



North Caucasus Center for Mathematical Research
of the Vladikavkaz Scientific Center of the RAS

Southern Mathematical Institute
of the Vladikavkaz Scientific Center of the RAS



International Seminar

"Operator Theory, Differential Equations and their Applications"

Seminar Chairmen: Prof. Anatoly G. Kusraev, Prof. Marat A. Pliev

Seminar Secretary: PhD Batradz B. Tasoev

December 1, 5 PM (UTC+3)

Spectral analysis of the 1D Dirac operator with summable potential
and the Sturm-Liouville operator with distribution coefficients

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We consider the one-dimensional Dirac operator with summable potential and regular boundary conditions in the sense of Birkhoff. We discuss the questions about basis property for system of eigenfunctions and associated functions. We consider the problem about equiconvergence of spectral decompositions in various metrics. We prove the results about equiconvergence depending on three indices μ , ν , and κ . Namely, equiconvergence in $L_\nu[0, \pi]$ of spectral decompositions $\|S_m - S_m^0\| \rightarrow 0$, $m \rightarrow \infty$ of the function $f \in L_\mu[0, \pi]$ and potential $P \in L_\kappa[0, \pi]$. Similar results we discuss for the Sturm-Liouville operator with singular potential and regular boundary conditions in the sense of Birkhoff.

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The seminar is organized by North Caucasus Center for Mathematical Research of the Vladikavkaz Scientific Center of the RAS jointly with Southern Mathematical Institute of the Vladikavkaz Scientific Center of the RAS.

If you have any questions please don't hesitate to contact the secretary of the seminar Batradz Tasoev at seminar_otde@mail.ru