

DATASETS employed in the paper "Lagrange-Chebyshev Interpolation for image resizing"

The validation of the **LCI** (Lagrange-Chebyshev Interpolation) method, proposed in the paper "Lagrange-Chebyshev Interpolation for image resizing", *Mathematics and Computers in Simulation*, ISSN: 0378-4754, DOI: 10.1016/j.matcom.2022.01.017, vol. 197, pp. 105 – 126, 2022, by D. Occorsio, G. Ramella, W. Themistoclakis, has been carried out on several kinds of 8-bit color images collected in six publicly available datasets, having different characteristics on the size and the quality of the images, the variety of subjects, etc. The employed datasets are synthesized in the following table comprising 1026 images in total.

Dataset	N	Size	Link
BSDS500	500	481×321 or 321×481	www2.eecs.berkeley.edu/Research/Projects/CS/vision/bsds/
NASA	17	[1200×1600] – [5430×3520]	www.gcc.tu-darmstadt.de/home/proj/dpid/index.en.jsp
YAHOO	96	[500×334] – [6394×3456]	www.gcc.tu-darmstadt.de/home/proj/dpid/index.en.jsp
13US	13	[241×400] – [400×310]	www.cl.cam.ac.uk/~aco41/Files/Sig15UserStudyImages.html
URBAN100	100	[1024×564] – [1024×1024]	paperswithcode.com/dataset/urban100
PEXELS300	300	300×300	available here

These datasets are available by the link indicated in the table. The dataset named PEXELS300 has been obtained by selecting 300 images from PEXELS (www.pexels.com/search/color/) that provides a free using and downloading library containing over 3.2 million photos and videos, growing each month by roughly 200,000 files. Its content is uploaded by the users and reviewed manually. The 300 images taken from this dataset, originally with a different large size, have been centrally cropped by 1800×1800 pixels. PEXELS300 is available here with the aim to support the possibility of comparison by other authors.

Permission to use, copy, or modify this dataset and its documentation for educational and research purposes only and without fee is granted, provided that this copyright notice and the original authors' names appear on all copies and supporting documentation.

This dataset shall not be modified without first obtaining the permission of the authors.

The authors make no representations about the suitability of this dataset for any purpose. It is provided "as is" without express or implied warranty.

In case of publishing results obtained utilizing this dataset, please refer to the following paper:

D. Occorsio, G. Ramella, W. Themistoclakis, "Lagrange–Chebyshev Interpolation for image resizing", *Mathematics and Computers in Simulation*, ISSN: 0378-4754, DOI: 10.1016/j.matcom.2022.01.017, vol. 197, pp. 105 – 126, 2022.