Ko Nishino

Contact	Department of Intelligence Science and Technology	*Tel:* +81-75-753-4891
	Graduate School of Informatics, Kyoto University	*Fax:* +81-75-753-4891
	Yoshida Honmachi, Sakyo-ku	kon@i.kyoto-u.ac.jp
	Kyoto, Kyoto 606-8501	http://vision.ist.i.kyoto-u.ac.jp/

Education

Columbia University — New York, NY

Postdoctoral Research Scientist, Department of Computer Science, Sept. 2002 – July 2005
 Advisor: Professor Shree K. Nayar

The University of Tokyo — Tokyo, Japan

Ph.D. in Computer Science, Graduate School of Science, March 2002
 "Photometric Object Modeling : Rendering from a Dense/Sparse Set of Images"
 Advisor: Professor Katsushi Ikeuchi

M.E. in Info. and Comm. Engineering (ECE), Graduate School of Engineering, March 1999
 "Appearance Compression and Synthesis based on 3D Model for Mixed Reality"
 Advisor: Professor Katsushi Ikeuchi

B.E. in Info. and Comm. Engineering (ECE), Faculty of Engineering, March 1997
 "KL1 Abstract Interpreter"
 Advisor: Professor Takashi Chikayama

Employment

Kyoto University, Department of Intelligence Science and Technology — Kyoto, Japan
Professor — April 2018 –

University of Pennsylvania, Computer and Information Science Department — Philadelphia, PA
Adjunct Professor — Sept. 2014 –

National Institute of Informatics — Tokyo, Japan
Visiting Professor — July 2015 – 2020

Drexel University, Department of Computer Science — Philadelphia, PA
Professor with Tenure — Sept. 2016 – March 2018
Associate Professor with Tenure — Sept. 2011 – Aug. 2016
Assistant Professor — Sept. 2005 – Aug. 2011

Osaka University, Institute of Industrial Scientific and Industrial Research — Osaka, Japan
Visiting Professor — Sept. 2012 – March 2018

Carnegie Mellon University, Robotics Institute — Pittsburgh, PA
Visiting Associate Professor — March 2013 – June 2013

Honors and Awards
British Machine Vision Conference, Best Student Paper Award, 2020
IEEE Senior Member, 2016
Outstanding Reviewer Award, Meeting on Image Recognition and Understanding, 2015
Outstanding Reviewer Award, IEEE Conference on Computer Vision and Pattern Recognition, 2014
Outstanding Reviewer Award, IEEE Conference on Computer Vision and Pattern Recognition, 2013
Best Paper Award, Meeting on Image Recognition and Understanding, 2011
Second Place, Mentor of the Year Award, Graduate Student Association, Drexel University, 2009
Outstanding Reviewer Award, IEEE Int'l Conference on Computer Vision, 2008
CAREER Award, National Science Foundation, 2008

Two Best Paper Awards, Meeting on Image Recognition and Understanding, 2002
Best Paper Award, International Society on Virtual Systems and Multimedia, 2000
Best Paper Award, The Virtual Reality Society of Japan, 1999

Press Coverage

PhillyVoice *The science of... crowd size estimation*, Aug. 11th 2015.
Newsweek *"Meet the Eye Cam: Processed reflection from the cornea can make the hindsight a reality"*, Jul. 12th 2004.
NewScientist *"Twinkle Eyes Animate Movies"*, Jul. 24th 2004.
New York Times *"Fleeting Experience, Mirrored in Your Eyes"*, Jul. 29th 2004.
Others including International Herald Tribunes, NYSTAR, Science Daily, ACM Tech News, Yomiuri Shinbun (Japanese), CGWorld (Japanese)

Patents

Co-inventor with Zhengyou Zhang and Katsushi Ikeuchi, "*View-dependent Image Synthesis*", US Patent 6639594, granted Oct. 28 2003.

