Information Processing, vol. 44, no. SIG9, pp. 86-93, 2003.7

International Conferences

Ryo Furukawa, Masahito Naito, Daisuke Miyazaki, Masahi Baba, Shinsaku Hiura, Yoji Sanomura, Shinji Tanaka, Hiroshi Kawasaki, "Auto-calibration Method for Active 3D Endoscope System Using Silhouette of Pattern Projector," In: Pacific-Rim Symposium on Image and Video Technology, pp. 222-236, 2017.11

Ryo Furukawa, Masahito Naito, Daisuke Miyazaki, Masahi Baba, Shinsaku Hiura, Yoji Sanomura, Shinji Tanaka, Hiroshi Kawasaki, "3D Endoscope System Using Asynchronously Blinking Grid Pattern Projection for HDR Image Synthesis," In: Computer Assisted and Robotic Endoscopy and Clinical Image-Based Procedures, pp. 16-28, 2017.9

Daisuke Miyazaki, Masashi Baba, Shinsaku Hiura, Marco Visentini-Scarzanella, Hiroki Morinaga, Hiroshi Kawasaki, Ryusuke Sagawa, "2-DOF auto-calibration for a 3D endoscope system based on active stereo," In: International Conference of the IEEE Engineering in Medicine and Biology Society, pp. 7937-7941, 2015.8

Daisuke Miyazaki, Takafumi Saneshige, Masashi Baba, Ryo Furukawa, Masahito Aoyama, Shinsaku Hiura, "Metamerism-based shading illusion," In: IAPR Conference on Machine Vision Applications, p. 255-258, 2015.5

Daisuke Miyazaki, Daisuke Akiyama, Masashi Baba, Ryo Furukawa, Shinsaku Hiura, Naoki Asada, "Polarization-based dehazing using two reference objects," In: IEEE International Conference on Computer Vision Workshops, pp. 852-859, 2013.12

Daisuke Miyazaki, Kanami Takahashi, Masashi Baba, Hirooki Aoki, Ryo Furukawa, Masahito Aoyama, Shinsaku Hiura, "Mixing paints for generating metamerism art under 2 lights and 3 object colors," In: IEEE International Conference on Computer Vision Workshops, pp. 874-882, 2013.12

Tomoyuki Kamikawa, Daisuke Miyazaki, Masashi Baba, Ryo Furukawa, Masahito Aoyama, Shinsaku Hiura, Naoki Asada, "High density shapes using photometric stereo and laser range sensor under unknown light-source direction," In: IAPR International Conference on Machine Vision Applications, pp. 125-128, 2013.5

Masanari Yokomizo, Daisuke Miyazaki, Masashi Baba, Ryo Furukawa, Masahito Aoyama, Shinsaku Hiura, Naoki Asada, "Optimization of 3D shape sharpening filter based on geometric statistical values," In: IAPR International Conference on Machine Vision Applications, pp. 260-263, 2013.5

Daisuke Miyazaki, Kazuki Nakamura, Masashi Baba, Ryo Furukawa, Masahito Aoyama, Shinsaku Hiura, Naoki Asada, "A first introduction to metamerism art," In: SIGGRAPH Asia 2012 Posters, pp. 17:1-17:1, 2012.11-12

Daisuke Miyazaki, Takuya Shigetomi, Masashi Baba, Ryo Furukawa, Shinsaku Hiura, Naoki Asada, "Polarization-based surface normal estimation of black specular objects from multiple viewpoints," In: 3DIMPVT, pp. 104-111, 2012.10

Daisuke Miyazaki, Saori Kagimoto, Masashi Baba, Naoki Asada, "Creating digital model of origami crane through recognition of origami states from image sequence," In: ACM SIGGRAPH ASIA 2010 Posters, pp. 19:1-19:1, 2010.12

Daisuke Miyazaki, Katsushi Ikeuchi, "Photometric stereo under unknown light sources using robust SVD with missing data," In: IEEE International Conference on Image Processing, pp. 4057-4060, 2010.9

Daisuke Miyazaki, Katsushi Ikeuchi, "Photometric stereo using graph cut and M-estimation for a virtual tumulus in the presence of highlights and shadows," In: IEEE Computer Society Conference on Computer Vision and Pattern Recognition Workshops, pp. 70-77, 2010.6

Daisuke Miyazaki, Yasuyuki Matsushita, Katsushi Ikeuchi, "Interactive shadow removal from a single image using hierarchical graph cut," In: ACCV 2009, vol. 5994, pp. 234-245, 2009.9

Daisuke Miyazaki, Kenji Hara, Katsushi Ikeuchi, "Photometric stereo beyond glass: Active separation of transparent layer and five-light photometric stereo with M-estimator using Laplace distribution for a virtual museum," In: International Workshop on Photometric Analysis for Computer Vision, 2007.10

Daisuke Miyazaki, Takushi Shibata, Katsushi Ikeuchi, "Wavelet-texture method: Appearance compression by Daubechies wavelet, reflection model, and polarization," In: International Workshop on Photometric Analysis For Computer Vision, 2007.10

