Curriculum Vitae

Dr. Norifumi KAWABATA

Principal Investigator Computational Imaging Lab, Kanazawa, Japan

January 29, 2025

1 Affiliation

Principal Investigator, Computational Imaging Lab, Kanazawa-shi, Ishikawa, 920-1155 Japan

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Workspace Webpage: https://imaging.norifumik.nagoya/e

2 Academic & Professional Experience

• April 2025

(To be arrived at a new academic post.)

• May 2024 - present

Principal Investigator.

Education and Research Division of Mathematical and Data Science / Research Division of Computational Imaging / Industry-Academia Cooperative Research Division, **Computational Imaging Lab**

• April 2024 - April 2024

Associate Professor, Department of Information Engineering, Faculty of Information Engineering, Kanazawa Gakuin University

• April 2023 - April 2024

Associate Professor,

Department of Economic Informatics, Faculty of Economic Informatics, Kanazawa Gakuin University

• April 2022 - March 2023

Principal Investigator,

Education and Research Division of Mathematical and Data Science / Research Division of Computational Imaging / Industry-Academia Cooperative Research Division, **Computational Imaging Lab**

• October 2021 – March 2022

Specially Appointed Assistant Professor,

Education and Research Center for Mathematical and Data Science, Hokkaido University

• August 2021 - September 2021

Assistant Technical Staff, Medical IT Center, Center for Healthcare Information Technology (C-HiT), Tokai National Higher Education and Research System (THERS), Nagoya University Hospital

• April 2019 - July 2021

Assistant Professor,

Department of Information Sciences, Faculty of Science and Technology, Tokyo University of Science

• April 2018 - March 2019

Assistant Technical Staff,

Research Division of Transportation and Information System, Institutes of Innovation for Future Society, Nagoya University

• April 2017 - March 2018

Research Fellow, Center for Frontier Medical Engineering (CFME), Chiba University

3 Academic Background

- April 2013 March 2017
 - Miyao Laboratory, Information Platform Group, Department of Information Engineering, Graduate School of Information Science, **Nagoya University**
- April 2011 March 2013

Horita Laboratory, (Media Information and Communication Technology (MICT)), Department of Intellectual Information Engineering, Graduate School of Science and Engineering for Education, **University of Toyama**

- April 2007 March 2011
 Department of Intellectual Information Engineering, Faculty of Engineering, University of Toyama
- March 2007

Seiryo High School, General Course Graduation

4 Academic Degree

- March 2017, Ph.D. of Information Science in Nagoya University
- March 2013, Master of Engineering in University of Toyama
- March 2011, Bachelor of Engineering in University of Toyama

5 Research Field

- Information Engineering, Information Science, Computer Science
- Multi-view 3D Image and Video, Three-dimensional Image Processing, Three-dimensional Display
- 3DCG, Computational Imaging, Texture Informatics
- Image Media Quality, Visual Media Processing, Visual Information Science
- Image and Signal Processing, Digital Watermarking, Sparse Coding
- Color Information Science and Engineering, Colorization, Color Management
- Picture Coding / Image Media Processing, Super-resolution, 360 Degrees Image and Video
- Multivariate Analysis, Data Mining, Machine Learning
- Human Interface and Interaction, Human Factor, Medical Virtual Reality
- Medical System, Healthcare Informatics, Medical Imaging

6 Teaching and Research Experience

- April 2025
 - (To be arrived at a new academic post.)
- May 2024 present

Principal Investigator,

Education and Research Division of Mathematical and Data Science / Research Division of Computational Imaging / Industry-Academia Cooperative Research Division, Computational Imaging Lab Research on Imaging and Computer Science.

• April 2024 - April 2024

Associate Professor,

Department of Information Engineering, Faculty of Information Engineering, Kanazawa Gakuin University Education and Research on Computer Engineering (Signal Processing).

• April 2023 – April 2024

Associate Professor,

Department of Economic Informatics, Faculty of Economic Informatics, Kanazawa Gakuin University Education and Research on Multimedia Signal Processing towards Economic Informatics.