Professional Activities

Editorial Boards
IPSJ Transactions on Computer Vision and Applications, Springer, Associate Editor in Chief (2017–)
IEEE Transactions on Pattern Analysis and Machine Intelligence, Associate Editor (2015–)
International Journal of Computer Vision, Springer, Associate Editor (2010–)
Machine Vision and Applications, Springer, Associate Editor (2012–2015)
Transactions on Computer Vision and Applications, IPSJ, Associate Editor (2013–2017)
Encyclopedia of Computer Vision, Springer, Editor (2010–2014)

Grant Panels/Reviews
NSF Directorate for Computer and Information Science and Engineering (2007–2012, 2014–2017)

Organizing Committees
IEEE Conference on Computer Vision and Pattern Recognition, Area Chair (2021)
Asian Conference on Computer Vision, General Chair (2020)
IEEE Conference on Computer Vision and Pattern Recognition, Area Chair (2018)
IEEE International Conference on Computer Vision, Area Chair (2017)
IEEE Conference on Computer Vision and Pattern Recognition, Area Chair (2017)
Asian Conference on Computer Vision, Program Chair (2016)
IEEE International Conference on Computer Vision, Area Chair (2015)
European Conference on Computer Vision, Area Chair (2014)
Asian Conference on Computer Vision, Area Chair (2014)
IEEE Conference on Computer Vision and Pattern Recognition, Area Chair (2012)
IEEE/RSJ International Conference on Intelligent Robots and Systems, Area Editor (2012)
IEEE First Workshop on Modeling, Simulation and Visual Analysis of Large Crowds, Program Chair (2011)
IEEE Applications of Computer Vision in Archaeology, Publications Chair (2010)

Program Committees
IEEE International Conference on Computer Vision (2007, 2009, 2011, 2013)
IEEE Conference on Computer Vision and Pattern Recognition (2004–2016)
European Conference on Computer Vision (2004, 2006, 2008, 2010, 2012, 2016)
AAAI Conference on Artificial Intelligence (2014)
Asian Conference on Computer Vision (2003, 2005–2007)
IAPR International Conference on Pattern Recognition (2008–2010)
3D Processing, Visualization, and Transmission (2004, 2006)
IEEE International Workshop on Projector-Camera Systems (2010)
IEEE International Workshop on Point Cloud Processing (2012)

IEEE Color and Photometry in Computer Vision Workshop (2011–2013)

Reviewer
Journal
    International Journal of Computer Vision
    IEEE Transactions on Pattern Analysis and Machine Intelligence
    IEEE Transactions on Image Processing
    IEEE Transactions on Computer Graphics and Visualization
    IEEE Signal Processing Magazine
    Communications of the ACM
    ACM Computing Surveys
    ACM Transactions on Graphics
    Computer Vision and Image Understanding
    Journal of Mathematical Imaging and Vision
    Machine Vision and Application
    Neural Processing Letters
Conference
    ACM SIGGRAPH
    ACM SIGGRAPH Asia
    IEEE International Conference on Computer Vision
    IEEE Computer Vision and Pattern Recognition
    European Conference on Computer Vision
    Asian Conference on Computer Vision
    IEEE Visualization
    ACM CHI
    EuroGraphics
    EuroGraphics Symposium on Rendering

Keynote Talks
"Seeing More with Computers," The 6th Kyoto University-Inamori Foundation Joint Kyoto Prize Symposium, 6/29/2019
"Computational Material Perception," The 23rd Symposium on Sensing via Image Information, 6/9/2017
"Going With the Flow: Pedestrian Efficiency in Crowded Scenes," International Joint Workshop on Advanced Sensing/Visual Attention and Interaction, 11/5/2013
"Visual Material Recognition," 16th Meeting on Image Recognition and Understanding, 7/31/2013
"Visual Material Recognition," 9th Workshop on Perception Beyond the Visible Spectrum, 6/24/2013
"Visual Material Recognition," 4th Workshop on Recent Trends in Computer Vision, 1/8/2013
"Visual Material Recognition," 7th Int'l Workshop on Robust Computer Vision, 1/5/2013

