



ЮЖНЫЙ ФЕДЕРАЛЬНЫЙ УНИВЕРСИТЕТ
Региональный математический центр
SOUTHERN FEDERAL UNIVERSITY
Regional Mathematical Center
<https://rmc.sfedu.ru/>, Rostov-on-Don, Russia

International scientific online seminar on Analysis, Differential Equations and Mathematical Physics

Coordinators: Prof. Alexey Karapetyants, Prof. Vladislav Kravchenko

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Dispersive estimates for Schrödinger equations

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The importance of the dispersive estimates for Schrödinger equations in spectral theory and in nonlinear analysis will be discussed. Furthermore, the literature on the $L^p - L^{p'}$ estimates will be reviewed, starting with the early results in the 1990th, and with an emphasis in the results in one dimension. New results will be presented, in $L^p - L^{p'}$ estimates for matrix Schrödinger equations in the half-line, with general selfadjoint boundary condition, and in matrix Schrödinger equations in the full-line with point interactions. In both cases we consider integrable matrix potentials that have a finite first moment.

References

- [1] T. Aktosun and R. Weder, *Direct and Inverse Scattering for the Matrix Schrödinger Equation*, Applied Mathematical Sciences **203**, Springer Verlag New York, 2021 (published in May 2020).
- [2] I. Naumkin, R. Weder, *$L^p - L^{p'}$ estimates for matrix Schrödinger equations*, Journal of Evolution Equations, online first <https://doi.org/10.1007/s00028-020-00605-x>, (2020).

*Seminar website: <https://rmc.sfedu.ru/seminar>. The seminar uses Microsoft Teams online platform.
To join the seminar, please send a request to pichugina@sfedu.ru (Olga Pichugina, scientific secretary).

The seminar is organized by the Regional Mathematical Center of the Southern Federal University in collaboration with Institute of Mathematics, Mechanics and Computer Sciences of the Southern Federal University and the special Interest ISAAC-OTHA group in Operator Theory and Harmonic Analysis.

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