

Curriculum Vitae

NAME: Jun Ohta

POSITION TITLE: Executive Director and Vice President, Research Professor

INSTITUTION AND LOCATION	DEGREE	Completion Date MM/YYYY	FIELD OF STUDY
The University of Tokyo, Tokyo, Japan	B.Eng.	03/1981	Applied Physics
The University of Tokyo, Tokyo, Japan	M.Eng.	03/1983	Applied Physics
The University of Tokyo, Tokyo, Japan	Dr.Eng.	09/1992	Applied Physics

Positions and Employment

2024- Present	Research Professor, Institute for Research Initiatives, NAIST, Nara, Japan
2021- Present	Executive Director and Vice President, NAIST, Nara, Japan
2018 – 2021	Director of Division of Materials Science, Graduate School of Science and Technology, NAIST, Nara, Japan
2004 – 2023	Professor, Graduate School of Materials Science, NAIST, Nara, Japan
1998 – 2004	Associate Professor, Graduate School of Materials Science, Nara Institute of Science and Technology (NAIST), Nara, Japan
1995 – 1998	Group Leader, Advanced Tech. R&D Center, Mitsubishi Electric Corp., Hyogo, Japan
1993 – 1995	Research Scientist, Advanced Tech. R&D Center, Mitsubishi Electric Corp., Hyogo, Japan
1992 – 1993	Visiting Scholar, Optoelectronic Computing Systems Center, University of Colorado at Boulder, CO, USA.
1983 – 1992	Research Scientist, Central Research Laboratory, Mitsubishi Electric Corp., Hyogo, Japan

Professional Activities and Services

2024	Tutorials Co-Chairs, IEEE BioCAS 2024, Xi'an, China
2023	Special Session Co-Chairs, IEEE BioCAS 2023, Toronto, Canada
2022 – Present	Adjunct Professor of IPB, Indonesia
2021 – Present	IEEE Fellow Society/Technical Council Evaluator (EMBS)
2019	Co-General Chairs, IEEE BioCAS 2019, Nara, Japan
2018	Technical Program Co-Chair, IEEE BioCAS 2018, Cleveland, OH, USA
2018 – 2019	Distinguished Lecturer, IEEE SSC
2018 – 2020	Associate Editor, IEEE Trans. BioCAS
2018 – Present	Editorial Board Member, Jpn. J. Apply. Phys and APEX, IOP
2018 – 2020	Evaluation Board Member, JSPS KAKENHI (A), Japan
2017	International Liaisons, IEEE BioCAS 2017, Torino, Italy
2016 – 2022	Advisory Board Member, JST PRESTO, Japan
2016 – Present	Member, Board of Councilors, JSAP, Japan
2016 – 2018	Chair, Technical Committee of BioMicro System, IEE Jpn.
2016 – 2019	Board Member, Sensor & Micromachine Section, IEE Jpn.
2016 – Present	Member, IEEE BioCAS Technical Committee
2014 – 2017	Associate Editor, IEEE Sensors J.
2013 – Present	Editorial Board Member, J. Eng., IET

Honors and Awards

2024	Medal of Honor with Purple Ribbon
2024	Tateishi Prize
2022	Niwa-Takayanagi Distinguished Achievement Award ITE Japan
2021	Fellow, IEEE
2014	Fellow, JSAP
2012	Fellow, ITE Japan

2018	Senior Member, IEE Japan
2018	IEICE Electronics Society Distinguished Achievement Award
2018	Best Demo Paper Award in Symposia on VLSI Technology and Circuits
2009	The Izuo Hayashi Award, JSAP
2007	The Niwa-Takayanagi Publication Award, ITE Japan
2001	The National Commendation for Invention
1996	The Ichimura Award

Main Publications (past five years)

(Published over 250 papers in journals, 10 book chapters, and 300 international conferences.)

Selected Book/Book Chapters

- B-1. **J. Ohta**, Smart CMOS Image Sensors and Applications, 2nd Ed., CRC Press, 2021.
- B-2. T. Tokuda, M. Haruta, K. Sasagawa, **J. Ohta**, "CMOS-Based Neural Interface Device for Optogenetics," *Optogenetics*, pp. 585-600, Springer Nature, 2021.
- B-3. **J. Ohta**, K. Sasagawa, M. Haruta, "Optical Biosensors: Implantable Multimodal Devices in Freely Moving Rodents" Handbook of Biochips, pp.1-15, Springer Nature, 2020.
- B-4. T. Tokuda, **J. Ohta**, "DNA Optical Readout Methods," *Handbook of Biochips*, pp.1-12, Springer Nature, 2020.
- B-5. K.Sasagawa, M. Haruta, Y. Ohta, H. Takehara, T. Tokuda, **J. Ohta**, "Implantable CMOS Fluorescent Imaging Devices," *Functional Brain Mapping: Methods and Aims*, pp.129-145, Springer Nature, 2020.