Daisuke Miyazaki, Mawo Kamakura, Tomoaki Higo, Yasuhide Okamoto, Rei Kawakami,

Takaaki Shiratori, Akifumi Ikari, Shintaro Ono, Yoshihiro Sato, Mina Oya, Masayuki Tanaka, Katsushi Ikeuchi, Masanori Aoyagi, "3D digital archive of the Burghers of Calais," In: International Conference on Virtual Systems and MultiMedia, vol. 4270, pp. 399-407, 2006.10

Daisuke Miyazaki, Noriyuki Takashima, Akira Yoshida, Eiki Harashima, Katsushi Ikeuchi, "Polarization-based shape estimation of transparent objects by using raytracing and PLZT camera," In: SPIE, vol. 5888, pp. 1-14, 2005.8

Takushi Shibata, Toru Takahashi, Daisuke Miyazaki, Yoichi Sato, Katsushi Ikeuchi, "Creating photorealistic virtual model with polarization based vision system," In: SPIE, vol. 5888, pp. 25-35, 2005.8

Daisuke Miyazaki, Katsushi Ikeuchi, "Inverse polarization raytracing: Estimating surface shape of transparent objects," In: International Conference on Computer Vision and Pattern Recognition, pp. II:910-917, 2005.6

Daisuke Miyazaki, Robby T. Tan, Kenji Hara, Katsushi Ikeuchi, "Polarization-based inverse rendering from a single view," In: International Conference on Computer Vision, pp. 982-987, 2003.10

Daisuke Miyazaki, Masataka Kagesawa, Katsushi Ikeuchi, "Polarization-based transparent surface modeling from two views," In: International Conference on Computer Vision, pp. 1381-1386, 2003.10

Daisuke Miyazaki, Masataka Kagesawa, Katsushi Ikeuchi, "Determining shapes of transparent objects from two polarization images," In: IAPR Workshop on Machine Vision Applications, pp. 26-31, 2002.12

Ko Nishino, Kenji Hara, Robby T. Tan, Daisuke Miyazaki, Katsushi Ikeuchi, "Photometric aspects on the preservation of cultural assets," In: International Conference on Virtual Systems and MultiMedia, pp. 926-933, 2002.9

Daisuke Miyazaki, Takeshi Ooishi, Taku Nishikawa, Ryusuke Sagawa, Ko Nishino, Takashi Tomomatsu, Yutaka Takase, Katsushi Ikeuchi, "The Great Buddha project: Modelling cultural heritage through observation," In: International Conference on Virtual Systems and MultiMedia, pp. 138-145, 2000.10

Book

Katsushi Ikeuchi, Daisuke Miyazaki, "Digitally Archiving Cultural Objects," Springer-Verlag, New York, pp. 503, 2007.11

Invited talk

[Tutorial]   Daisuke Miyazaki, "---," Polarization Science and Engineering Group,

2016.12

[Invited talk]   Daisuke Miyazaki, Katsushi Ikeuchi, "---," The Japan Society of Applied Physics, 2011.3

[Invited talk]   Daisuke Miyazaki, Katsushi Ikeuchi, "---," The Japan Society of Applied Physics, 2009.3

[Invited talk]   Daisuke Miyazaki, Noriyuki Takashima, Akira Yoshida, Eiki Harashima, Katsushi Ikeuchi, "Polarization-based shape estimation of transparent objects by using raytracing and PLZT camera," In: SPIE, vol. 5888, pp. 1-14, 2005.8

Awards

[Konica Minolta Imaging Science Encouragement Award] Daisuke Miyazaki, 2014.1

[VC research award] Daisuke Miyazaki, Kanami Takahashi, Masashi Baba, Hirooki Aoki, Ryo Furukawa, Masahito Aoyama, Shinsaku Hiura, "---," Joint Symposium on VC and GCAD, 2014.6

[Best overall paper] Daisuke Miyazaki, Takeshi Ooishi, Taku Nishikawa, Ryusuke Sagawa, Ko Nishino, Takashi Tomomatsu, Yutaka Takase, Katsushi Ikeuchi, "The Great Buddha project: Modelling cultural heritage through observation," In: International Conference on Virtual Systems and MultiMedia, pp. 138-145, 2000.10

Fund

2014.1   Konica Minolta Imaging Science Encouragement Award, JPY 500K.

2012.10-2013.3   Consigned research fund, JPY 1,810K.

2012.4-2015.3   JSPS KAKENHI (Grant-in-Aid for Encouragement of Young Scientists (B)), JPY 2,000K.

2008.11-2009.11 Microsoft Research Asia, JPY 1,800K.

2004.4-2006.3   JSPS KAKENHI (Research Fellow), JPY 1,900K.

Teaching

Computer graphics 1 (undergraduate), Hiroshima City University: 2010.4-present.

Computer graphics 2 (undergraduate), Hiroshima City University: 2009.4-present.

Experiments in intelligent systems 2 (undergraduate), Hiroshima City University: 2009.4-present.

Technical English 1 (undergraduate), Hiroshima City University: 2009.4-2010.3, 2017.4-present.

