

Report on the paper by Włodzimierz Lenski and Bogdan Szal entitled *Approximation of functions from $L^p(\omega)_\beta$ by general linear operators of their Fourier series*, submitted to the Banach Center Publications Volume of the Institute of Mathematics, Polish Academy of Sciences.

Since ω is nondecreasing,

$$\omega\left(\frac{\pi}{n+1}\right) \leq \omega\left(\frac{\pi}{r+1}\right).$$

Line 8² implies that

$$(n+1)^\beta \leq \frac{1}{n+1} \sum_{s=1}^r (s+1)^\beta,$$

which is clearly false. Did the authors mean to write

$$(n+1)^\beta \ll \frac{1}{n+1} \sum_{s=1}^r (s+1)^\beta?$$

9² – 9³ Clearly

$$\frac{1}{r+1} \sum_{s=0}^r (s+1)^\beta \leq \frac{(r+1)^\beta (r+1)}{r+2} = (r+1)^\beta.$$

Since

$$\omega\left(\frac{\pi}{n+1}\right) \leq \omega\left(\frac{\pi}{r+1}\right) \quad \text{for } s = 0, 1, \dots, r,$$

9³ does not follow from 9².

9⁷ Since A has nonnegative entries and row sums 1, $b_{nn}a_{n,n-k} \leq b_{nn}$, and there is no need for line 9⁸.

9⁹ $\tau \sum_{r=\tau}^{n-1}$ should read $(\tau+1) \sum_{r=\tau}^{n-1}$

The formula for I_2 on 9⁵ does not agree with the value for I_2 given on line 8⁷.

10⁹ How does this follow from line 10⁸?

I stopped reading the paper at this point.

This paper contains no examples to show that the theorems of this paper are indeed generalizations of the results of [1].

Here are some grammatical corrections that need to be made in the first nine pages.

3⁷ Since, the should read Since the

3¹² – 3¹³ Delete "should be \dots of $\sin t$." and replace it with the following:

$\sin t/2$ should be used instead of $\sin t$.

3¹⁶ begin. should read beginning.

3¹⁶ formulate the general should read formulate general

- ³¹⁷ and modulus should read and the modulus
³¹⁷ entries of should read entries of the
³₅ such ω , should read such an ω ,
³₃ that for should read that, for
³₃ ≥ 0 should read ≥ 0 ,
⁴₉, ⁵₄, ⁵₁₅, ⁵₅ considered x . Please state the interval being used.
⁴₅ satisfy the should read satisfy
⁵₁ and in should read and, in
⁵₁, ⁵₁₂, ⁶₁₂ $-1/p$ should read $-1/p$,
⁵₅ of matrix should read of the matrix
⁵₅ such tath should read as
⁵₅ (1.10) is the wrong reference number.
⁵₇ satsfies should read satisfy
⁵₈ of matrix should read of the matrix
⁵₁₂ and in the case should read and, for
⁵₁₁ satisfy the condition should read satisfy condition
⁵₄ is nonin- should read is a nonin-
⁵₂ for any should read for any
⁵₁ This line should be in italics, since it a part of the statement of Corollary 1.
⁶₁ note, that in should read note that, in
⁶₁ Delete "is used".
⁶₄ which should read is used, which
⁶₄ , but should be used the should read . Instead,
⁶₄ – ⁶₅ Delete "of the form".
⁶₅ (2.7). should read (2.7)should be used.
⁶₆ formulate should read reformulate
⁶₆ on estimates of L^p norm should read on the L^p estimate of the norm
⁶₉ Delete "the".
⁶₁₂ in the case should read , for
⁶₇ In the case If
⁶₆ nondecreases should read is nondecreasing
⁶₅ Under additional should read Under the additional
⁶₄ but in Theorem 4 is should read , but in Theorem 4, it is
⁶₂ assumption f should read assumption that f
⁷₁₃ in the case should read for
⁷₁₃ ∞ , only. should read ∞ only.
⁸₄ and since should read and, since
⁸₈]quad Should $k - \frac{1}{2}$ be $k + \frac{1}{2}$?
⁷₈ Now, we should read Now we

8_8 of the type should read of type