

P. K. Kamtham
MCMMASTER UNIVERSITY
HAMILTON, ONTARIO, CANADA



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Fundació Ferran Sunyer i Balaguer

DEPARTMENT OF MATHEMATICS
HAMILTON COLLEGE

May 1, 1967

Professor F. Sunyer Balaguer,
Department of Mathematics,
Angel Guimera, 66 pral. 2^o
Barcelona, - 17, Spain.

Dear Professor Balaguer,

Thank you very much for your letter of April 21 together with a number of comments and suggestions which I have incorporated now in the revised version of my paper "FK-space of entire Dirichlet functions" which you will find enclosed herewith. (pages: 2, 4, 5, 8, 9 instead of page 2, 4, 5 and 8, 9, 10 of original manuscript. Please correct ref. [1] on p. 3 to ref. [2])

Yes, I agree that Q_{20} of theorem in §3 depended on N and therefore the proof of the result could not be justified. I have changed this result by introducing a different metric.

On page 3 of your letter, you ask me as how

$$\lambda_n = e^{\lambda n^2}$$

happens to be true. In fact, λ_n is just λ_n of p.2 of my paper, where $\lambda_1, \lambda_2, \dots, \lambda_n, \dots$ is a basis of X , since if $\lambda_n(s) = e^{s\lambda n^2}$, then the functions $e^{s\lambda_1}, \dots, e^{s\lambda_n}, \dots$ generate the class of all entire Dirichlet functions. Therefore $\lambda_1, \lambda_2, \dots$ is a basis of X .

Finally, I hope you will find this revised version to your satisfaction and if still there are some minor modifications, you are at liberty to make changes accordingly and oblige.

With kindest regards

Yours very sincerely,

P. K. Kamtham

PKK:lk
Encl.

P.S. I shall request you one thing more: ~~Let~~ $A_\delta(\sigma) = \lim_{T \rightarrow \infty} \frac{1}{2T} \int_{-T}^T |f(\sigma + it)|^\delta dt$, $\delta > 0$. Is $\log A_\delta(\sigma)$ is a convex fn. of σ ? Can you suggest me the proof. I know that $A_\delta(\sigma) \leq (M(\sigma))^\delta$; and $A_\delta(\sigma + \eta) \geq K M(\sigma)$, $\eta > 0$, K depends on η (cf. my paper in Ann. Inst. Fourier, Grenoble, p. 209-223, Vol. 16, 1966) only. I shall be very grateful to you. Can you say that $\log A_\delta(\sigma)$ increases with σ , from $A_\delta(\sigma + \eta) \geq K M(\sigma)$, $\eta > 0$?