Invited Talks
Microsoft Japan, AI Academic Forum, 1/28/2020
Kyoto University, Faculty of Engineering, Open Seminar, 7/27/2019
Tamagawa University, 5/29/2019
STW 2019, 5/14/2019
Chiba University, Computational Color Imaging Workshop, 3/27/2019
Advanced Institute of Industrial Technology, Innovation Design Forum, 1/29/2019
Osaka University Research Association of Industry and Science, Sanken Techno Salon Speical 1, 11/9/2018
IEICE, Technical Commmittee on Smart Info-Media Systems, 10/25/2018
Kyoto University, Brain Information Seminar, 1/19/2017
NICT-NSF Collaborative Workshop on Computational Neuroscience, 1/18/2017
Osaka University-NICT, Center for Information and Neural Networks, 1/16/2017
University of Tokyo, Department of Computer Science, 1/13/2017

University of Tokyo, Institute of Industrial Science, 1/11/2017
Huawei Visual Computing Workshop and Retreat, 12/2/2016
Innovative Shitsukan Science and Technology, 6/21/2016
University of Pennsylvania, Computer Graphics Laboratory, 6/2/2016
University of Arizona, Space Object Behavioral Sciences, 5/5/2016
Amazon.com Inc., 10/26/2015
National Institute for Physiological Sciences, Komatsu Laboratory, 10/15/2015
NTT, Communication Science Laboratory, 10/13/2015
Waseda University, Morishima Laboratory, 10/12/2015
The College of New Jersey, Computer Science Colloquium, 4/21/2015
University of Tokyo, Okawa Symposium, 3/5/2015
Massachusetts Institute of Technology, Perceptual Science Seminar, 10/27/2014
University of California Los Angeles, VCLA Seminar, 9/22/2014
Int'l Symposium on the Future of Shitsukan Research (Material Perception), 7/17/2014
Dagstuhl Seminar on Interaction and Collective Movement Processing, 3/23-28/2014
University of California Berkeley, Visual Computing Seminar, 11/22/2013
University of California San Diego, Computer Vision Seminar, 11/21/2013
University of Central Florida, CRCV Seminar, 5/17/2013
Carnegie Mellon University, RI Seminar, 5/10/2013
Nagoya University, IEICE Seminar, 12/20/2012
Columbia University, CAVE Seminar, 6/8/2012
Rochester Institute of Technology, CIS Seminar, 4/18/2012
University of North Carolina at Chapel Hill, GAMMA Seminar, 3/28/2012
University of California Los Angeles, IEEE CVPR Area Chair Meeting, 2/27/2012
Osaka University, SANKEN Workshop, 1/12/2012
NSF-JST Workshop on Cognitive Robotics, 10/7/2011
University of Tokyo, Computer Vision Seminar, 12/16/2010
Pennsylvania State University, CSE Colloquium, 3/22/2010
University of Maryland, CfAR Seminar, 3/5/2010
University of Pennsylvania, GRASP Seminar, 2/19/2010
Carnegie Mellon University, VASC Seminar, 2/15/2010
University of Toronto, AI Computational Vision CS Seminar, 2/5/2010
Temple University, CIS Colloquium, 1/27/2010
Drexel IEEE Graduate Forum Technical Poster Symposium, Distinguished Lecture, 5/4/2009

Students

Kyoto: Current and Past Students
See http://vision.ist.i.kyoto-u.ac.jp/people/

Drexel: Past PhD Students
Gabriel Schwartz, *Visual Material Recognition* (December 2017, Facebook Reality Lab)
Stephen Lombardi, *Radiometric Scene Decomposition: Complex Reflectance and Natural Illumination from Images* (September 2015, Facebook Reality Lab)
Geoffrey Oxholm, *Reconstructing Geometry from Its Latent Structures* (June 2014, Adobe Research)
Louis Kratz, *Visual Analysis of Crowded Scenes* (June 2012, Curalate)

Drexel: Past MS Students
Prabin Bariya, *Scale Variability of 3D Geometry* (June 2010)
Geoffrey Oxholm, *Nonrigid Image Registration* (June 2009, PhD Student at Drexel)
John Novatnack, *Scale-Dependent 3D Geometric Features and Descriptors* (June 2008, Google)

Drexel: Past BS Students
Dennis Shtatnov (2015)
Ian Johnston (Math, June 2010, PhD Student at Boston Univ.)

