

srdataset

README

Dataset: 3D MOTION-BASED HIGH-RESOLUTION IMAGING TECHNIQUES FOR AUTOMOTIVE RADAR

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Created: 09-04-2024

Modified: 10-04-2024

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Referencing the dataset

added later

Background reading for the dataset and its collection:

3-d ego-motion estimation using multi-channel fmcw radar

S.Yuan, F. Fioranelli, A. Yarovoy: *3-d ego-motion estimation using multi-channel fmcw radar*.

in IEEE Transactions on Radar Systems. <<https://doi.org/doi: 10.1109/TRS.2023.3299180>>

[Link:](<https://doi.org/doi: 10.1109/TRS.2023.3299180>) <<https://doi.org/doi: 10.1109/TRS.2023.3299180>>

Background reading for the used radar system:

3D high-resolution imaging algorithm using 1D MIMO array for autonomous driving application

S.Yuan, F. Fioranelli, A. Yarovoy: *3D high-resolution imaging algorithm using 1D MIMO array for autonomous driving application*.

<https://doi.org/10.48550/arXiv.2402.13062>

Link: <https://doi.org/10.48550/arXiv.2402.13062>

Matlab read file

Drawing the 3d imaging simulated housing model results: main_draw_houseding.m

Drawing the 3d imaging simulated human model results: main_draw_humanding.m

Description and notification table

Dataname	File
Imaging_results_from_simulated_houseding	'main_simulated_houseding_sidelooking.mat'
Target_model_houseding	'houseding.mat'
Imaging_results_from_simulated_humanding	'main_simulated_humanding_sidelooking.mat'
Target_model_humanding	'human.mat'
Radar_range_information	'r512.mat'