- Computer Basic Exercises I a/b
- Computer Basic Exercises II a/b
- Programming Basis a/b
- Programming I a/b
- Programming III a/b
- Programming IV a/b
- Database I
- Database II
- Fundamental Seminar I
- Fundamental Seminar II

• April 2022 - March 2023

Principal Investigator,

Education and Research Division of Mathematical and Data Science / Research Division of Computational Imaging / Industry-Academia Cooperative Research Division, Computational Imaging Lab Research on Imaging and Computer Science.

- Computational Imaging Lab Information Platform (Mathematical and Data Science Program, Application and Basis (Data Science Basis))
- Computational Imaging Lab Information Platform (Mathematical and Data Science Program, Application and Basis (Data Engineering Basis))
- Computational Imaging Lab Information Platform (Mathematical and Data Science Program, Application and Basis (AI Basis))
- October 2021 March 2022

Specially Appointed Assistant Professor,

Education and Research Center for Mathematical and Data Science, Hokkaido University Education and Research for Mathematical and Data Science.

- MDS Platform (Clustering such as Regression Analysis, Hierarchical Clustering, Non-hierarchical Clustering, Naive Bayes Method, and Support Vector Machine Method)
- MDS Platform (Optimization)
- August 2021 September 2021

Assistant Technical Staff,

Medical IT Center, Nagoya University Hospital

A Study Support on Medical Information System to Smart Hospital.

• April 2019 - July 2021

Assistant Professor,

Department of Information Sciences, Faculty of Science and Technology,

Tokyo University of Science

Education and Research on computer sciences to the bio-medical science and technology field.

- Introduction to Computer Systems and its Exercises (UNIX, Internet, TeX, C Language Programming)

- Experiments in Information Sciences I (OCaml)
- Exercises in Information Sciences I (Java)
- Experiments in Information Sciences II (PBL)
- Exercises in Information Sciences II (Application of C Language Programming, Network Programming, SQL, PHP, JavaScript, Multimedia, Embedded System, Image Processing)
- Experiments in Information Sciences III
- Exercises in Information Sciences III
- Advanced Studies and Researches (Group Meeting, Image Processing Seminar, Skill Seminar, Journal Club)
- April 2018 March 2019

Assistant Technical Staff,

Research Division of Transportation and Information Systems, Institutes of Innovation for Future Society, Nagoya University

- Research Technical Assistance on Transportation and Information Systems in the Next Generation Mobility Society
- April 2017 March 2018

Research Fellow,

Center for Frontier Medical Engineering, Chiba University

- Education and Research on developing the Medical Support System using Virtual Reality System and Medical Image Engineering in Nakaguchi Laboratory.
- April 2014 March 2015

Teaching Staff, School of Culture-Information Studies, Sugiyama Jogakuen University

- Video and Animation Production (April 2014 September 2014)
- Graphics Design (October 2014 March 2015)
- October 2013 March 2014

Research Assistant, Graduate School of Information Science, Nagoya University

- Outstanding Graduate COE support subsidy
- April 2013 September 2013

Teaching Assistant, Nagoya University

- Fundamental Seminar A (for Information Platform, Usability)
- October 2011 March 2012

Teaching Assistant, University of Toyama

- Liberal Principles of Exercise (C Language)

7 Qualification

- Mental calculation Grade 1
- Calculation on the Abacus Test Semi-first Step Grade
- Calligraphy First Step Grade
- The EIKEN Test in Practical English Proficiency Grade 2
- Car Driver License for Standard Vehicle
- High School Specialized Teacher's Certificate
- TOEIC 620

8 Technical Skill

8.1 Programming Languages

- C / Visual C++ / C#
- Java
- OCaml / ML
- LISP
- Assembly
- PHP
- Python
- R
- JavaScript
- HTML5 / CSS3

8.2 Tools

- MATLAB
- Scilab
- OpenCV
- · Autodesk Maya
- Blender
- Unity
- · Adobe Photoshop
- Adobe Premiere
- Adobe After Effect
- JM / High Efficiency Video Coding Software

9 Research Fund, Grant, and Scholarship

• FY2023

Traveling abroad Travel Expenses Assistance in the Telecommunications Advancement Foundation (IWAIT 2024)

