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Nota di contenuto	Preface DRAC 2022 -- nnU-Net Pre- and Postprocessing Strategies for UW-OCTA Segmentation Tasks in Diabetic Retinopathy Analysis -- Automated analysis of diabetic retinopathy using vessel segmentation maps as inductive bias -- Bag of Tricks for Diabetic Retinopathy Grading of Ultra-wide Optical Coherence Tomography Angiography Images -- Deep convolutional neural network for image quality assessment and diabetic retinopathy grading -- Diabetic Retinal Overlap Lesion Segmentation Network -- An Ensemble Method to Automatically Grade Diabetic Retinopathy with Optical Coherence Tomography Angiography Images -- Bag of Tricks for Developing Diabetic Retinopathy Analysis Framework to Overcome Data Scarcity --

Deep-OCTA: Ensemble Deep Learning Approaches for Diabetic Retinopathy Analysis on OCTA Images -- Deep Learning-based Multi-tasking System for Diabetic Retinopathy in UW-OCTA images -- Semi-Supervised Semantic Segmentation Methods for UW-OCTA Diabetic Retinopathy Grade Assessment -- Image Quality Assessment based on Multi-Model Ensemble Class-Imbalance Repair Algorithm for Diabetic Retinopathy UW-OCTA Images -- An improved U-Net for diabetic retinopathy segmentation -- A Vision transformer based deep learning architecture for automatic diagnosis of diabetic retinopathy in optical coherence tomography angiography -- Segmentation, Classification, and Quality Assessment of UW-OCTA Images for the Diagnosis of Diabetic Retinopathy -- Data Augmentation by Fourier Transformation for Class-Imbalance : Application to Medical Image Quality Assessment -- Automatic image quality assessment and DR grading method based on convolutional neural network -- A transfer learning based model ensemble method for image quality assessment and diabetic retinopathy grading -- Automatic Diabetic Retinopathy Lesion Segmentation in UW-OCTA Images using Transfer Learning -- Preface MIDOG 2022 -- Reference Algorithms for the Mitosis Domain Generalization (MIDOG) 2022 Challenge -- Radial Prediction Domain Adaption Classifier for the MIDOG 2022 challenge -- Detecting Mitoses with a Convolutional Neural Network for MIDOG 2022 Challenge -- Tackling Mitosis Domain Generalization in Histopathology Images with Color Normalization -- "A Deep Learning based Ensemble Model for Generalized Mitosis Detection in H&E stained Whole Slide Images" -- Fine-Grained Hard-Negative Mining: Generalizing Mitosis Detection with a Fifth of the MIDOG 2022 Dataset -- Multi-task RetinaNet for mitosis detection. .

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## Sommario/riassunto

This book constitutes two challenges that were held in conjunction with the 25th International Conference on Medical Image Computing and Computer-Assisted Intervention, MICCAI 2022, which took place in Singapore during September 18-22, 2022. The peer-reviewed 20 long and 5 short papers included in this volume stem from the following three biomedical image analysis challenges: Mitosis Domain Generalization Challenge (MIDOG 2022), Diabetic Retinopathy Analysis Challenge (CRAC 2022) The challenges share the need for developing and fairly evaluating algorithms that increase accuracy, reproducibility and efficiency of automated image analysis in clinically relevant applications.

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