Honors and Awards to Students	Best Student Paper Award, British Machine Vision Conference, 2020: Yuzheng Xu

Jay Modi Memorial Award, Dept. of CS, Drexel University, 2016: Gabriel Schwartz

Harry Brown, Jr. Endowed Fellowship, 2013: Stephen Lombardi

Research Award, Highly Commended, CoE, Drexel University, 2013: Stephen Lombardi

George Hill, Jr. Endowed Fellowship, CoE, Drexel University, 2013: Gabriel Schwartz

Jay Modi Memorial Award, Dept. of CS, Drexel University, 2013: Stephen Lombardi

Outstanding Research Award, Dept. of CS, Drexel University, 2012: Louis Kratz

George Hill, Jr. Endowed Fellowship, CoE, Drexel University, 2012: Stephen Lombardi

Dean's Fellowship, CoE, Drexel University, 2010: Stephen Lombardi, Gabriel Schwartz

George Hill, Jr. Endowed Fellowship, CoE, Drexel University, 2010: Geoffrey Oxholm

Best Poster Award, Third Annual Research Symposium, Drexel IEEE, 2010: Geoffrey Oxholm

Student Travel Grant, European Conference on Computer Vision, 2010: Geoffrey Oxholm

Provost's Fellowship, Drexel University, 2010: Stephen Lombardi

Jay Modi Memorial Award, Dept. of CS, Drexel University 2010: Louis Kratz

Provost's Fellowship, Drexel University, 2009: Geoffrey Oxholm, Stephen Lombardi

Dean's Fellowship, CoE, Drexel University, 2009: Geoffrey Oxholm, Stephen Lombardi

Dean's Fellowship, CoE, Drexel University, 2008: Prabin Bariya

Koerner Family Fellowship, CoE, Drexel University, 2009: Louis Kratz

Best Poster Award, Second Annual Research Symposium, Drexel IEEE, 2009: Louis Kratz

George Hill, Jr. Endowed Fellowship, CoE, Drexel University, 2007: Louis Kratz

Honorable Mention, Outstanding Undergraduate Research Award, Computing Research Association, 2006: John Novatnack

Outstanding Research Award, Dept. of CS, Drexel University, 2005: John Novatnack

Teaching

Kyoto University

See `https://kyouindb.iimc.kyoto-u.ac.jp/j/pY3mQ`

Newly Developed Courses

CS435 (CS480) Computational Photography (undergraduate level)
CS583 (CS480/CS680) Introduction to Computer Vision (graduate level)
CS634 (CS680) Advanced Computer Vision (graduate level)
CS613 Machine Learning (graduate level) (completely revamped)

Offerings[1]

Term	Level	Course Number: Title	Students	COE Eval (overall/inst.)
2005-06 W	G	CS680: Computer Vision I	14	4.08/4.46
2005-06 S	G	CS680: Computer Vision II	5	4.75/5.00
2006-07 F	UG	CS480: Computational Photography	12	4.44/4.89
2006-07 W	UG	CS480: Introduction to Computer Vision	6 (13)	4.80/5.00
–	G	CS680: –	7 (13)	4.43/4.57
2006-07 W	G	CS690: Machine Learning in Computer Vision	2	–
2006-07 S	UG·G	CS480·680: Advanced Computer Vision	5	5.00/5.00
2007-08 F	UG	CS480: Computational Photography	8	4.38/4.38
2007-08 F	G	CS690: Adv. Topics in Comp. Photography	1	–
2007-08 W	G	CS680: Introduction to Computer Vision	14	–
2007-08 S	G	CS613: Machine Learning	12	–

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[1]Thesis credits CS898 and research credits CS997 are not listed. COE Course Evaluation results are missing for 2007-08 Winter, Spring and 2008-09 Fall due to system failure.