• FY2023

Education and Research Fund for Faculty Member in Kanazawa Gakuin University

FY2021

Education and Research Fund for Faculty Member in Tokyo University of Science

• FY2020

Education and Research Fund for Faculty Member in Tokyo University of Science

• FY2019

Education and Research Fund for Faculty Member in Tokyo University of Science

• FY2017

Traveling abroad Travel Expenses Assistance in the Telecommunications Advancement Foundation (IWAIT 2018)

• FY2016

Support Grant for Student to participate in the International Conference by ITE (ITC-CSCC 2016)

• FY2016

Scholarship for Ph.D. Student because of having the academic excellent result and submitting the doctor thesis

• FY2015

Research Grant for Ph.D. Student in Nagoya University

FY2014

Research Grant for Ph.D. Student in Nagoya University

• FY2013

Outstanding Graduate COE Support Subsidy in Nagoya University

10 Affiliated Society, Contribution to Society

10.1 Affiliated Society

- The Institute of Image Information and Television Engineers (ITE) (Member, from February 2011)
- The Institute of Electronics, Information and Communication Engineers (IEICE) (Member, from August 2013)
- The Institute of Electrical and Electronics Engineers (IEEE) (Member, from February 2014)
 - IEEE Signal Processing Society (IEEE SPS) (Member, from February 2014)
 - IEEE Engineering in Medicine & Biology Society (IEEE EMBS) (Member, from October 2020)
 - IEEE Computer Society (IEEE CS) (Member, from October 2020)
- The Institute of Image Electronics Engineers of Japan (IIEEJ) (Member, from April 2015)
- The Institute of Information Processing Society of Japan (IPSJ) (Member, from January 2017)
- The Japanese Society of Medical Imaging Technology (JAMIT) (Member, from April 2018)
- The Japan Society of Computer Aided Surgery (JSCAS) (Member, from July 2018)
- The International Society for Optical Engineering (SPIE) (Early Career Professional Member, from June 2020)
- Japan Association for Medical Informatics (JAMI) (Member, from August 2021)
- Society for Imaging Science and Technology (IS&T) (Member, from December 2021)

10.2 Committee Experience

- Councilor, Japan Society of Computer Aided Surgery (JSCAS) (December 2023 present)
- Panel of judges, R.5 IEICE Hokuriku Section Excellent Student Paper Award (August 2023 September 2023)
- Proctor, International Collegiate Programming Contest (ICPC 2019) Asia Yokohama Regional Online First Round Contest (July 2019 – July 2019)

10.3 Review Experience

- Reviewer, *Circuits, Systems, and Signal Processing* (from December 2024, by once)
- Reviewer, *Frontiers of Computer Science* (from December 2024, by once)
- Reviewer, *Smart Science* (from December 2024, by once)
- Reviewer, *Biomimetics* (from October 2024, by once)
- Reviewer, *IEEE Sensors Letters* (from September 2024, by once)
- Reviewer, *The 31st International Conference on Multimedia Modeling* (MMM 2025) (from August 2024, by Seven times)
- Reviewer, *International Journal of Imaging Systems and Technology* (from August 2024, by once)
- Reviewer, *IEEE Transactions on Geoscience and Remote Sensing* (from July 2024, by once)
- Reviewer, 2024 IEEE International Conference on Visual Communications and Image Processing (VCIP2024) (from July 2024, by five times)
- Reviewer, *PeerJ Computer Science* (from July 2024, by once)
- Reviewer, *Remote Sensing* (from July 2024, by once)
- Reviewer, *Neural Networks* (from June 2024, by once)
- Reviewer, *IEEE Consumer Electronics Magazine* (from May 2024, by once)
- Reviewer, *IEEE Transactions on Pattern Analysis and Machine Intelligence* (PAMI) (from May 2024, by once)
- Reviewer, *Electromagnetic Science* (from April 2024, by once)
- Reviewer, *IEEE Transactions on Information Forensics & Security* (T-IFS) (from January 2024, by once)
- Reviewer, *IEEE Transactions on Computational Imaging* (TCI) (from January 2024, by once)

