

Supplementary material

Optimization algorithm	Adam Optimizer
Learning rate	Decay from 10^{-4} to 10^{-5}
Augmentations during training	Rotating, flipping
Number of parameters	7.7 million
Number of channels in backbone	512
Batch size during training	5
Training time	4 hours
Software	PyTorch 2.0.1
Hardware	NVIDIA GeForce RTX 3090 GPU

Table 1. Training details

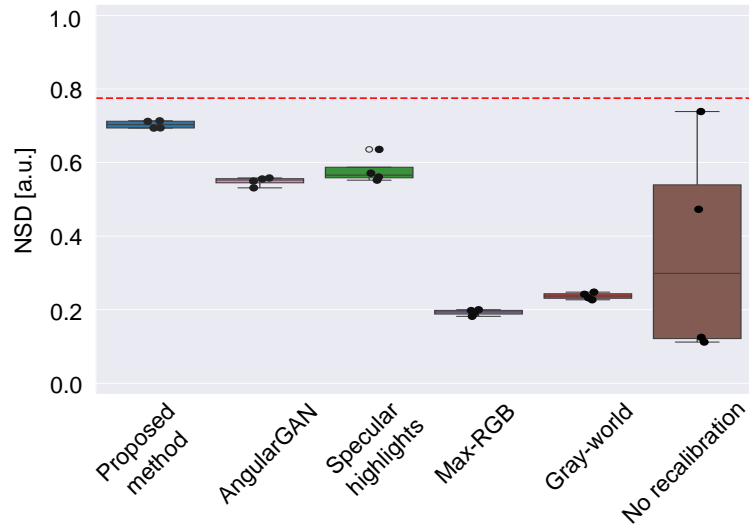


Fig. 1. Results on the semantic segmentation dataset. Red line: Mean normalized surface dice (NSD) in the absence of straylight. Points: Different stray light scenarios.

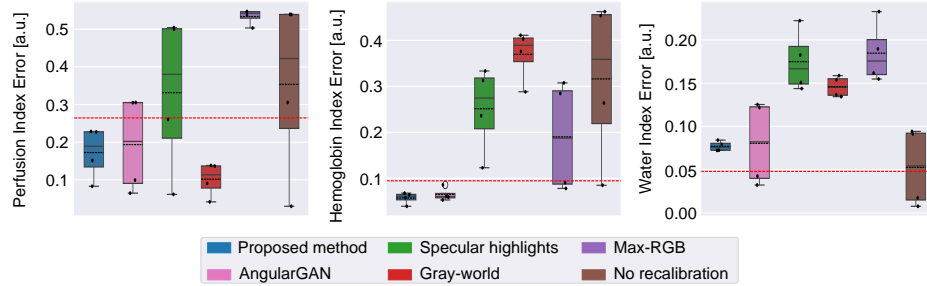


Fig. 2. Organ-specific absolute perfusion (left), hemoglobin (middle) and water (right) index errors between calibrated rat images without stray light and corresponding stray light images that are recalibrated by one of the methods. Red line: Mean performance of the gold standard (manual white tile calibration).

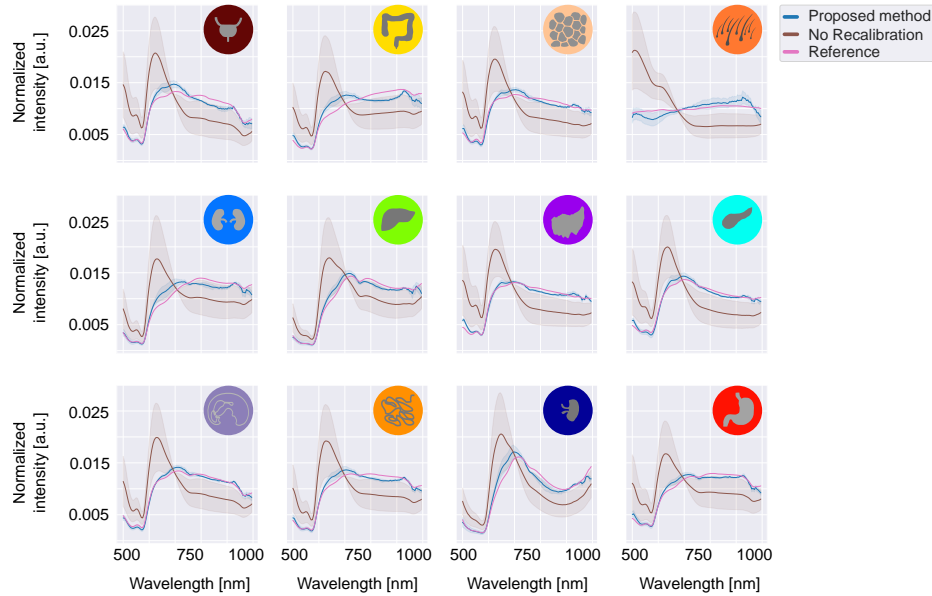


Fig. 3. While tissue spectra in the presence of stray light (brown) significantly deviate from reference spectra in the absence of straylight (magenta), our recalibration approach accurately restores the tissue spectra (blue). Solid lines denote the mean L-1 normalized reflectance. Shaded areas depict the standard deviation interval.