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Hardy-Bloch type spaces and lacunary series on the polydisk. (English) Zbl 1123.32004

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Summary: We extend the well-known Paley and Paley-Kahane-Khintchine inequalities on lacunary series to the unit polydisk of \mathbb{C}^n . Then we apply them to obtain sharp estimates for the mean growth in weighted spaces $h(p, \alpha)$, $h(p, \log(\alpha))$ of Hardy-Bloch type, consisting of functions n -harmonic in the polydisk. These spaces are closely related to the Bloch and mixed norm spaces and naturally arise as images under some fractional operators.

MSC:

32A37 Other spaces of holomorphic functions of several complex variables (e.g., bounded mean oscillation (BMOA), vanishing mean oscillation (VMOA))

Cited in **36** Documents

32A05 Power series, series of functions of several complex variables

Full Text: [DOI](#)

References:

- [1] DOI: 10.1112/plms/s3-20.2.249 · Zbl 0217.10401 · doi:10.1112/plms/s3-20.2.249
- [2] DOI: 10.1007/BF02566357 · Zbl 0549.30012 · doi:10.1007/BF02566357
- [3] Avetisyan, Izv. Nat. Akad. Nauk Armenii, Matematika 40 pp 3– (2005)
- [4] Avetisyan, Mat. Zametki 75 pp 483– (2004) · doi:10.4213/mzm48
- [5] DOI: 10.1112/blms/12.4.241 · Zbl 0416.32010 · doi:10.1112/blms/12.4.241
- [6] DOI: 10.1016/j.jmaa.2003.11.039 · Zbl 1054.32019 · doi:10.1016/j.jmaa.2003.11.039
- [7] DOI: 10.1016/0022-247X(72)90081-9 · Zbl 0246.30031 · doi:10.1016/0022-247X(72)90081-9
- [8] DOI: 10.1112/plms/s3-51.2.369 · Zbl 0573.30029 · doi:10.1112/plms/s3-51.2.369
- [9] Aulaskari, Analysis 15 pp 101– (1995) · Zbl 0835.30027 · doi:10.1524/anly.1995.15.2.101
- [10] DOI: 10.1007/s00020-005-1391-3 · Zbl 1103.30035 · doi:10.1007/s00020-005-1391-3
- [11] Anderson, J. Reine Angew. Math. 270 pp 12– (1974)
- [12] Girela, J. Austral. Math. Soc. 80 pp 397– (2006)
- [13] Girela, Ann. Acad. Sci. Fenn. 29 pp 459– (2004)
- [14] Aulaskari, Acta Sci. Math. (Szeged) 60 pp 31– (1995)

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