- Reviewer, *The 2nd International Conference on Computer Graphics and Image Processing (CGIP2024)* (from December 2023 to January 2024, by three times)
- Reviewer, *IEEE Transactions on Intelligent Vehicles* (from October 2023, by once)
- Reviewer, *Chinese Optics Letters* (from October 2023, by once)
- Reviewer, *IEEE Transactions on Pattern Analysis and Machine Learning* (PAMI) (from September 2023, by once)
- Reviewer, *IEEE Transactions on Artificial Intelligence* (**TAI**) (from September 2023 to now, by once)
- Reviewer, *Computers in Biology and Medicine* (**CBM**) (from September 2023 to now, by once)
- Reviewer, *IEEE Transactions on Industrial Informatics* (**TII**) (from August 2023 to now, by once)
- Reviewer, *Big Data and Cognitive Computing* (**BDCC**) (from July 2023 to now, by once)
- Reviewer, EURASIP Journal on Advances in Signal Processing (from June 2023 to now, by once)
- Reviewer, International Journal of Environmental Research and Public Health (from February 2023 to now, by once)
- Reviewer, *IET Image Processing* (from February 2023 to now, by once)
- Reviewer, *Nonlinear Theory and Its Applications, IEICE* (**NOLTA**) (from January 2023 to now, by once)
- Reviewer, *IEEE Transactions on Consumer Electronics* (**TCE**) (from December 2022 to now, by once)
- Reviewer, *Disaster Medicine and Public Health Preparedness* (**DMP**) (from November 2022 to now, by once)
- Reviewer, *ACM Transactions on Privacy and Security* (**TOPS**) (from July 2022 to now, by once)
- Reviewer, *IEICE Transactions on Information and Systems (JPN Edition, in Japanese)* (from June 2022 to now, by once)
- Reviewer, *Discrete Dynamics in Nature and Society* (from June 2022 to now, by once)
- Reviewer, *IEICE Transactions on Communications (JPN Edition, in Japanese)* (from June 2022 to now, by once)
- Reviewer, *IEEE Transactions on Emerging Topics in Computational Intelligence* (from February 2022 to now, by once)
- Reviewer, *IEEE Transactions on Dependable and Secure Computing* (from February 2022 to now, by once)
- Reviewer, *IEICE Electronics Express* (from December 2021 to now, by second)

- Reviewer, *Tomography* (from October 2021 to now, by twice)
- Reviewer, Advanced Intelligent Systems (from October 2021 to now, by once)
- Reviewer, *IPSJ Transactions on Consumer Devices & Systems* (from October 2021 to now, by once)
- Reviewer, *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences* (from October 2021 to now, by three times)
- Reviewer, *Multimedia Systems* (MMSJ) (from September 2021 to now, by six times)
- Reviewer, *IEEE Transactions on Neural Networks and Learning Systems* (TNNLS) (from June 2021 to now, by once)
- Reviewer, *IEEE Signal Processing Letters* (**SPL**) (from May 2021 to now, by once)
- Reviewer, *Optical Review* (from May 2021 to now, by three times)
- Reviewer, *IEEJ Transactions on Electrical and Electronic Engineering* (from April 2021 to now, by once)
- Reviewer, *Signal, Image and Video Processing* (**SIVP**) (from April 2021 to now, by four times)
- Reviewer, *IEICE Transactions on Information and Systems* (from April 2021 to now, by three times)
- Reviewer, *Journal of the Society for Information Display* (**J. SID**) (from June 2020 to now, by twice)
- Reviewer, *Sensors* (**SENSC9**) (from February 2020 to now, by twice)
- Reviewer, *Journal of the Institute of Electrical Engineers of Japan C* (from October 2019 to now, by five times)
- Reviewer, *APSIPA Transactions on Signal and Information Processing* (from September 2019 to now, by once)
- Reviewer, *IEEE Journal on Emerging and Selected Topics in Circuits and Systems* (**IEEE JETCAS**) (from August 2019 to now, by once)
- Reviewer, *Electronics* (**ELECGJ**) (from July 2019 to now, by five times)
- Reviewer, *IEEE Journal of Biomedical and Health Informatics* (**JBHI-EMBS**) (from July 2019 to now, by eleventh times)
- Reviewer, *Multimedia Tools and Applications* (MTAP) (from March 2019 to now, by twenty one times)
- Reviewer, *Neurocomputing* (**NEUCOM**) (from February 2019 to now, by seven times)
- Reviewer, *Symmetry* (**SYMMAM**) (from January 2019 to now, by three times)

