

IMIA Operator Algebra Seminar
University of Wollongong

Title: Traces on weak- \mathcal{L}_1

Speaker: Alexandr Usachev (UNSW)

Time and Date: 3:30pm Thursday, 7 November 2013

Location: Room 39C.meeting room

Abstract: In the present talk we introduce a new approach to traces on the principal ideal weak- \mathcal{L}_1 . Distinct from the well-known construction of J. Dixmier, this approach provides the explicit construction of traces in terms of translation invariant functionals. The advantage of this construction is that it is a bijective association between traces on weak- \mathcal{L}_1 and translation invariant functionals on l_∞ . This bijection allows us to identify all known and commonly used subsets of traces (Dixmier traces, Connes-Dixmier traces, etc.) in terms of invariance properties of linear functionals on l_∞ , and definitively classify the measurability of operators in weak- \mathcal{L}_1 in terms of qualified convergence of sums of eigenvalues.

This talk based on the joint work with E. Semenov, F. Sukochev and D. Zanin.