

Regularity principle in sequence spaces and applications

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Resumo/Abstract:

We present a nonlinear regularity principle in sequence spaces which produces universal estimates for special series defined therein. Some consequences are obtained and, in particular, we establish a new Grothendieck's type theorem for m -linear operators from ℓ_1^m into ℓ_2 . We further use this new tool to solve the classification problem concerning all pairs of admissible exponents in the anisotropic Hardy–Littlewood inequality.