Term	Level	Course Number: Title	Students	COE Eval (overall/ inst.)
2008-09 F	UG	CS498: Statistical Appearance Modeling	1	–
2008-09 F	G	CS583: Introduction to Computer Vision	13	–
2008-09 W	UG	CS435: Computational Photography	8	4.5/4.25
2008-09 S	G	CS680: Advanced Computer Vision	9	3.67/3.5
2009-10 F	G	CS583: Introduction to Computer Vision	14	4.22/4.22
2009-10 W	UG	CS435: Computational Photography	11	4.6/4.6
2009-10 S	G	CS613: Machine Learning	17	4.71/4.71
2010-11 F	G	CS583: Introduction to Computer Vision	15	4.71/4.57
2009-10 W	UG	CS435: Computational Photography	15	4.25/4.50
2011-12 S	G	CS613: Machine Learning	23	4.00/4.56
2011-12 S	G	CS613: Machine Learning (online)	5	4.50/4.50
2012-13		Sabbatical		
2013-14 F	U	CS480: ST: Computer Vision	4	3.00/3.00
2013-14 F	G	CS583: Introduction to Computer Vision	21	4.33/5.00
2013-14 F	G	CS583: Introduction to Computer Vision (online)	9	4.33/4.67
2014-15 F	U	CS435: Computational Photography	15	4.5/4.5
2014-15 F	U	CS435: Computational Photography (online)	8	4.5/4.5
2015-16 S	G	CS583: Introduction to Computer Vision	20	4.6/4.6
2015-16 S	G	CS583: Introduction to Computer Vision (online)	11	4.7/4.7
2016-17 S	G	CS583: Introduction to Computer Vision	21	4.6/4.6
2016-17 S	G	CS583: Introduction to Computer Vision (online)	12	4.4/4.5

Senior Design Projects

4D Archaeological Data Exploration, Brant Olsen, Mark Golazeski, Ben Rockstroh, Adam Miller, Patrick Smith, Second place in department, 2008–09

Boss Spy, Brendan Budine, Paul J. Melici, John Novatnack, Abbas Omar (co-advised with Prof. Ali Shokoufandeh), First place in department, 2005–06

University Services **Kyoto University**

See `https://kyouindb.iimc.kyoto-u.ac.jp/j/pY3mQ`

Service Committees

Dept. of Computer Science Tenure and Promotion Committee, Chair and Member (2015)
Dept. of Computer Science Faculty Search Committee (2015)
Dept. of Computer Science Faculty Search Committee, Chair (2014)
College of Computing and Informatics Strategic Committee (2014)
Dept. of Computer Science Graduate Curriculum Committee, Chair (2013–)
College of Computing and Informatics Research Operations Council (2013–2014)

College of Engineering Junior Faculty Advisory Committee (2008–2010)
Dept. of Computer Science Colloquium Series Committee, Chair (2010)
Dept. of Computer Science Undergraduate Recruiting Committee (2008–2009)
Dept. of Computer Science Graduate Curriculum Committee (2005–2009, 2011)
Dept. of Computer Science Faculty Search Committee (2008, 2012)
Dept. of Computer Science Student Awards Committee (2006)
College of Engineering High School Summer Mentorship Program (2007–2009)
College of Engineering Research Experience for Teachers Program (2006–2009)
College of Engineering Math and Science Partnership Program (2007)
Drexel Research Day, Judge (2010)

