画像情報処理研究チーム ／ Image Processing Research Team

（1）原著論文（accept）を含む ／ Original Papers

1. Chu, S-L., Abe, K., Yokota, H., Tsai, M-D., “Recurrent Neural Network for Monitoring Mouse Embryonic Stem Cell Colony in vitro Using Time-lapse Fluorescence Microscopy Images”, Biomedical Engineering: Applications,Basis and Communications.34,05,2250030 (2022).
2. Chu, S-L., Sudo,K., Yokota, H., Abe, K., Nakamura, Y., M.D. Tsai, “Human induced pluripotent stem cell formation and morphology prediction during reprogramming with time-lapse bright-field microscopy images using deep learning methods”, Computer Methods and Programs in Biomedicine.229, 10, 107264 (2023).
3. Umebayashi, M., Takemoto, S., Reymond, L., Sundukova, M., Hovius, R., Bucci, A., Heppenstall, P.A., Yokota, H., Johnsson, K., Riezman, H., “A covalently linked probe to monitor local membrane properties surrounding plasma membrane proteins”, Journal of Cell Biology, 222(3):e202206119 (2023).
4. Ando, N., Kono, T., Ogihara, N., Nakamura, S., Yokota, H., Kanzaki, R., “Modeling the musculoskeletal system of an insect thorax for flapping flight”, Bioinspiration & Biomimetics. 17,6 (2022).
5. Tamura, N., Goto, S., Yokota, H., and Goto, S., “Contributing role of mitochondrial energy metabolism on platelet adhesion, activation and thrombus formation under blood flow conditions”, Platelets. 33, 7, 1083-1089 (2022).
6. Furukawa, T., Oyama, S., Yokota, H., Kondoh, Y., Kataoka, K., Johkoh, T., “A comprehensible machine learning tool to differentially diagnose idiopathic pulmonary fibrosis from other chronic interstitial lung diseases”, Respirology (2022).
7. Yamashita, N., Matsuno, T., Maeda, D., Kikuzuki, M., Yokota, H., “Efficient 3D observation of steel microstructure using serial sectioning with precision cutting and on-site etching”, Precision Engineering. 75, 37-45, May (2022).
8. Hu, R., Monebhurrun, V., Himeno, R., Yokota, H., Costen, H., “A general framework for building surrogate models for uncertainty quantification in computational electromagnetics”, IEEE Transaction on Antennas and Propagation. 70, 1402 – 1414, Feb (2022).
9. Takematsu, M., Umezawa, M., Sera, T., Kitagawa, Y., Kurahashi, H., Yamada, S., Okubo, K., Kamimura, M., Yokota, H., Soga, K., “Influence of the difference in refractive index on the interface of an object and the surrounding in near-infrared fluorescence tomography”,

Applied Optics (2022).

10. Fukatsu, M., Yoshizawa, S., Takemura, H., and Yokota, H., “Adaptive and Dynamic Regularization for Rolling Guidance Image Filtering”, Proc. of Pacific Graphics Short Papers, Posters, and Work-in-Progress Papers. 43-48, Eurographics Digital Library (2022).
11. 深津美薫, 吉澤信, 竹村裕, 横田秀夫, “ 定義域分割法と Ridge 回帰を用いた高精度 Rolling Guidance 画像フィルタ”, 情報処理学会研究報告, 2022-CG-186, 2, 1-11, 情報処理学会 (2022).
12. Hori, K., Ikematsu, H., Yamamoto, Y., Matsuzaki, H., Takeshita, N., Shinmura, K., Yoda, Y., Kiuchi, T., Takemoto, S., Yokota, H., Yano, T., “Detecting colon polyps in endoscopic images using artificial intelligence constructed with automated collection of annotated images from an endoscopy reporting system”, Digestive Endoscopy 34, 5, 1021-1029 (2022).
13. Feldotto, B., Eppler, J., Romero, C., Bignamini, C., Gutierrez C., Albanese, U., Retamino, E., Vorobev, V., Zolfaghari, V., Upton, A., Sun Z., Yamaura, H., Heidarinejad, M., Klijn, W., Morrison, A., Cruz, F., McMurtrie, C., Knoll, A., Igarashi, J., Yamazaki, T., Doya, K., Morin, F., “Deploying and optimizing embodied simulations of large-scale spiking neural networks on HPC infrastructure”, Frontiers in neuroinformatics. 16, 884180 (2022).
14. Oota, S., Abe, K., Yokota, H., et al., “Real-Time Course: Reconstruction of cellular diversity and lineage trajectory based on somatic mutational patterns detected from low-pass single-cell transcriptome data”, Research Square (2022).

（2）会議、シンポジウム、セミナー主催 ／ Meeting, Symposiums and Seminars

1. 医療情報みらい会議　第 3 回合同会議, 琉球大学医学部, 2 月 15 日

（3）特許出願 ／ Patent Applications

1. 横田秀夫, “ 情報処理装置、情報処理方法、および、コンピュータプログラム”, 特願 2022-043291, 2022 年 3 月 18 日
2. Hideo Yokota, “SYSTEMS FOR IDENTIFYING CELLS AND USES THEREOF” ,US 17/715975, 2022 年 4 月 8 日
3. 和田智之, 道川隆士, 佐々高史, 国本幸紀, “ 打撃点分析システム、打撃点分析方法、及びプログラム”, 特願 2022-14019、2022 年 9 月 2 日　特願 2022-140194
4. 横田秀夫, “ 情報処理装置、情報処理方法、および、コンピュータプログラム”, 特願 2022-175512, 2022 年 11 月 1 日

5. 太田聡史“ シングルセル RNA-seq データから得た細胞変異情報を利用する細胞系列の追跡方法”, 海外特許出願中

（4）特筆すべき事項・トピックス（雑誌表紙などの掲載記事）／ Topics

1. 日経テクノロジー展望 2023　世界を変える 100 の技術,　日経 BP, 2022 年 9 月 15 日
2. Riken クローズアップ科学道