International Journal of Education, Social Science & Humanities.
Finland Academic Research Science Publishers
ISSN: 2945-4492 (online) | (SJIF) = 7.502 Impact factor
Volume-11| Issue-10| 2023 Published: |22-10-2023|

LINEAR MIXED PROBLEM FOR EQUATION OF KVAZI THE EQUATIONS ARE LINEAR IN THE NUMBER OF ISSUES TO BE PUT FEW OF THE SOLUTIONS OF THE INTEGRATED SYSTEMTO BRING TO TAKE OFF.

https://doi.org/10.5281/zenodo.10014746

Oybek Maniyozov Azatboevich
TATU Fergana branch assitsenti

Anotatsiya

kvazichiziqli equations for mixed boundary issues is required to find the commercial function of the condition of the content. To do this Karateodori condition, the movement of the row Fur'e qullab we will settle the problem.

This mastay in kvazichiziqli mixed problems for equations put. L and depends on the texture of the operator of the space and that we are to take off a few of the issue noted. We have $\mathcal{F} \in \left(K \wedge_{p,q}\right)$, and $\mathcal{F}(K,S)$whom don't look at the xolni finds doing so.

Issue.let's put.

So $it(t,x) \in \mathcal{L}(g_{,T})$ required to find the function that, as a result, this function

$$u_{tt} = L_x u + F(t,x,u,\mu) \quad (1)$$

tenglamani $g_T = (\tau, T) * g$, and may build in the area

$$u(t,x)|_{t=\tau} = \varphi_\tau(x) \quad (2)$$

$$u_t(t,x)|_{t=\tau} = \varphi_\tau(x) \quad (3)$$

Primary and terms and conditions

$$B_G u = 0 \quad (4)$$

May be the content of a boundary condition.

Thus, $x \in g \subset E,^S, \varphi_\varphi(x), \psi_\tau(x)$ optional $\tau \in [\alpha, \beta]$ o'lchanuvchi for features in a given area. $\mathcal{F}(t,x,u,\mu)$ given a function, the parameters μ of the value assigned in g_T Karateodori identified and the conditions will build in the area, L_x superimposed detected the differential expression is positive, $b\ is\ a_G$ –boundary together with the operator $\mathcal{L}_2(g)$ has a spectrum with dots at L_x operator is bounded from below we will assume that (1)-(4) the issue then the issue An we are called, $\mathcal{L}^k(g_{,T})$-space Banax.

L_x compared to assuming the operator in accordance with, the differential expression L_x boundary operator B_G and g shundayki to the area, results in

International Journal of Education, Social Science & Humanities.
Finland Academic Research Science Publishers
ISSN: 2945-4492 (online) | (SJIF) = 7.502 Impact factor
Volume-11| Issue-10| 2023 Published: |22-10-2023|

$L_x it = -\lambda' it$, $B_G u = 0$. The issue $of\ a$ certain class, we will add features to determine solutions.

1-Definition. *$W_2(L)$ so $,it(t,x)$ collection features the character, they are certain $t \in (\tau, T)$ in the value of L if the area belongs to the operator aniqlanish, t on $\mathcal{L}_2(g)$ which is relevant to the second xosila have orderly.*

Thus, $u(t,x) \in W_2(L)$ for the element so that $T_1 \in (\tau, T)$ that there is, as a result, $t \in (T_1 T)$ bo'present in $he(t,x) = 0$ is. $W_2(g)$ features package in $\mathcal{L}_2(g)$ is dense at. Also, if

$u(t,x) \in W_2(L)$ if, then

$$\lim_{t \to T} \int_g u(t,x)dx = \lim_{t \in T} \int_g u_t(t,x)dt = 0 \qquad (5)$$

$\mathcal{L}^k(g,_T)$ and $\mathcal{L}_1^{k\ k-1}(g,_T)$ by

$$u(t,x) = \sum_{n=1}^{\infty} a_n(t)\vartheta_n(x)$$

Features ought to sign the package, so that Fur'e pumps will draw:

$$\sum_{n=1}^{\infty} (\lambda_n^k\ max|a_n(t)|)^2$$

$$\sum_{n=1}^{\infty} (\lambda_n^k\ max|a_n(t)|)^2 + \sum_{n=1}^{\infty} (\lambda_n^{k-1}\ max|a_n'(t)|)^2$$

Note. Us 1-ta'rifning last instead of the condition (5) see you can get.

2-Description:*. If $u(t,x) \in \mathcal{L}^k(g\ -_T)$ this equation does integrated content*

$$\int_\tau \int_g \{u(t,x)[F_{tt}(t,x) - LF(t,x)] - \mathrm{F}\ (t,x,u,\mu)F(t,x)\}dxdt + \int_g [\varphi_\tau(x)F_t(t,x) - \psi_{_\tau}(x)F_t(t,x)]_{t\in\tau} = 0$$

(6)

thus, $F(t,x) \in W_2(L), \mathcal{F}(t,x,u,\mu)$ the operator $\mathcal{L}_2(g)$ to $\mathcal{L}_2(g)$ to akslantirish, it s the case.L.Sobolev, O.A.Ladijenskaya, V.A.Il'in on $it(t,x)$ function issues A 's solution, and it briefly $(\mathcal{L}_{T,}^k, W_2(L))^P$, we will write as.

