

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. Hu, R., Monebhurrn, V., Himeno, R., Yokota, H., and Costen, F.: "A general framework for building surrogate models for uncertainty quantification in computational electromagnetics", IEEE Transaction on Antennas and Propagation Vol.70, pp.1402-1414 (2022).
2. Takematsu, M., Umezawa, M., Sera, T., Kitagawa, Y., Kurahashi, H., Yamada, S., Okubo, K., Kamimura, M., Yokota, H., and 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 (2021).
3. Michikawa, T., Yoshida, T., Kuroki, S., Ishikawa, T., Kakei, S., Kimizuka, R., Saito, A., Yokota, H., Shimizu, A., Itohara, S., and Miyawaki, A.: "Distributed sensory coding by cerebellar complex spikes in units of cortical segments", Cell Reports 37,6 (2021).
4. Xanthos, L., Yavuz, M. E., Himeno, R., Yokota, H., and Costen, F.: "Resolution Enhancement of UWB Time-Reversal Microwave Imaging in Dispersive Environments", IEEE Transactions on Computational Imaging. Vol.7, pp.925-934 (2021).
5. Chen, M., Wu, J., Li, S., Liu, J., Yokota, H., and Guo, S.: "Accurate and real-time human-joint-position estimation for a patient-transfer robot using a two-level convolutional neural network", Robotics and Autonomous Systems 139(1), 103735 (2021).
6. Takamatsu, T., Kitagawa, Y., Akimoto, K., Iwanami, R., Endo, Y., Takashima, K., Okubo, K., Umezawa, M., Kuwata, T., Sato, D., Kadota, T., Mitsui, T., Ikematsu, H., Yokota, H., Soga, K., and Takemura, H.: "Over 1000 nm Near-Infrared Multispectral Imaging System for Laparoscopic In Vivo Imaging", Sensors 21(8), 2649 (2021).
7. Sonoda, S., Shiihara, H., Terasaki, H., Kakiuchi, N., Funatsu, R., Tomita, M., Shinohara, Y., Uchino, E., Udagawa, T., An, G., Akiba, M., Yokota, H., and Sakamoto, T.: "Artificial intelligence for classifying uncertain images by humans in determining choroidal vascular running pattern and comparisons with automated classification between artificial intelligence", PLOS ONE (2021).
8. An, G., Aloba, M., Omodaka, K., Nakazawa, T., and Yokota, H.: "Hierarchical deep learning models using transfer learning for disease detection and classification based on small number of medical images", Scientific Reports (2021).
9. Yoshizawa, S., and Yokota H.: "Fast and faithful scale-aware image filters", The Visual Computer Vol. 37, Issue 12, pp. 3051-3062 (2021).

10. Takahashi, K., Sun, Z., Solé-Casals, J., Cichocki, A., Huy Phan, A., Zhao, Q., Zhao, H., Deng, S., and Micheletto, R.: “Data Augmentation For Convolutional LSTM based Brain Computer Interface System”, *Applied Soft Computing* (2022).
11. Yamashita, N., Matsuno, T., Maeda, D., Kikuzuki, M., and Yokota, H.: “Efficient 3D observation of steel microstructure using serial 49 sectioning with precision cutting and on-site etching”, *Precision Engineering* Vol. 75, pp. 37-45 (2022).
12. 竹本智子, 吉澤信, 山下典理男, 森田正彦, 西村将臣, 横田 秀夫: “画像処理による細胞集団の形態と機能の定量解析”, *Drug Delivery System* Vol. 36, No.4, pp. 277-285 (2021).
13. Fujisaki, K., Yamashita, N., and Yokota, H.: “Multipoint indentation for material identification in three-dimensional observation based on serial sectioning”, *Precision Engineering* Vol. 69, pp. 62-67 (2021).
14. Hori, K., Ikematsu, H., Yamamoto, Y., Matsuzaki, H., Takeshita, N., Shinmura, K., Yoda, Y., Kiuchi, T., Takemoto, S., Yokota, H., and 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* (2021).
15. Kitrungrotsakul, T., Han, X-X., Iwamoto, Y., Takemoto, S., Yokota, H., Ipponjima, S., Nemoto, T., Wei, X., and Chen, Y.-W.: “A Cascade of 2.5D CNN and Bidirectional CLSTM Network for Mitotic Cell Detection in 4D Microscopy Image”, *IEEE/ACM Transactions on Computational Biology and Bioinformatics* vol. 18, no. 2, pp. 396-404 (2021).
16. Kitrungrotsakul, T., Iwamoto, Y., Takemoto, S., Yokota, H., Ipponjima, S., Nemoto, T., Lin, L., Tong, R., Li, J., and Chen, T.-W.: “Accurate and fast mitotic detection using an anchor-free method based on full-scale connection with recurrent deep layer aggregation in 4D microscopy images”, *BMC Bioinformatics* Vol. 22, Article number: 91 (2021).
17. 堀圭介, 竹本智子, 横田秀夫, 池松弘朗, 矢野友規, “高効率な学習スキームによる胃癌の領域検出 AI”, *胃と腸* Vol. 56(4), 423-431(2021).

(2) 招待講演 / Invited Talks

1. Sun, Z., “スーパーコン富岳に基づく脳シミュレーション”, 静岡大学テニユアトラック 浜松セミナー, (2021).

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

1. 精密工学会 外観検査アルゴリズムコンテスト共催, オンライン, 12 月 (2021) .

(4) 特許出願 / Patent Applications

1. 深堀昂, 梶谷ケビン, 筒雅博, フェルナンドチャリス・ラサンサ, 孫哲, 吉澤信, 道川隆士, 横田秀夫, “画像処理システム、画像エンコーダ、画像デコーダ、画像処理方法及び画像処理プログラム”, 特願 2021-028581, 2021 年 3 月 25 日.
2. 深堀昂, 梶谷ケビン, 筒雅博, フェルナンドチャリス・ラサンサ, 孫哲, 吉澤信, 道川隆士, 横田秀夫, “画像符号化装置、画像符号化方法、画像復号化装置、及び画像復号化方法”, 特願 2021-028534, 2021 年 3 月 25 日.
3. 深堀昂, 梶谷ケビン, 筒雅博, フェルナンドチャリス・ラサンサ, 孫哲, 吉澤信, 道川隆士, 横田秀夫, “画像符号化装置、画像符号化方法、画像復号化装置、及び画像復号化方法”, 特願 2021-028459, 2021 年 3 月 25 日.
4. 和田智之, 佐々高史, 道川隆士, 国本幸弘, 重田将宏, “異常音判定方法、異常音判定プログラム及び異常音判定システム”, 特願 2021-158823, 2021 年.