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EXPERIMENTING THE SATURATION THEOREMS AND FUNCTIONS RELATED WITH DEGREE OF FUNCTION $f \in H_W$ IN THE HOLDER METRIC

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Abstract: In this paper , a formula on degree of calculation of function $\tilde{f} \in H$w lecture by (E,1) (C,1) resources in the Holder metric consumes stood recognised.

Keywords: Holder Metric, Saturation Theorems, Degree of Function

1. Introduction:

The degree of estimate of a function f going to many classes by different Sum ability technique has remained determined through many Arithmetician, Chandra (2015) discovery the grade of guess of function through Nor Lund alter Later on Mahapatra then Chandra (2004) get the degree of guess in Holder metric by matrix transmute.Hölder continuity has never seemed in my official education besides the wikipedia item appears insufficiently general.

In sequel Singh (2014) get the error certain of periodic meaning in Holder metric over Mishra (2001) contributed the generalization of consequence of Singh (2004) In this paper we discovery the gradation of estimate of function $\tilde{f} \in H$w through (E,1) (C,1) resources in holder metric.The grade of calculation of a meaning f going to several courses by diverse Suability technique takes remained resolute by numerous Geometrician, Chandra (1982) bargain the degree of calculation of meaning thru Norlund alter.

Well ahead continuously Chandra (1982) find the mark of guesstimate in Holder metric by matrix convert. I n sequel singh (2018) get the fault bound of intermittent utility in Holder metric over Mishra (2011) gave the oversimplification of consequence of Singh (2018). In this weekly we discovery the step of calculation of meaning in Holder metric thru (N, Pn) revenues.The elimination of subsumed formulas is a critical step in the proof of the saturation theorem. Yet, most designers of proof calculi only discuss this informally, and the few formal expositions that do exist tend to be awkward. We offer a framework for formal demonstrations of the completeness of reputational arguments made by abstract proves that use saturation calculi like ordered resolution and superposition. The framework expands redundancy criteria in a modular fashion using well-known ground-to-no ground lifts. It enables us to model entire proverb architectures so that the static reputational completeness of a calculus automatically implies the dynamic reputational completeness of a prove implementing the calculus within, say, an Otter or DISCOUNT loop. It also enables us to extend redundancy criteria so that they cover subsumption. In Isabelle/HOL, our framework is mechanised.

Aimed at a 2π - periodic sign $f \in Lp$ periodic vital in the intellect of Lévesque then the Fourier sequence of f(y) is assumed by

F(y)$\approx \frac{b_0}{2} + \sum_{n=1}^{\infty}(b_m cosmy + a_m sinmy)$ (1)

The conjugate sequences of Fourier sequences (1) is assumed by

$\sum_{n=1}^{\infty}(a_m cosmy - b_m sinmy)$ (2)

Let (z) besides w^*(z) denote binary agreed module of endurance s.t.

$(w(z))^{\frac{\alpha}{\beta}}$= ($w^*$(z)) asz $\rightarrow 0^+$ for $0 \leq \alpha < \beta < 1$ (3)

Let $c_2\pi$mean the BanachInterplanetary of altogether 2π - periodic unceasing function clear on [π, $-\pi$] below sub-norm the interplanetary$L$q[0,2π] $where$q = ∞ contains the space $c_2\pi$Aimed atcertain positive continuous k the meaning space Hw is distinct by

$H_w = \{f \in c_{2\pi}: |f(y) - f(x)| \leq (|y - x|)\}$ (4)

With norm ‖. ‖w* sharp in

$\|f\|_{w^*} = \|f\|_c + \sup_{y,x}\left[\Delta^{w^*} f(y,x)\right]$ (5)

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Everywhere (z) besides w^*(z) stand amassed occupation of z and

$$\|f\|_c = \sup_{0 \leq y \leq 2\pi} \left[\Delta^{w^*} f(y, x)\right]$$

And

$$\Delta^{w^*} f(y, x) = \frac{|f(y) - f(x)|}{w^*(|y - x|)} \text{y} \neq x \text{ (6)}$$

By the empathetic that $\Delta^0 f$(y, x) = 0 If there occurs positive continuous αin addition k such that

$$(|\text{y} - \text{x}|) \leq \alpha |\text{y} - \text{x}| \beta$$

then

$$w^*(|\text{y} - \text{x}|) \leq k |\text{y} - \text{x}| \alpha \quad 0 \leq \alpha \leq 1$$

than the interplanetary

$$H\text{w} = \{f \in c_2 \ : |f(\text{y}) - f(\text{x})| \leq k |\text{y} - \text{x}| \beta \ \ , 0 \leq \beta \leq 1\} \text{ (7)}$$

Is Banach space besides metric encouraged through norm ‖. ‖$\beta$and$H\beta$ is thought to stand Holder metric evidently $H\beta$stands a Banach space which diminutions as α rises that stands

$$H\beta \leq H\alpha \leq c_{2\pi} \quad \text{for } 0 \leq \alpha \leq \beta \leq 1 \text{ (8)}$$

An immeasurable series $\sum_{m=0}^{\infty} b_m$is thought to be (C,1) summable to s if

$$(\text{C},1) = \frac{1}{m+1} \sum_{m=0}^{\infty} s_{k \to s} \text{ (9)}$$

$$\|f\|_c = \sup_{0 \leq y \leq 2\pi} \left[\Delta^{w^*} f(y, x)\right]$$

And

$$\Delta^{w^*} f(y, x) = \frac{|f(y) - f(x)|}{w^*(|y - x|)} \text{y} \neq x$$

The (E,1) convert is distinct through

$$(E,1) = \frac{1}{2^M}\sum_{m=0}^{\infty}\binom{m}{k}s_{k\to s} \quad (10)$$

The (E,1) convert of (C,1) convert defined $EC^{1/m}$ is assumed by

$$(EC)^{1/m} = \frac{1}{2^M}\sum_{m=0}^{\infty}\binom{m}{k}c_{k\to s} \quad (11)$$

