



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

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

**11th June 2020, 5 pm (UTC+3)**

Supervisors: Prof. Alexey Karapetyants, Prof. Vladislav Kravchenko

### Reducible and irreducible Fermi surfaces for periodic operators

**Stephen Shipman**, Louisiana State University,  
Baton Rouge, USA, [shipman@math.lsu.edu](mailto:shipman@math.lsu.edu)

I will discuss new theorems concerning reducibility of the Fermi surface for periodic Schrödinger operators.

- (1) Irreducibility for a class of planar discrete graph operators;
- (2) Reducibility of multilayer graphs due to compatible asymmetries of the connecting edges;
- (3) Reducibility of multilayer graphs due to separability or bipartiteness of the layers.

Parts of this work are in collaboration with Wei Li, Lee Fisher, Karl-Michael Schmidt, Ian Wood, and Malcolm Brown.

Seminar website: <https://rmc.sfedu.ru/seminar>

Seminar secretary: Olga Pichugina, [pichugina@sfedu.ru](mailto:pichugina@sfedu.ru)

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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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