Coordinators: Prof. Alexey Karapetyants, Prof. Vladislav Kravchenko JOIN THE SEMINAR

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## Hilbert *C*<sup>\*</sup>-module independence

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In this talk, we review some kinds of independence in setting of operator algebras. We introduce the notion of Hilbert  $C^*$ -module independence and show that it is a natural generalization of the notion of  $C^*$ -independence. Furthermore, we demonstrate that even in the case of  $C^*$ -algebras this concept of independence is new and has a nice characterization in terms of Hahn-Banach type extensions.

This talk is based on a joint work with R. Eskandari, J. Hamhalter, and V. M. Manuilov.

*Keywords*: Hilbert *C*\*-module; *C*\*-independence; state; determining element; module independence.

\*Seminar website: <u>https://msrn.sfedu.ru/sl</u>. The seminar uses Microsoft Teams online platform. Please send questions to <u>ademp.seminar@gmail.com</u> (Tatiana Andreeva, scientific secretary).

The seminar is organized by the coordinators Alexey Karapetyants and Vladislav Kravchenko within the activities of 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 OTHA research group in Operator Theory and Harmonic Analysis.



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