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Titolo	Large-Scale Annotation of Biomedical Data and Expert Label Synthesis and Hardware Aware Learning for Medical Imaging and Computer Assisted Intervention [[electronic resource] ] : International Workshops, LABELS 2019, HAL-MICCAI 2019, and CuRIOUS 2019, Held in Conjunction with MICCAI 2019, Shenzhen, China, October 13 and 17, 2019, Proceedings // edited by Luping Zhou, Nicholas Heller, Yiyu Shi, Yiming Xiao, Raphael Sznitman, Veronika Cheplygina, Diana Mateus, Emanuele Trucco, X. Sharon Hu, Danny Chen, Matthieu Chabanas, Hassan Rivaz, Ingerid Reinertsen
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Collana	Image Processing, Computer Vision, Pattern Recognition, and Graphics ; ; 11851
Disciplina	006.6 006.37
Soggetti	Optical data processing Artificial intelligence Health informatics Image Processing and Computer Vision Artificial Intelligence Health Informatics
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	4th International Workshop on Large-Scale Annotation of Biomedical Data and Expert Label Synthesis (LABELS 2019) -- Comparison of active learning strategies applied to lung nodule segmentation in CT scans -- Robust Registration of Statistical Shape Models for Unsupervised Pathology Annotation -- XiangyaDerm: A Clinical Image Dataset of Asian Race for Skin Disease Aided Diagnosis -- Data Augmentation based on Substituting Regional MRI Volume Scores -- Weakly supervised segmentation from extreme points -- Exploring the

Relationship between Segmentation Uncertainty, Segmentation Performance and Inter-observer Variability with Probabilistic Networks -- DeepIGeoS-V2: Deep Interactive Segmentation of Multiple Organs from Head and Neck Images with Lightweight CNNs -- The Role of Publicly Available Data in MICCAI Papers from 2014 to 2018 -- First International Workshop on Hardware Aware Learning for Medical Imaging and Computer Assisted Intervention (HAL-MICCAI 2019) -- Hardware Acceleration of Persistent Homology Computation -- Deep Compressed Pneumonia Detection for Low-Power Embedded Devices -- D3MC: A Reinforcement Learning based Data-driven Dyna Model Compression -- An Analytical Method of Automatic Alignment for Electron Tomography -- Fixed-Point U-Net Quantization for Medical Image Segmentation -- Second International Workshop on Correction of Brainshift with Intra-Operative Ultrasound (CuRIOUS 2019) -- Registration of ultrasound volumes based on Euclidean distance transform -- Landmark-based evaluation of a block-matching registration framework on the RESECT pre- and intra-operative brain image data set -- Comparing deep learning strategies and attention mechanisms of discrete registration for multimodal image-guided interventions.

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### Sommario/riassunto

This book constitutes the refereed joint proceedings of the 4th International Workshop on Large-Scale Annotation of Biomedical Data and Expert Label Synthesis, LABELS 2019, the First International Workshop on Hardware Aware Learning for Medical Imaging and Computer Assisted Intervention, HAL-MICCAI 2019, and the Second International Workshop on Correction of Brainshift with Intra-Operative Ultrasound, CuRIOUS 2019, held in conjunction with the 22nd International Conference on Medical Imaging and Computer-Assisted Intervention, MICCAI 2019, in Shenzhen, China, in October 2019. The 8 papers presented at LABELS 2019, the 5 papers presented at HAL-MICCAI 2019, and the 3 papers presented at CuRIOUS 2019 were carefully reviewed and selected from numerous submissions. The LABELS papers present a variety of approaches for dealing with a limited number of labels, from semi-supervised learning to crowdsourcing. The HAL-MICCAI papers cover a wide set of hardware applications in medical problems, including medical image segmentation, electron tomography, pneumonia detection, etc. The CuRIOUS papers provide a snapshot of the current progress in the field through extended discussions and provide researchers an opportunity to characterize their image registration methods on newly released standardized datasets of iUS-guided brain tumor resection.

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