

# Curriculum Vitae

Dr. Norifumi KAWABATA

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

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## 1 Affiliation

Department of Information Sciences, Faculty of Science and Technology, Tokyo University of Science  
Computational Imaging Field (Kawabata G.), 2F, Building No.6, Noda Campus, Tokyo University of Science  
2641 Yamazaki Noda-shi, Chiba JAPAN 278-8510, mailto: norifumi [AT] rs [DOT] tus [DOT] ac [DOT] jp  
Web site: <https://en.norifumik.nagoya/> (Personal), <https://norifumik.nagoya/e/> (Research Group)

## 2 Research Field

- Information Engineering, Information Science
- Multi-view 3D Image and Video, Three-dimensional Image Processing
- 3DCG, Texture Informatics
- Image Media Quality, Visual Media Processing
- Image and Signal Processing, Digital Watermarking
- Color Information Science and Engineering, Image Analysis, Color Management
- Picture Coding, Image Media Processing, Super-resolution
- Statistical Analysis, Data Mining
- Human Interface and Interaction, Medical Virtual Reality
- Medical Systems, Medical Imaging

## 3 Academic & Professional Experience

- April 2019 –  
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**

## 4 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  
Horita Laboratory, (Media Information and Communication Technology (MICT))  
(April 2010 – March 2011), Department of Intellectual Information Engineering,  
Faculty of Engineering,  
**University of Toyama**
- March 2007  
**Seiryō High School, General Course** Graduation

## 5 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

## 6 Teaching and Research Experience

- April 2019 –  
**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, 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

- 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
- FY2014  
Research Grant for Ph.D. Student
- FY2013  
Outstanding Graduate COE Support Subsidy

## 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), Signal Processing Society (Member, from February 2014)
- The Institute of Image Electronics Engineers of Japan (IEEEJ) (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)

### 10.2 Committee Experience

- Proctor, *International Collegiate Programming Contest (ICPC 2019) Asia Yokohama Regional Online First Round Contest* (July 2019)

### 10.3 Review Experience

- Reviewer, *IEEE Signal Processing Letter (SPL)* (from September 2020 to now, by once)
- Reviewer, *Journal of Perceptual Imaging (JPI)* (from September 2020 to now, by once)
- Reviewer, *Journal of the Society for Information Display (J. SID)* (from June 2020 to now, by once)
- Reviewer, *Sensors (SENSC9)* (from February 2020 to now, by once)
- Reviewer, *Journal of the Institute of Electrical Engineers of Japan C* (from October 2019 to now, by twice)
- 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 three times)
- Reviewer, *IEEE Journal of Biomedical and Health Informatics (JBHI-EMBS)* (from July 2019 to now, by three times)
- Reviewer, *Multimedia Tools and Applications (MTAP)* (from March 2019 to now, by seven times)
- Reviewer, *Neurocomputing (NEUCOM)* (from February 2019 to now, by four times)
- Reviewer, *Symmetry (SYMMAM)* (from January 2019 to now, by twice)

- Reviewer, *Applied Sciences (Applsci)*  
(from July 2018 to now, by seven times)
- Reviewer, *IEEE Access*  
(from July 2018 to now, by nine times)
- Reviewer, *Journal of Imaging (J. Imaging)*  
(from June 2018 to now, by once)
- Reviewer, *IEEE Transactions on Circuits and Systems II: Express Briefs (TCAS-II)*  
(from February 2018 to now, by four times)
- Reviewer, *IEEE Transactions on Circuits and Systems I: Regular Papers (TCAS-I)*  
(from February 2018 to now, by three times)
- Reviewer, *Journal of Imaging Science and Technology (JIST)*  
(from February 2018 to now, by ten times)
- Reviewer, *IEEE Transactions on Medical Imaging (TMI)*  
(from January 2018 to now, by twice)
- Reviewer, *Signal Processing (SigPro)*  
(from January 2018 to now, by twice)
- Reviewer, *SPIE Journal of Electronic Imaging (JEI)*  
(from December 2017 to now, by once)
- Reviewer, *IEEE Transactions on Image Processing (TIP)*  
(from December 2017 to now, by nineteen times)
- 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 twenty three times)
- Reviewer, *IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)*  
(from June 2017 to now, by thirteen times)

## 11 Awards

- [1]. **“Certificate of Appreciation for serving as a reviewer for Journal of Electronic Imaging during the calendar year of 2018,”**  
for serving as a reviewer for Journal of Electronic Imaging during the calendar year of 2018,  
February 6, 2019.
- [2]. **“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.
- [3]. **“Certificate of Appreciation for serving as a reviewer for Journal of Electronic Imaging during the calendar year of 2017,”**  
February 17, 2018.
- [4]. **“Forum on Information Technology (FIT2016) FIT Encouragement Award 2016,”**  
Gofuku Campus, Univ. of Toyama (Presentation, Sept. 7, 2016),  
September 9, 2016.
- [5]. **“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

- [1]. **Norifumi Kawabata**, “**Statistical Analysis of Questionnaire Survey on the Assessment of 3D Video Clips**,” 13 pages (on final revision, Conditional Acceptance), 2020.
- [2]. **Norifumi Kawabata**, “**Multi-view 3D CG Image Quality Evaluation Including Visible Digital Watermarking Based on RGB Color Information**,” 9 pages (on 2nd revision, Conditional Acceptance), 2020.
- [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

- [6]. **Norifumi Kawabata** and Toshiya Nakaguchi, “(Submitted)”
- [7]. **Norifumi Kawabata**, “(Submitted)”
- [8]. **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 University of Science and Technology, March 12-13, 2020.
- [9]. **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.
- [10]. **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*, Vol. 26, VHF7-3, pp. 1185–1188, Sapporo Convention Center, Sapporo, Japan, November 27-29, 2019.
- [11]. **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.
- [12]. **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., September 27-28, 2018.
- [13]. **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).
- [14]. **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*, Vol. 24, 3D5-1, pp. 849–852, Sendai International Center, Sendai, Japan, December 6-8, 2017.

- [15]. **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).
- [16]. **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.
- [17]. **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.
- [18]. **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.
- [19]. **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.
- [20]. **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

- [21]. **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.
- [22]. **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

- [23]. **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.