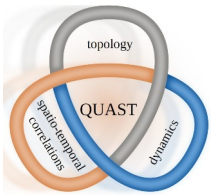

Publication notification

including metadata

(please try to fill in as much as possible, even if not complete)

QUAST

Publication:

Title:	Disentangling real space fluctuations: the diagnostics of metal-insulator transitions beyond single-particle spectral functions
Journal Reference (URL or DOI):	
arXiv Reference:	2501.18325

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Academic position / Role in data storage:	Research Group Leader

Contact for data requests:

Name:	
Institution:	
E-Mail:	
Academic position / Role in data storage:	

Type of data produced: **(Please check the corresponding box)**

☐ QUAST-funded authors were not directly involved in creating or storing data.

☐ Work is purely analytic. Figures are visualizations of analytic expressions given in the paper.

☐ For original data, please refer to the cited publications.

☐ All data and code shown in the paper are available in [provide link]

☐ Data is available on reasonable request [fill out the missing information below]

☒ Other [please provide an alternative description below]

All data available in the paper are available under https://doi.org/10.17617/3.BKGXQO

Dataset 1: **(Collection of data published/archived together)**

Short description of data:	With this data set we provide all relevant raw data for the analyses provided in arXiv:2501.18325 via HDF5 files. The file names contain first the method (either CDMFT or the ISOLATED cluster), then the interaction value, the temperature, the doping or the chemical potential, the second next neighbor hopping and, finally, the size of the (impurity) cluster, either 1x1 or 2x2 follows. 1x1 indicates a single-site DMFT calculation.
Origin of data (institution):	Max Planck Institute for Solid State Research, Stuttgart
(3rd party) Software used:	

☒ additional information included as README with data

Data availability:

☐ published at (DOI)

☐ on reasonable request, to corresponding author. Data is archived:

☐ according to local policy at institution (as provided).

☐ other (Please provide details: location, accessible by, ...)

☐ data included in publication or as supplemental online material at the publishers website

Source availability: **(own software or scripts, used to generate/process data)**

☐ published at (link)

☐ archived/published with data ☐ archived according to local policy at institution (as provided)

☐ other (Please provide details: location, accessible by, ...)

Dataset 2: **(Collection of data published/archived together)**

Short description of data:	
Origin of data (institution):	
(3rd party) Software used:	

☐ additional information included as README with data

Data availability:

☐ published at (DOI)

☐ on reasonable request, to corresponding author. Data is archived:

☐ according to local policy at institution (as provided).

☐ other (Please provide details: location, accessible by, ...)

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Source availability: **(own software or scripts, used to generate/process data)**

☐ published at (link)

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☐ other (Please provide details: location, accessible by, ...)