- Reviewer, *Applied Sciences* (**Applsci**) (from July 2018 to now, by ten times)
- Reviewer, *IEEE Access* (from July 2018 to now, by twenty three times)
- Reviewer, *Journal of Imaging* (**J. Imaging**) (from June 2018 to now, by three times)
- Reviewer, *IEEE Transactions on Circuits and Systems II: Express Briefs* (**TCAS-II**) (from February 2018 to now, by five times)
- Reviewer, *IEEE Transactions on Circuits and Systems I: Regular Papers* (**TCAS-I**) (from February 2018 to now, by four times)
- Reviewer, Journal of Imaging Science and Technology (JIST) (from February 2018 to now, by sixteen times)
- Reviewer, *IEEE Transactions on Medical Imaging* (TMI) (from January 2018 to now, by four times)
- Reviewer, *Signal Processing* (**SigPro**) (from January 2018 to now, by three times)
- Reviewer, SPIE Journal of Electronic Imaging (**JEI**) (from December 2017 to now, by three times)
- Reviewer, *IEEE Transactions on Image Processing* (**TIP**) (from December 2017 to now, by twenty third)
- Reviewer, EURASIP Journal on Image and Video Processing (JIVP) (from December 2017 to now, by three times)
- Reviewer, *IEEE Transactions on Multimedia* (**TMM**) (from September 2017 to now, by forty first)
- Reviewer, *IEEE Transactions on Circuits and Systems for Video Technology* (**TCSVT**) (from June 2017 to now, by thirty six times)

11 Awards

[1]. "The international society for optics and photonics, SPIE Journal of Electronic Imaging, Certificate of Appreciation,"

for serving as a reviewer for Journal of Electronic Imaging during the calendar year of 2024, January 7, 2025.

[2]. "The international society for optics and photonics, SPIE Journal of Electronic Imaging, Certificate of Appreciation,"

for serving as a reviewer for Journal of Electronic Imaging during the calendar year of 2023, January 4, 2024.

[3]. "The international society for optics and photonics, SPIE Journal of Electronic Imaging, Certificate of Appreciation,"

for serving as a reviewer for Journal of Electronic Imaging during the calendar year of 2018, February 6, 2019.

[4]. "Elsevier Signal Processing Certificate of Outstanding Contribution in Reviewing," in recognition of the contributions made to the quality of the journal in April 2018, June 25, 2018.

[5]. "Certificate of Appreciation for serving as a reviewer for Journal of Electronic Imaging during the calendar year of 2017,"

February 17, 2018.

[6]. "Forum on Information Technology (FIT2016) FIT Encouragement Award 2016," Gofuku Campus, Univ. of Toyama (Presentation, Sept. 7, 2016), September 9, 2016.

[7]. "IEICE Tokai Section Student Award (Doctor),"

"A Study of the 3D CG Image Quality Metrics with 8 Viewpoints Parallax Barrier Method,"
Castle Plaza Nagoya,
June 3, 2015.

12 Achievement

12.1 Peer-reviewed Journal Papers

- "(Submitted),"
- "(Submitted),"
- "(Submitted),"
- [1]. Norifumi Kawabata, "Multi-view 3D CG Image Quality Evaluation Including Visible Digital Water-marking Based on RGB Color Information," 9 pages (on final revision, Conditional Acceptance).
- [2]. Norifumi Kawabata, "Statistical Analysis of Questionnaire Survey on the Assessment of 3D Video Clips," *Displays*, Vol.71, 102110, January 2022.
- [3]. Norifumi Kawabata and Masaru Miyao, "Multi-view 3D CG Image Quality Assessment for Contrast Enhancement Based on S-CIELAB Color Space," *IEICE Transactions on Information and Systems*, Vol. E100-D, No. 07, pp. 1448–1462, July 2017.
- [4]. Norifumi Kawabata and Yuukou Horita, "Statistical Analysis of Subjective Assessment for 3D CG Images with 8 Viewpoints Lenticular Lens Method," *IIEEJ Transactions on Image Electronics and Visual Computing*, Vol. 4, No. 2, pp. 101–113, December 2016.
- [5]. Norifumi Kawabata and Masaru Miyao, "3D CG Image Quality Metrics by Regions with 8 Viewpoints Parallax Barrier Method," *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, Vol. E98-A, No. 08, pp. 1696–1708, August 2015.