Applied mathematics and image processing (graduate), Hiroshima City University:

2009.4-present.

Special lecture on digital archive 1 (graduate), Hiroshima City University: 2011.4-2012.3, 2013.4-2014.3, 2015.4-2016.3

Students

Secondary supervisor, MS students, Hiroshima City University (Primary supervisor: Shinsaku Hiura or Naoki Asada): Takuya Shigetomi (2009.4-2011.3), Hironori Kai (2011.4-2013.3), Tomoyuki Kamikawa (2012.4-2014.3), Masanari Yokomizo (2012.4-2014.3), Akihisa Ono (2013.4-2015.3).

Secondary supervisor, BS students, Hiroshima City University (Primary supervisor: Shinsaku Hiura or Naoki Asada): Chikako Matsumoto (2009.4-2010.3), Saori Kagimoto (2009.4-2010.3), Marie Minami (2009.4-2010.3), Mika Hiramatsu (2010.4-2011.3), Hironari Kai (2010.4-2011.3), Daisuke Akiyama (2010.4-2011.3), Kazuki Nakamura (2011.4-2012.3), Tomoyuki Kamikawa (2011.4-2012.3), Masanari Yokomizo (2011.4-2012.3), Kanami Takahashi (2012.4-2013.3), Akihisa Ono (2012.4-2013.3), Takafumi Saneshige (2013.4-2014.3), Takuma Okuge (2013.4-2014.3), Mitsutoshi Matsubara (2014.4-2015.3), Mia Nakamura (2014.4-2015.3), Ikumi Nakane (2015.4-2016.3), Karin Tsuda (2015.4-2016.3), Kenji Ishiguro (2016.4-2017.3), Taku Kawasaki (2016.4-2017.3), Sayaka Taomoto (2017.4-2018.3), Shuhei Hashimoto (2017.4-2018.3), Yuka Onishi (2017.4-2018.3).

Secondary supervisor, MS students, The University of Tokyo (Primary supervisor: Katsushi Ikeuchi): Takushi Shibata (2004.4-2006.3).

Academic activities

Society member

CG-ARTS   Society member (2013.8-present).

IPSJ   Member (2002.10-2016.10), Senior member (2016.10-present).

IEEE   Student member (2004.9-2005.3), Member (2005.3-present).

ACM   Professional member (2006.8-present).

IEICE   Member (2009.5-present).

IIEEJ   Member (2013.7-present).

Editorial board

2018.5-present   (Special Issue) Guest Editor, Journal of Imaging.

2011.4-present   Editorial Board, International Journal of Computer Vision & Signal

Processing.

2007.3-2010.8   Editorial Advisory Board, The Open Artificial Intelligence Journal.

Society committee

2013.4-2017.3   IPSJ CVIM   Steering committee member.

2009.4-2013.3   IPSJ CG   Steering committee member.

Executive committee

MIRU2017   Organizing chair

MIRU2011   Publication chair

ITS2009   Support member

ACCV2007   Technical support staff

Program committee member

CVPR2009, CVPR2010, CVPR2011, CVPR2013, CVPR2014, CVPR2015, CVPR2016, CVPR2017, CVPR2018, ACCV2006, ACCV2007, ACCV2009, ACCV2010, ACCV2012, ACCV2014, ACCV2016, SCCG2011, SCCG2012, SCCG2013, SCCG2014, SCCG2015, SCCG2016, eHeritage2009, eHeritage2010, eHeritage2016, ICCV2009, ICCV2011, ICCV2013, ICCV2015, ICCV2017, ECCV2010, ECCV2012, ECCV2014, ECCV2016, PSIVT2009, PSIVT2013, 3DV2014, 3DV2015, SITIS2016, ICPR2014, BMVC2017, BMVC2018, ACPR2017

Reviewed

CVPR2004, CVPR2009, CVPR2010, CVPR2011, CVPR2013, CVPR2014, CVPR2015, CVPR2016, CVPR2017, CVPR2018, ACCV2006, ACCV2007, ACCV2009, ACCV2010, ACCV2012, ACCV2014, ACCV2016, SCCG2011, SCCG2012, SCCG2013, SCCG2014, SCCG2015, SCCG2016, eHeritage2009, eHeritage2010, eHeritage2016, ICCV2009, ICCV2011, ICCV2013, ICCV2015, ICCV2017, ECCV2010, ECCV2012, ECCV2014, ECCV2016, ICPR2002, ICPR2008, ICPR2014, PSIVT2009, PSIVT2013, IEVC2010, IEVC2014, 3DV2014, 3DV2015, NICOGRAPH2015, SIGGRAPH2015, SITIS2016, ICVS2003, ICRA2006, MVA2007, PG2013, BMVC2017, BMVC2018, ACPR2017, Applied Optics, CVA, CVIU, H&M, IEICE-E-A, IEICE-E-D, IET-CV, IET-IP, IIEEJ, IJCV, IJCVSP, IMAVIS, JJAP, JOSA A, JSEM, MVA, OAI, Optical Review, Optics Letters, PAMI, Sensors, TIP, JSSDJ, OE, PR