

Peer Review

Review of: "Deep Learning-Based CKM Construction with Image Super-Resolution"

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Strengths:

- The paper has drawn an interesting analogy between CKM construction from sparse data and image super-resolution. It adapts the SRResNet architecture for CKM construction.
- The same method has been applied to path loss maps and angle of arrival (AoA) maps, and it demonstrates generalizability across different types of channel knowledge.
- Results have been evaluated on different datasets.

Weaknesses:

- The proposed approach uses SRResNet. However, there is no insight shared about why it performs better than SRGAN, which can also accommodate RMSE via the reconstruction loss in the generator.
- For the considered problem, Kriging interpolation is a natural choice for a baseline, which has not been considered.
- There is very little information about the data preprocessing used before training the model. For example, are the geographical regions in the training and test sets mutually exclusive?
- No numerical results on AoA estimation have been provided.
- Several recent works have leveraged building maps for the considered problem. The reason for not doing so in this paper has not been discussed. Furthermore, there is no comparison of such approaches with the proposed work in this paper.

Declarations

Potential competing interests: No potential competing interests to declare.