Thesis Committees
PhD Defense
  Stephen Lombardi (Drexel CS, 9/15/2015, Chair, Advisor)
  Raymond Canzanese (Drexel ECE, 5/8/2015)
  Geoffrey Oxholm (Drexel CS, 6/6/2014, Chair, Advisor)
  Louis Kratz (Drexel CS, 5/3/2012, Chair, Advisor)
  Tony Fast (Drexel MSE, 6/14/2011)
  Keith Sevcik (Drexel MEM, 4/7/2010)
  Chenyu Wu (CMU RI, 1/8/2010)
  Trip Denton (Drexel CS, 6/4/2007)
  Cuping Zhang (Drexel ECE, 10/20/2006)
  M. Fatih Demirci (Drexel CS, 12/12/2005, Chair)
PhD Proposal
  Gabriel Schwartz (Drexel CS, 1/31/2017, Chair, Advisor)
  Hang Zhang (Rutgers ECE, 1/31/2017)
  Stephen Lombardi (Drexel CS, 1/21/2015, Chair, Advisor)
  Robert Lass (Drexel CS, 10/1/2014)
  Raymond Canzanese (Drexel ECE, 4/21/2014)
  Geoffrey Oxholm (Drexel CS, 6/11/2013, Chair, Advisor)
  Tony Fast (Drexel MSE, 5/12/2011)
  David Turner (Drexel MSE, 3/14/2011)
  Manolya Eyiyurekli (Drexel CS, 4/2/2010 Chair)
  Keith Sevcik (Drexel MEM, 11/24/2009)
  Chenyu Wu (CMU RI, 9/7/2007)
  Trip Denton (Drexel CS, 4/26/2007)
PhD Candidacy
  Pavan Kantharaju (Drexel CS, 12/1/2016)
  Stephen Lombardi (Drexel CS, 9/15/2011, Advisor)
  Geoffrey Oxholm (Drexel CS, 1/13/2011)
  David Turner (Drexel MSE, 4/13/2010)
  Edward Stehle (Drexel CS, 3/4/2010, Chair)
  Linge Bai (Drexel CS, 8/20/2009, Chair)
  Louis Kratz (Drexel CS, 5/22/2008, Advisor)
  Manolya Eyiyurekli (Drexel CS, 12/14/2007)
  Jeff Abrahamsom (Drexel CS, 3/21/2006)
  Trip Denton (Drexel CS, 11/2/2005, Chair)
Master Thesis Defense
  Rafael Campos (Drexel CS, 12/5/2016)
  Md. Alimoor Reza (Drexel CS, 8/8/2011, Chair)
  Dan Bodenstein (Drexel DM, 7/18/2011)
  Dan Hennessey (Drexel CS, 7/3/2009, Chair)
  John Novatnack (Drexel CS, 5/29/2008, Advisor)

Outreach

    Noyan Baykal, Koc School, Drexel CoE High School Mentorship (3 weeks, July 2009)
    Virginia Brady, Cleveland Elementary School, Drexel CoE Research Exp. for Teachers (July 2008)
    Mehmet Secan Mihmanli, Koc School, Drexel CoE High School Mentorship (July 2008)
    Amber Mckown, Downingtown High School, Drexel CoE High School Mentorship (July 2007)
    Craig Polakoff, Upper Moreland High School, Drexel CoE Research Exp. for Teachers (July 2007)
    Susan Brennan, Sulzburger Middle School, Drexel CoE Research Exp. for Teachers (July 2006)
    Talks and demonstrations at open houses at the university, college, and department levels and as part of the Drexel CoE Math and Science Partnership program

Publications   Google Scholar: `http://scholar.google.com/citations?user=SXXEZhYAAAAJ&hl=en`

Book

[A1] Saad Ali, Ko Nishino, Dinesh Manocha and Mubarak Shah (Eds.), "Modeling Simulation and Visual Analysis of Crowds: A Multidisciplinary Perspective," ISBN 9781461484820, Springer, 2013.

Book Chapter

[B1] Ko Nishino and Louis Kratz, "Modeling Crowd Flow for Video Analysis of Crowded Scenes," S. Ali, K. Nishino, D. Manocha and M. Shah (Eds.), Modeling Simulation and Visual Analysis of Crowds: A Multidisciplinary Perspective, ISBN 9781461484820, Springer, in print, 2013.

[B2] Louis Kratz and Ko Nishino, "Spatio-temporal Motion Pattern Models of Extremely Crowded Scenes," L. Wang, G. Zhao, L. Cheng, and M. Pietikäine (Eds.), Machine Learning for Vision-based Motion Analysis: Theory and Techniques, ISBN 9780857290564, Springer, pp263–274, 2010.

[B3] Ko Nishino and Shree K. Nayar, "Extraction of Visual Information from Images of Eyes," Riad Hammoud (Ed.) *Passive Eye Monitoring: Algorithms, Applications and Experiments*, ISBN 9783540754114, Chapter 7, Springer, pp153–177, 2008.

[B4] Ko Nishino and Katsushi Ikeuchi, "Robust Simultaneous Registration of Multiple Range Images," Katsushi Ikeuchi and Daisuke Miyazaki (Ed.) *Digitally Archiving Cultural Objects*, ISBN 9780387758060, Chapter 5, Springer, pp71–86, 2007.

