

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  $\omega$  is nondecreasing,

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

Line 8<sup>2</sup> 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

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

9<sup>2</sup> – 9<sup>3</sup> 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

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

9<sup>3</sup> does not follow from 9<sup>2</sup>.

9<sup>7</sup> 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 9<sup>8</sup>.

9<sup>9</sup>  $\tau \sum_{r=\tau}^{n-1}$  should read  $(\tau+1) \sum_{r=\tau}^{n-1}$

The formula for  $I_2$  on 9<sup>5</sup> does not agree with the value for  $I_2$  given on line 8<sup>7</sup>.

10<sup>9</sup> How does this follow from line 10<sup>8</sup>?

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.

3<sup>7</sup> Since, the                      should read                      Since the

3<sup>12</sup> – 3<sup>13</sup> Delete "should be  $\dots$  of  $\sin t$ ." and replace it with the following:

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

3<sup>16</sup> begin.                      should read                      beginning.

3<sup>16</sup> formulate the general                      should read                      formulate general

- 3<sup>17</sup> and modulus should read and the modulus  
 3<sup>17</sup> entries of should read entries of the  
 3<sub>5</sub> such  $\omega$ , should read such an  $\omega$ ,  
 3<sub>3</sub> that for should read that, for  
 3<sub>3</sub>  $\geq 0$  should read  $\geq 0$ ,  
 4<sub>9</sub>, 5<sub>4</sub>, 5<sup>15</sup>, 5<sub>5</sub> *considered*  $x$ . Please state the interval being used.  
 4<sub>5</sub> *satisfy the* should read *satisfy*  
 5<sup>1</sup> *and in* should read *and, in*  
 5<sup>1</sup>, 5<sup>12</sup>, 6<sup>12</sup>  $-1/p$  should read  $-1/p$ ,  
 5<sup>5</sup> *of matrix* should read *of the matrix*  
 5<sup>5</sup> such tath should read as  
 5<sup>5</sup> (1.10) is the wrong reference number.  
 5<sup>7</sup> *satsfies* should read *satisfy*  
 5<sup>8</sup> *of matrix* should read *of the matrix*  
 5<sup>12</sup> *and in the case* should read *and, for*  
 5<sub>11</sub> *satisfy the condition* should read *satisfy condition*  
 5<sub>4</sub> is *nonin-* should read is a *nonin-*  
 5<sub>2</sub> for any should read *for any*  
 5<sub>1</sub> This line should be in italics, since it a part of the statement of Corollary 1.  
 6<sup>1</sup> note, that in should read note that, in  
 6<sup>1</sup> Delete "is used".  
 6<sup>4</sup> which should read is used, which  
 6<sup>4</sup> , but should be used the should read . Instead,  
 6<sup>4</sup> – 6<sup>5</sup> Delete "of the form".  
 6<sup>5</sup> (2.7). should read (2.7)should be used.  
 6<sup>6</sup> formulate should read reformulate  
 6<sup>6</sup> on estimates of  $L^p$  norm should read on the  $L^p$   
 estimate of the norm  
 6<sup>9</sup> Delete "the".  
 6<sup>12</sup> *in the case* should read , *for*  
 6<sub>7</sub> In the case If  
 6<sub>6</sub> nondecreases should read is nondecreasing  
 6<sub>5</sub> Under additional should read Under the additional  
 6<sub>4</sub> but in Theorem 4 is should read , but in Theorem 4, it is  
 6<sub>2</sub> assumption  $f$  should read assumption that  $f$   
 7<sup>13</sup> in the case should read for  
 7<sup>13</sup>  $\infty$ , only. should read  $\infty$  only.  
 8<sup>4</sup> and since should read and, since  
 8<sup>8</sup>]quad Should  $k - \frac{1}{2}$  be  $k + \frac{1}{2}$ ?  
 7<sub>8</sub> Now, we should read Now we

$8_8$  of the type                      should read                      of type