Automatic Online Layer Separation for Vessel Enhancement in X-ray Angiograms for Percutaneous Coronary Interventions

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Highlights

- A fast automatic online layer separation method for X-ray angiograms is proposed.
- The method separates X-ray frames into 3 layers including a vessel-enhanced layer.
- The method relies on online robust principal component analysis (OR-PCA).
- Down-weighting past frames could improve layer separation for the current frame.
- The method can improve vessel visibility in X-ray images with low vessel contrast.