[B5] Tomohito Masuda, Yuichiro Hirota, Ko Nishino, and Katsushi Ikeuchi, "Simultaneous Determination of Registration and Deformation Parameters among 3D Range Images," Katsushi Ikeuchi and Daisuke Miyazaki (Ed.) *Digitally Archiving Cultural Objects*, ISBN 9780387758060, Chapter 8, Springer, pp127–144, 2007.

[B6] Ryusuke Sagawa, Ko Nishino, Mark D. Wheeler, and Katsushi Ikeuchi, "Parallel Processing of Range Data Merging," Katsushi Ikeuchi and Daisuke Miyazaki (Ed.) *Digitally Archiving Cultural Objects*, ISBN 9780387758060, Chapter 9, Springer, pp147–158, 2007.

[B7] Ryusuke Sagawa, Ko Nishino, and Katsushi Ikeuchi, "Adaptively Merging Large-Scale Range Data with Reflectance Properties," Katsushi Ikeuchi and Daisuke Miyazaki (Ed.) *Digitally Archiving Cultural Objects*, ISBN 9780387758060, Chapter 10, Springer, pp161–187, 2007.

[B8] Robby T. Tan, Ko Nishino, and Katsushi Ikeuchi, "Color Constancy through Inverse-Intensity Chromaticity Space," Katsushi Ikeuchi and Daisuke Miyazaki (Ed.) *Digitally Archiving Cultural Objects*, ISBN 9780387758060, Chapter 16, Springer, pp323–349, 2007.

[B9] Ko Nishino, Yoichi Sato, and Katsushi Ikeuchi, "Eigen-Texture Method: Appearance Compression based on 3D Model," Katsushi Ikeuchi and Yoichi Sato (Ed.) *Modeling from Reality*, ISBN

0792375157, Chapter 6, pp 113–123, 2001.

[B10] Daisuke Miyazaki, Takeshi Oishi, Taku Nishikawa, Ryusuke Sagawa, Ko Nishino, Takashi Tomomatsu, Yutaka Takase, and Katsushi Ikeuchi, "The Great Buddha Project: Modeling Cultural Heritage through Observation," Katsushi Ikeuchi and Yoichi Sato (Ed.) *Modeling from Reality*, ISBN 0792375157, Chapter 9, pp 171–180, 2001.

[B11] Katsushi Ikeuchi, Yoichi Sato, Ko Nishino, and Imari Sato, "Photometric Modeling for Mixed Reality," Y. Ohta and H. Tamura (Ed.) *Mixed Reality –Merging Real and Virtual World–*, ISBN 3540656235, Chapter 8, pp 147–163, 1999.

Journal

[J1] Yuta Asano, Yinqiang Zheng, Ko Nishino, and Imari Sato, "Depth Sensing by Near-Infrared Light Absorption in Water," *IEEE Trans. on Pattern Analysis and Machine Intelligence*, 2020. (online first)

[J2] Gabriel Schwartz and Ko Nishino, "Recognizing Material Properties from Images," *IEEE Trans. on Pattern Analysis and Machine Intelligence*, 2019. (online first)

[J3] Hiroki Okawa, Miho Shimano, Yuta Asano, Ryoma Bise, Ko Nishino, and Imari Sato, "Estimation of Wetness and Color From A Single Multispectral Image," *IEEE Trans. on Pattern Analysis and Machine Intelligence*, 2019. (online first) [J4] Trung Thanh Ngo, Hajime Nagahara, Ko Nishino, Rinichiro Taniguchi, and Yasushi Yagi, "Reflectance and Shape Estimation with A Light Field Camera Under Natural Illumination," *Journal of Computer Vision*, Vol. 127, pp1707–1722, Feb., 2019.

[J5] Geoffrey Oxholm and Ko Nishino, "Shape and Reflectance Estimation in the Wild," *IEEE Trans. on Pattern Analysis and Machine Intelligence*, Vol. 38, No. 2, pp376–389, Feb., 2016.

