Affine and quasi-affine frames for rational dilations - DTU Orbit (11/12/2018)

Affine and quasi-affine frames for rational dilations

In this paper we extend the investigation of quasi-affine systems, which were originally introduced by Ron and Shen [J. Funct. Anal. 148 (1997), 408-447] for integer, expansive dilations, to the class of rational, expansive dilations. We show that an affine system is a frame if, and only if, the corresponding family of quasi-affine systems are frames with uniform frame bounds. We also prove a similar equivalence result between pairs of dual affine frames and dual quasi-affine frames. Finally, we uncover some fundamental differences between the integer and rational settings by exhibiting an example of a quasi-affine frame such that its affine counterpart is not a frame.

General information
State: Published
Organisations: Department of Mathematics, University of Oregon
Contributors: Bownik, M., Lemvig, J.
Pages: 1887-1924
Publication date: 2011
Peer-reviewed: Yes

Publication information
Journal: Transactions of the American Mathematical Society
Volume: 363
Issue number: 4
ISSN (Print): 0002-9947
Ratings:
  BFI (2018): BFI-level 2
  Web of Science (2018): Indexed yes
  BFI (2017): BFI-level 2
  Scopus rating (2017): CiteScore 1.41 SJR 2.378 SNIP 1.723
  Web of Science (2017): Impact factor 1.496
  Web of Science (2017): Indexed yes
  BFI (2016): BFI-level 2
  Scopus rating (2016): CiteScore 1.34 SJR 2.371 SNIP 1.878
  Web of Science (2016): Impact factor 1.426
  Web of Science (2016): Indexed yes
  BFI (2015): BFI-level 2
  Scopus rating (2015): CiteScore 1.18 SJR 2.172 SNIP 1.747
  Web of Science (2015): Impact factor 1.196
  BFI (2014): BFI-level 2
  Scopus rating (2014): CiteScore 1.13 SJR 2.389 SNIP 1.696
  Web of Science (2014): Impact factor 1.122
  BFI (2013): BFI-level 2
  Scopus rating (2013): CiteScore 1.09 SJR 2.239 SNIP 1.75
  Web of Science (2013): Impact factor 1.095
  ISI indexed (2013): ISI indexed yes
  BFI (2012): BFI-level 2
  Scopus rating (2012): CiteScore 1.07 SJR 2.043 SNIP 1.698
  Web of Science (2012): Impact factor 1.019
  ISI indexed (2012): ISI indexed yes
  BFI (2011): BFI-level 2
  Scopus rating (2011): CiteScore 1.07 SJR 2.031 SNIP 1.675
  Web of Science (2011): Impact factor 1.093
  ISI indexed (2011): ISI indexed yes
  Web of Science (2011): Indexed yes
  BFI (2010): BFI-level 2
  Scopus rating (2010): SJR 2.199 SNIP 1.581
  Web of Science (2010): Impact factor 1.1
  BFI (2009): BFI-level 2
  Scopus rating (2009): SJR 1.874 SNIP 1.616