12.2 Peer-reviewed International Conference Papers or Proceedings

- "(Submitted),"
- [6]. Norifumi Kawabata, "3D CG Image Quality Assessment in Vision and Language Based on Stable Diffusion," Image Quality and System Performance (IQSP XXII) (Electronic Imaging Symposium (EI2025)), vol.22, IQSP-xxx, February 2025 (Accepted).
- [7]. Norifumi Kawabata, "Image Quality Metrics for Cross Reality Considering Image Region and Perspective Based on 360 Degrees Camera," Proc. of The 31st International Display Workshops (IDW'24), Workshop on 3D/Hyper-Realistic Displays and Systems, (Emerging Technologies for 3D/Hyper-Realistic Display), 3Dp2-7, pp.806–809, Sapporo Convention Center, Sapporo, Japan, December 4-6, 2024.
- [8]. Norifumi Kawabata, "HEVC Image Evaluation and Analysis between Contrast and Rotation Based on Material Data Set of the Shitsukan Perception Standard Problem," Proc. of 2024 IEEE 13th Global Conference on Consumer Electronics (GCCE 2024), POS3B-23, 2 pages, Asia Pacific Import Mart (AIM) Medium Exhibition Hall, Kokura, Japan, October 29 November 1, 2024.

- [9]. Norifumi Kawabata, "Evaluation of 3D CG Image Colorization Quality Using Visible Digital Water-marking after Noise Removal Based on Sparse Dictionary Learning," Proc. of The 39th International Technical Conference on Circuits/Systems, Computers and Communications (ITC-CSCC2024), POSIII-21, 6 pages, Okinawa Institute of Science and Technology Graduate University (OIST), Okinawa, Japan, July 2-5, 2024.
- [10]. Norifumi Kawabata, "ROI Estimation of Laparoscopic Image Including Contrast Enhancement Based on Saliency Map," Proc. of The 27th International Workshop on Advanced Image Technology (IWAIT2024), 7A2 (Image/Video Compression), 6 pages, Parkroyal Langkawi Resort, Langkawi, Malaysia, January 7-8, 2024.
- [11]. Norifumi Kawabata, "HEVC Subjective and Objective Image Quality Assessment Considering Cross Reality Based on 360 Degrees Camera," Proc. of The 30th International Display Workshops (IDW'23), Workshop on 3D/Hyper-Realistic Displays and Systems (Human Factor on Realistic Display), 3D2/3DSA2, pp.642–645, TOKI MESSE Niigata Convention Center, Niigata, Japan, December 6-8, 2023.
- [12]. Norifumi Kawabata and Toshiya Nakaguchi, "Optimal Design of Color Laparoscopic Super-Resolution Image Quality Based on Generative Adversarial Networks," Proc. of The 2023 International Conference on Computer Graphics and Image Processing (CGIP 2023), S2-6, 7 pages, Takanawa Campus, Tokai Univ., Tokyo, Japan, January 13-16, 2023.
- [13]. Norifumi Kawabata, "3D CG Image Region of Interest Estimation and Visual Attention Based on Saliency Map," Proc. of The 29th International Display Workshops (IDW'22), Workshop on Applied Vision and Human Factors (Image Quality), VHFp1-6L, pp.709–710, Fukuoka International Congress Center, Fukuoka, Japan (Hybrid), December 14-16, 2022.