2 Results:

As a result, it can be used to demonstrate a calculus' static completeness, but it is insufficient to prove the relationship between static and dynamic completeness (unless the notion of fairness is strengthened).Scalar and victoria diffraction theories are the two most popular approaches to diffraction. The former method assumes that the other components of the electric field or magnetic field behave similarly and treats light as a scalar quantity that represents one of them. This streamlines the analysis but ignores Maxwell's equations, which couple the elements of the electric and magnetic fields. The victoria theory takes this connection into account, but the relations that are found, with a few exceptions, are too difficult to solve.Singh (2008) well-known the next proposition to error bound of indication passing through (C,1)(E,1) alter. Theorem 1 – Let (z) distinct (4) be s.t.

$$\int_z^{\pi}\frac{w(v)}{v^2}dz = o\{H(z)\};\ H(z) \geq 0 \ (12)$$

$$\int_0^z H((v)dv = o\{zH(z)\};\ H(z) \geq 0 \ (13)$$

Then on behalf of $0 \leq \alpha < \beta \leq 1$ also $f \in H$w we obligate

$$\left\|t_m^{CE^1}(s{:}\,f) - f(y)\right\|_{w^*} = o\left\{\left((m+1)^{-1}H\left(\frac{\pi}{m+1}\right)\right)^{1-\frac{\alpha}{\beta}}\right\}(14)$$

Theorem 2 – Deliberatew(z) distinct(4) and on behalf of $0 \leq \alpha \leq 1$ besides$f \in H_w$we obligate

$$\left\|t_m^{CE^1}(s:f)-f(y)\right\|_{w^*}=o\left(w\left(\frac{\pi}{m+1}\right)^{1-\frac{\alpha}{\beta}}+(m+1)^{-1}\sum_{k=1}^{m+1}w\left(\frac{1}{k+1}\right)^{1-\frac{\alpha}{\beta}}\right)(15)$$

In sequel Mishra (1998) offered the comprehensive consequence of upstairs proposition. They verified the subsequent.

Theorem 3 – Let (z) distinct (4) be s.t.

$$\int_z^{\pi}\frac{w(v)}{v^2}dv=o\{H(z)\};\ H(z)\geq 0$$

$$\int_0^z H((v)dv=o\{zH(z)\};\ H(z)\geq 0$$

LeaseNqremain the nor Lundsum abilitymediummadethrough the non –negative {Qm} s.t. (m+1)pm = o(Qm) m ≥ 0.The authors evaluated the degree of estimate of meanings linked by the similar series in Holder metric by Borel's mean after establishing the Fourier atmosphere of series.

Then on behalf of $0\leq\alpha<\beta\leq 1$ also $f\in H$w

we obligate

$$\left\|t_m^{C-NE}(f)-\bar{f}(y)\right\|_{w^*}=o\left\{\frac{w(|y-x|)^{\frac{\alpha}{\beta}}}{w^*(|y-x|)}\left(\log(m+1)\,w\left(\frac{\pi}{m+1}\right)\right)^{\frac{\alpha}{\beta}}\left((m+1)^{-1}H\left(\frac{\pi}{m+1}\right)\right)^{1-\frac{\alpha}{\beta}}\right\}(16)$$

Deliberate w(z) distinct (4) and on behalf of $0\leq\alpha\leq 1$ besides $\bar{f}\in H_w$ we obligate

$$\left\|t_m^{C-NE}(f)-\bar{f}(y)\right\|_{w^*}=o\left\{\frac{w(|y-x|)^{\frac{\alpha}{\beta}}}{w^*(|y-x|)}\left(\log(m+1)\,w\left(\frac{\pi}{m+1}\right)\right)^{\frac{\alpha}{\beta}}\left(\left(\frac{1}{m+1}\right)H\left(\frac{\pi}{m+1}\right)\right)^{1-\frac{\alpha}{\beta}}\right\}(17)$$

In this paper we need to demonstrate a proposition on the gradation of guesstimate of a function f(y) conjugate to a 2π- intervallic function f fitting to $\bar{f}\in H$wperiodthrough (E,1) (C,1) unkind of conjugate sequences of its Fourier series.

Theorem4– Let (z) placate the resulting complaint

$$\int_{z}^{\pi} \frac{w(v)}{v^2} dv = o\{H(z)\};\ H(z) \geq 0 \ (18)$$

$$\int_{0}^{z} H((v)dv = o\{zH(z)\};\ H(z) \geq 0 \ (19)$$

Then on behalf of $0 \leq \alpha < \beta \leq 1$ also $\bar{f} \in H$w

$$\left\| t_m^{C-NE}(f) - \bar{f}(y) \right\|_{w^*} = o\left\{ \frac{w(|y-x|)^{\frac{\alpha}{\beta}}}{w^*(|y-x|)} \left(\log(m+1)\, w\left(\frac{\pi}{m+1}\right)\right)^{\frac{\alpha}{\beta}} \left((m+1)^{-1} H\left(\frac{\pi}{m+1}\right)\right)^{1-\frac{\alpha}{\beta}} \right\} (20)$$

Hence Proved

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