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ΟΜΙΛΙΑ ΓΕΝΙΚΟΥ ΣΕΜΙΝΑΡΙΟΥ

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Τίτλος: *Operator Algebras associated to Subshifts*

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Abstract: A major trend in Operator Theory is the use of Hilbertian operators for encoding geometrical and topological structures. A central aspect of the programme is to explore the passage from intrinsic properties of the structure into properties of the associated operator algebras; and then using invariants of the latter to classify the former. In the current work we are interested in operator algebras associated with subshifts.

A subshift is characterized by a set of allowable words on $\$d\$$ symbols. In a sense it encodes the allowable operations an automaton performs.

C^* -algebras associated with subshifts were introduced in the late 1990's by Matsumoto. Motivated by the seminal work of Cuntz and Krieger they are constructed through a Fock quantization. On the other hand, nonselfadjoint operator algebras of subshifts were studied by Shalit and Solel in 2009. They form an example of a more general theory on subproduct systems.

In the joint work with Shalit we study (both selfadjoint and nonselfadjoint) operator algebras in terms of classification programmes and the C^* -envelope. In this talk we will give the basic steps of our results and comment on the proofs.