Selected Journals

- J-1. V.C.G. Castillo, L. Akbar, R. Siwadamrongpong, Y. Ohta, M. Kawahara, Y. Sunaga, H. Takehara, H. Tashiro, K. Sasagawa, **J. Ohta**, "Region of interest determination algorithm of lensless calcium imaging datasets," *PLoS One*, 17;19(9):e0308573, 2024.
- J-2. R. Sasaki, Y. Ohta, H. Onoe, R. Yamaguchi, T. Miyamoto, T. Tokuda, Y. Tamaki, K. Isa, J. Takahashi, K. Kobayashi, **J. Ohta**, T. Isa, "Balancing Risk-Return Decisions by Manipulating the Mesofrontal Circuits in Primate," *Science*, vol.383, no.6678, pp.55-61, 2024.
- J-3. L. Akbar, V. Castillo, J. Olorocisimo, Y. Ohta, M. Kawahara, H. Takehara, M. Haruta, H. Tashiro, K. Sasagawa, M. Ohsawa, Y.M. Akay, M. Akay, **J. Ohta**, "Multi-Region Microdialysis Imaging Platform Revealed DorsalRaphe Nucleus Calcium Signaling and Serotonin Dynamicsduring Nociceptive Pain," *Int'l J. Mol. Sci.*, vol.24, no.7, pp.6654, 2023.
- J-4. Y. Ohta, T.E. Murakami, M. Kawahara, M. Haruta, H. Takehara, H. Tashiro, K. Sasagawa, **J. Ohta**, M. Akay, Y.M. Akay, "Investigating the Influence of GABA Neurons on Dopamine Neurons in the Ventral Tegmental Area Using Optogenetic Techniques," *Int'l J. Mol. Sci.*, vol.23, no.3, pp.1114, 2022.
- J-5. Y. Ohta, M.C. Guinto, T. Tokuda, M. Kawahara, M. Haruta, H. Takehara, H. Tashiro, K. Sasagawa, H. Onoe, R. Yamaguchi, Y. Koshimizu, K. Isa, T. Isa, K. Kobayashi, Y.M. Akay, M. Akay, **J. Ohta**, "Micro-LED Array-Based Photo-Stimulation Devices for Optogenetics in Rat and Macaque Monkey Brains," *IEEE Access*, vol.9, pp.127937-127949, 2021.
- J-6. Y. Sunaga, Y. Ohta, Y.M. Akay, **J. Ohta**, M. Akay, "Monitoring Neural Activities in the VTA in Response to Nicotine Intake Using a Novel Implantable Microimaging Device," *IEEE Access*, **8**, 68013 -68020, 2020.
- J-7. E. Rustami, K. Sasagawa, K. Sugie, Y. Ohta, M. Haruta, T. Noda, T. Tokuda, **J. Ohta**, "Needle-Type Imager Sensor with Band-Pass Composite Emission Filter and Parallel Fiber-Coupled Laser Excitation," *IEEE Trans. CAS I*, 67(4), 1082-1091, 2020.
- J-8. K. Sasagawa, Y. Ohta, M. Kawahara, M. Haruta, T. Tokuda, **J. Ohta**, "Wide field-of-view lensless fluorescence imaging device with hybrid bandpass emission filter," *AIP Adv.* **9**(3), 35108, 2019.
- J-9. M. Haruta, Y. Kurauchi, M. Ohsawa, C. Inami, R. Tanaka, K. Sugie, A. Kimura, Y. Ohta, T. Noda, K. Sasagawa, T. Tokuda, H. Katsuki, **J. Ohta**, "Chronic brain blood-flow imaging device for a behavior experiment using mice," *Biomed. Opt. Exp.*, **10**(4), 1557-1566, 2019.
- J-10. H. Takehara, Y. Nakamoto, N. Ikeda, K.Sasagawa, M. Haruta, T. Noda, T. Tokuda, **J. Ohta**, "Compact Lensless Fluorescence Counting System for Single Molecular Assay," *IEEE Trans. BioCAS.*, **12**(5), 1177-1185, 2018.

Selected International Conferences

- C-1. **J. Ohta**, "Implantable Optoelectronic Devices Toward Photoceuticals", 7th Int'l Conf. Biomed. Eng. Appl. (ICBEA 2023), 2023.4.23. Yuanzheng Qizhen Hotel, China. Online **Keynote**
- C-2. **J. Ohta**, "Brain Implantable Optoelectronic Devices for Measuring and Controlling Biological Functions", Brain Interface CAS, BioCAS pre-conference workshop, 2022.10.12. Tainan, ROC. Online. **Keynote**
- C-3. **J. Ohta**, "Optoelectronic Bionterface Devices for Measuring and Controlling Biological Function" (invited), IEEE-NANOMED 2021, 2021.11.16. online. **Invited Talk**
- C-4. **J. Ohta**, "Present Status and Prospects of Retinal Prostheses", 2021 JAPAN-TAIWAN Symposium, The Foresight

Advanced Materials for Biotechnology and Precision Health and Medicine with AI Symposium, 2021.11.11. Online.

Keynote

- C-5. **J. Ohta**, "Implantable optoelectronic biomedical devices," International Conference and School on Physics in Medicine and Biosystems2020(ICSPMB2020), 2020.11.9. online. **Invited Talk**
- C-6. **J. Ohta**, "Bidirectional Optical Communication with Biological Functions," The Information Photonics 2020 (IP'20), 2020.9.11, Taipei, R.O.C. **Invited Talk**
- C-7. **J. Ohta**, H. Takehara, M. Haruta, K. Sasagawa, H. Sumi, M. Sobue, R. Kawasaki, K. Nishida, "Selfie Fundus Camera with Near Infrared Coloring Technology," Imaging, Sensing, and Optical Memory 2019 (ISOM'19), 2019.10.22, Niigata, Japan. **Invited Talk**
- C-8. **J. Ohta**, "Micro-communicators: Implantable Optoelectronic Devices that can Communicate with Biological Functions with Electron and Photon," The 2019 Westlake International Symposium in Engineering (WISE 2019), 2019.7.20. Hangzhou, China. **Plenary Talk**.
- C-9. **J. Ohta**, "Optical Measuring and Controlling Biological Functions by Implantable Optoelectronic Devices," International Workshop on Nanodevice Technologies 2018, Mar. 2018, Hiroshima, Japan. **Invited Talk**
- C-10. **J. Ohta**, "Implantable optoelectronic devices for biomedical applications," 2018 International Conference on Solid State Devices and Materials, 2018.9.11. The University of Tokyo, Japan. **Invited Talk**