- [14]. Norifumi Kawabata, "Data Set Production and Evaluation for Semantic Segmentation of 3D CG Images by H.265/HEVC," Proc. of The Eleventh International Workshop on Image Media Quality and its Applications (IMQA2022), pp.107–113, Online (Campus Plaza Kyoto, Kyoto, Japan), March 3-4, 2022.
- [15]. Norifumi Kawabata, "Visualization for Texture Analysis of the Shitsukan Research Database Based on Luminance Information," Image Quality and System Performance (IQSP XIX) (Electronic Imaging Symposium (EI2022)), vol.19, IQSP-198, pp.1–6, Online (San Francisco, CA, USA), January 16-20, 2022.
- [16]. Norifumi Kawabata and Toshiya Nakaguchi, "Color Laparoscopic High-Definition Video Quality Assessment for Super-Resolution," *Proc. of The 25th International Workshop on Advanced Image Technology* (IWAIT2022), 7A5, pp.1–6, The Hong Kong Polytechnic Univ., Hong Kong (Hybrid), January 4-6, 2022.
- [17]. Norifumi Kawabata, "3D CG Image Noise Removal and Quality Assessment Based on Sparse Dictionary Learning," *Proc. of The 2021 IEEE 3rd Global Conference on Life Sciences and Technologies* (LifeTech 2021), OS-AIT1-3 (Advanced Image Technology in Applied Life Science: IoT & Deep Learning Perspectives), pp.225–226, Nara Royal Hotel, Nara, Japan (Hybrid), March 9-11, 2021.
- [18]. Norifumi Kawabata and Toshiya Nakaguchi, "Color Laparoscopic Image Region Segmentation after Contrast Enhancement Including SRCNN by Image Regions," Proc. of SPIE (The International Forum on Medical Imaging in Asia (IFMIA2021)), no.85, 6 pages, National Taiwan Univ. of Science and Technology, Taiwan (Online), January 24-26, 2021.
- [19]. Norifumi Kawabata and Toshiya Nakaguchi, "Laparoscopic Image Region Segmentation Based on Texture Analysis by Regions," *Proc. of The Tenth International Workshop on Image Media Quality and its Applications* (IMQA2020), PS2-4, 6 pages, National Taiwan Univ. of Science and Technology, March 12-13, 2020.
- [20]. Norifumi Kawabata and Toshiya Nakaguchi, "Color Laparoscopic Image Diagnosis for Automatic Detection of Coded Defect Region," Proc. of The 5th Asia Color Association Conference (ACA2019 Nagoya), Vol. 5, P1-25, pp. 487–492, Meijo Univ., Nagoya, Japan, November 29–December 2, 2019.
- [21]. Norifumi Kawabata, "Computational Classification of Texture Contents in the Shitsukan Research Database," Proc. of The 26th International Display Workshops (IDW'19), Workshop on Applied Vision and Human Factors (Ergonomics for Display Applications II), Vol. 26, VHF7-3, pp. 1185–1188, Sapporo Convention Center, Sapporo, Japan, November 27-29, 2019.