Note. You $it(t,x) \in C,(g); (-L)^{1/2} \cup (t,x) \in \mathcal{L}_T^T(g)$,
$t \in (\tau, T)$ and

$$\int_g |u(t,x)|^P dx, t \in (\tau, T)$$

let's be the function, $he(t,x), select\ (\mathcal{L},_k, W(L))$ appreciate the character.

Note. You 2-ta'rifida $u(t,x) \in \mathcal{L}^k(g,_T)$ if it is , the issue $of\ a$'s solutionsaccounted for $(\mathcal{L}_2, W_2(L))^P$ appreciate the character.

International Journal of Education, Social Science & Humanities.
Finland Academic Research Science Publishers
ISSN: 2945-4492 (online) | (SJIF) = 7.502 Impact factor
Volume-11| Issue-10| 2023 Published: |22-10-2023|

The issue logically A 's of on-demand solutions $(\mathcal{L}_{T,}^{k}, W_2(L))^P$ is. But the opposite every time is not reasonable. The issue is A mainly determine $(\mathcal{L}_{T,}^{k}, W_2(L))$, L compared to mostly optional assuming the operator $(\mathcal{L}_{,T}^{k}, W_2(L))^P$ function L can spread to a number of special Fur'e on the functions of the operator. Almost $t \in (\tau, T)$ for s $\mathcal{L}_2(g)$ in a single yoyilma insight.

You $it(t, x,)$ function $(\mathcal{L}_{,T}^{0}, W_2(L))^P$ if,

$$u(t,x) = \sum_{n=1}^{\infty} a_n(t)\vartheta_n(x) \tag{7}$$

Thus,

$$a_n(t) = \int_g u(t,x)\vartheta_n(x)dx\,;\;\; n = 1,2,\ldots;\;\; \vartheta_n(x) - L$$

The special functions of the operator. Therefore a solution of problem $(\mathcal{L}_{,T}^{k}, W_2(L))$ to (7) , you can also search form.

Coefficient of linear equations to find their fur'e the dressing will make the integrated system are few in number.

LITERATURE:

1. К.Х.Щабадиков. О разресҳимости смесҳанной задасҳи для одного нелинейного уравнения сҳетвертого порядка и непреривнои зависимости ресҳения от параметра. «Исоледования по п проблемам физико-математисҳеских наук», Сборник наусҳниных трудов Тасҳкенцкого ГПИ им,Низоми,1978г,том №240 стр.23-28

2. Нарасимхон Р. Анализ на действительних икомплексных многообразиях. Москва «Мир» 1971г,231 стр

3. Б.М.Будак. А.А.Самарский, А.Н.Тихонов Сборник задасҳ по математисҳеской физике. Масква 1972г,687 стр

4. Nasriddinov, O., Maniyozov, O., & Bozorqulov, A. (2023). xususiy hosilali differensial tenglamalarning umumiy yechimni topishning xarakteristikalar usuli. *Research and implementation*.

5. Jo'raeva, D. (2022). buziladigan oddiy differentsial tenglama uchun birinchi chegaraviy masala. o'zbekistonda fanlararo innovatsiyalar va ilmiy tadqiqotlar jurnali, 2(13), 456-461

6. Saidov, M., & Isroilov, S. (2023). To'rtinchi tartibli bir jinsli bo'lmagan tenglama uchun aralash masala. Research and implementation

7. Jo'raeva, D. (2022). Buziladigan oddiy differentsial tenglama uchun birinchi chegaraviy masala. O'zbekistonda fanlararo innovatsiyalar va ilmiy tadqiqotlar jurnali, 2(13), 456-461

8. Saidov, M., & Isroilov, S. (2023). To'rtinchi tartibli bir jinsli bo'lmagan tenglama uchun aralash masala. Research and implementation

9. Bozarov B.I., Shaev A.K. Norm of the error functional for the optimal quadrature formula with cosine weight in the Sobolev space. //Problems of computational and applied mathematics. No. 3/1(50) 20233. pp 167-173.

10. Yusupov, Y. A., Otaqulov, O. H., Ergashev, S. F., & Kuchkarov, A. A. (2021). Automated stand for measuring thermal and energy characteristics of solar parabolic trough concentrators, Appl. *Sol. Energy*, *57*, 216-222.

11. Tolipov, N., Xudoynazarov, Q., & Munavarjonov, S. (2023). об одной некорректной задаче для бигармонического уравнения в полушаре. Research and implementation.

12. Saidov, M. (2023). normal shakllar. mukammal normal shakllar. Research and implementation

13.Madibragimova, I. M. (2023). Problem learning in mathematics classes. *International journal of advanced research in education, technology and management*, *2*(4).

14.Madibragimova, I. M. (2023). Matematika darslarida muammoli ta'lim. *Principal issues of scientific research and modern education*, *2*(6).