[J6] Stephen Lombardi and Ko Nishino, "Reflectance and Illumination Recovery in the Wild," *IEEE Trans. on Pattern Analysis and Machine Intelligence*, Vol. 38, No. 1, pp129–141, Jan., 2016.

[J7] Prabin Bariya, John Novatnack, Gabriel Schwartz, and Ko Nishino, "3D Geometric Scale Variability in Range Images: Features and Descriptors," *Int'l Journal of Computer Vision*, Vol. 99, No. 2, pp232–255, Sept., 2012.

[J8] Ko Nishino, Louis Kratz, and Stephen Lombardi, "Bayesian Defogging," *Int'l Journal of Computer Vision*, Vol. 98, No. 3, pp263–278, Jul., 2012.

[J9] Geoffrey Oxholm and Ko Nishino, "A Flexible Approach to Reassembling Thin Objects of Unknown Geometry," *Journal of Cultural Heritage*, Vol. 14, No. 1, Jan.–Feb., 2013.

[J10] Louis Kratz and Ko Nishino, "Tracking Pedestrians using Local Spatio-Temporal Motion Patterns in Extremely Crowded Scenes," *IEEE Trans. on Pattern Analysis and Machine Intelligence*, Vol. 34, No. 5, pp987–1002, May, 2012.

[J11] Kenji Hara and Ko Nishino, "Variational Estimation of Inhomogeneous Specular Reflectance and Illumination from A Single View," *OSA Journal of Optical Society of America A*, Vol. 28, No. 2, pp136–146, Feb., 2011.

[J12] Ko Nishino and Stephen Lombardi, "A Directional Statistics-based Reflectance Model for Isotropic BRDFs," *OSA Journal of Optical Society of America A*, Vol. 28, No. 1, pp8–18, Jan., 2011.

[J13] Trip Denton, Ali Shokoufandeh, John Novatnack, and Ko Nishino, "Canonical Subsets of

Image Features," *Computer Vision and Image Understanding*, Vol. 112, No. 1, pp55–66, Oct., 2008.

[J14] Kenji Hara, Ko Nishino, and Katsushi Ikeuchi, "Mixture of Spherical Distributions for Single-View Relighting," *IEEE Trans. on Pattern Analysis and Machine Intelligence*, Vol. 30, No. 1, pp25–35, Jan., 2008.

[J15] Takanori Igarashi, Ko Nishino, and Shree K. Nayar, "The Appearance of Human Skin: A Survey," *Foundations and Trends in Computer Graphics and Vision*, Vol. 3, No. 1, pp1–95, Nov., 2007.

[J16] Katsushi Ikeuchi, Takeshi Oishi, Jun Takamatsu, Ryusuke Sagawa, Atsushi Nakazawa, Ryo Kurazume, Ko Nishino, Mawo Kamakura, and Yasuhide Okamoto, "The Great Buddha Project: Digitally Archiving, Restoring, and Analyzing Cultural Heritage Objects," *Int'l Journal of Computer Vision*, Vol. 75, No. 1, pp189–208, Oct., 2007.

[J17] Ko Nishino and Shree K. Nayar, "Corneal Imaging System: Environment from Eyes," *Int'l Journal of Computer Vision*, Special Issue of Best Papers in CVPR 2004, Vol. 70, No. 1, pp23–40, Oct., 2006. Invited Paper

[J18] Ryo Kurazume, Ko Nishino, Mark D. Wheeler, Katsushi Ikeuchi, "Mapping Textures on 3D Geometric Model Using Reflectance Image," *Systems and Computers in Japan* Vol. 36, No. 13, pp92–101, Nov., 2005.

[J19] Ko Nishino, Shree K. Nayar, and Tony Jebara, "Clustered Blockwise PCA for Representing Visual Data," *IEEE Trans. on Pattern Analysis and Machine Intelligence*, Vol. 27, No. 10, pp1675–1679, Oct., 2005.

[J20] Kenji Hara, Ko Nishino, and Katsushi Ikeuchi, "Light Source Position and Reflectance Estimation from a Single View without the Distant Illumination Assumption," *IEEE Trans. on Pattern Analysis and Machine Intelligence*, Vol. 27, No. 4, pp493–505, Apr., 2005.

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