Universiteit Leiden
The Netherlands

Tailoring x-ray tomography techniques for cultural heritage research

Bossema, F.G.

Stellingen

Stellingen behorend bij het proefschrift getiteld **Tailoring X-ray imaging techniques for cultural heritage research**, door Francien G. Bossema.

1. To obtain useful and significant information from CT scans of cultural heritage objects, the involvement of object experts is crucial (Chapter 2).
2. Due to the uniqueness of cultural heritage objects and their associated questions, X-ray imaging methods need to be developed for specific applications (Chapter 3).
3. In order to make optimal use of inhouse imaging facilities in museums, there should be a focus on developing software to make the best use of existing X-ray hardware (Chapter 4).
4. The interpretability of CT data for cultural heritage experts can be improved by including surface scans and designing user-friendly visualisation tools (Chapter 5).
5. There are many factors that influence image quality in CT imaging, in particular the geometrical system parameters (Abella et al, Medical Physics, 2021). Therefore image quality can be further improved by optimisation of these parameters.
6. CT scanning can provide new insights into cultural heritage objects and post-processing methods have the potential to further increase the knowledge gain from CT imaging (Dambrogio et al, Nature Communications, 2021).
7. Besides the reasons for digitisation of art works identified by Pieraccini and colleagues (2001), investigation of art works using various 3D imaging methods can lead to more information about the making process, artists methods and origin of art works, which are important topics in the field of art history.
8. CT imaging is a promising tool for dendrochronological dating of wooden objects (Bill et al, 2012; Dominguez-Delmas, 2021) and therefore new tools and methods should be developed to expand the range of objects to which it can be applied.
9. Interdisciplinary research is the future of academia.
10. To improve the connection between science and society, PhD candidates should be educated in, encouraged to engage in and, crucially, be rewarded for outreach and science communication activities.

Francien G. Bossema,
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