- [22]. Norifumi Kawabata, "HEVC Image Quality Assessment of the Multi-view and Super-resolution Images Based on CNN," *Proc. of 2018 IEEE 7th Global Conference on Consumer Electronics* (GCCE 2018), POS1A-3, pp. 38–39, Nara Royal Hotel, Nara, Japan, October 9-12, 2018.
- [23]. Norifumi Kawabata, "Image Diagnosis for Coded Defect Detection on Multi-view 3D Images," *Proc. of The Ninth International Workshop on Image Media Quality and its Applications* (IMQA2018), PS-10, pp. 110–119, Kobe Univ., Kobe, Japan, September 27-28, 2018.
- [24]. Norifumi Kawabata, "Multi-view 3D CG Image Quality Evaluation and Analysis for Application Procedure between H.265/HEVC and Watermarking," Proc. of The 21st International Workshop on Advanced Image Technology (IWAIT2018), D3-3, 4 pages, The Imperial Mae Ping Hotel, Chiang Mai, Thailand, January 7-9, 2018 (Traveling Abroad Travel Expenses Assistance in the Telecommunications Advancement Foundation).
- [25]. Norifumi Kawabata, "Image Quality Assessment for Multi-view 3D CG Images and 5K High Definition Images Based on S-CIELAB Color Space," Proc. of The 24th International Display Workshops (IDW'17), Workshop on 3D/Hyper-Realistic Displays and Systems (Autostereoscopic Display), Vol. 24, 3D5-1, pp. 849–852, Sendai International Center, Sendai, Japan, December 6-8, 2017.
- [26]. Norifumi Kawabata and Masaru Miyao, "Multi-view 3D CG Image Quality Assessment for Contrast Enhancement Including S-CIELAB Color Space in case the Background Region is Gray Scale," Proc. of The 31st International Technical Conference on Circuits/Systems, Computers and Communications (ITC-CSCC2016), T2-6-3, pp. 579–582, Municipal Center (Jichikaikan), Okinawa, Japan, July 10-13, 2016 (ITE (The Institute of Image Information and Television Engineers) International Conference Support Grant).
- [27]. Norifumi Kawabata and Masaru Miyao, "Multi-view 3D CG Image Quality Evaluation Including Visible Digital Watermarking Based on Color Information," Proc. of The Eighth International Workshop on Image Media Quality and its Applications (IMQA2016), OS1-3, pp. 18–26, Noyori Conference Hall, Higashiyama Campus, Nagoya Univ., Nagoya, Japan, March 10-11, 2016.
- [28]. Norifumi Kawabata and Masaru Miyao, "3D CG Image Quality Assessment for the Luminance Change by Contrast Enhancement Including S-CIELAB Color Space with 8 Viewpoints Parallax Barrier Method," Proc. of The 1st International Conference on Advanced Imaging (1st ICAI2015), T107-01, pp. 632–635, National Center of Science (Hitotsubashi Memorial Hall), Tokyo, Japan, June 17-19, 2015.
- [29]. Norifumi Kawabata, Masaru Miyao, and Yuukou Horita, "3D CG Image Quality Metrics Including the Coded Degradation by Regions with 8 Viewpoints Parallax Barrier Method," Proc. of The Seventh International Workshop on Image Media Quality and its Applications (IMQA2014), PS-9, pp. 102–105, Keyaki Hall, Nishi Chiba Campus, Chiba Univ., Chiba, Japan, September 2-3, 2014.
- [30]. Norifumi Kawabata and Yuukou Horita, "Statistical Analysis and Consideration of Subjective Evaluation of 3D CG Images with 8 Viewpoints Lenticular Lens Method," *Proc. of The Sixth International Workshop on Image Media Quality and its Applications* (IMQA2013), T1-2, pp. 23–32, Takanawa Campus, Tokai Univ., Tokyo, Japan, September 12-13, 2013.
- [31]. Norifumi Kawabata, Keiji Shibata, Yasuhiro Inazumi, and Yuukou Horita, "Image Quality Evaluation of 3D CG Images with 8 Viewpoints Lenticular Lens Method," *Proc. of The Fifth International Workshop on Image Media Quality and its Applications* (IMQA2011), D-10, pp. 88–90, Campus Plaza Kyoto, Kyoto, Japan, October 4-5, 2011.

12.3 Technical Reports

[32]. Norifumi Kawabata and Masaru Miyao, "Multi-view 3D CG Image Quality Assessment by Using S-CIELAB Color Space Including Visible Digital Watermarking by Regions in case the Background Region is Gray Scale," *IEICE Tech. Rep., Image Media Quality*, vol.116, no.68, IMQ2016-1, pp.1–6, Nishi-Chiba Campus, Chiba Univ., May 2016.

[33]. Norifumi Kawabata and Masaru Miyao, "3D CG Image Quality Metrics for the Contrast Enhancement of the Object Region Including S-CIELAB Color Space with 8 Viewpoints Parallax Barrier Method," *IEICE Tech. Rep., Image Media Quality*, vol.115, no.48, IMQ2015-4, pp.17–22, Gofuku Campus, Univ. of Toyama, May 2015.

12.4 Dissertation

[34]. Norifumi Kawabata,

"A Study of the Multi-view 3D CG Image Quality Assessment Including the Image Characteristics," Doctor Dissertation, Department of Information Engineering, Graduate School of Information Science, Nagoya University, January 2017.