Title. Small doubling in ordered semigroups.

Abstract. The talk is focused on the generalization of recent results by G.A. Freiman, M. Herzog and coauthors on the structure theory of sets of very small doubling (less than 3) from the context of linearly (i.e., strictly and totally) ordered groups to the more abstract setting of linearly ordered semigroups. In particular, it is shown that: If S is a finite subset of a linearly ordered semigroup generating a nonabelian subsemigroup, then $|S^2| \geq 3|S| - 2$. On the road to this goal, a few subsidiary results are proved, notably including the fact that the commutator and the normalizer of a finite subset of a linearly ordered semigroup are equal to each other. The whole is accompanied by a number of examples, mostly finalized to explore conditions under which some special classes of semigroups (and related structures such as semirings) are linearly orderable.

Biography. Salvatore Tringàli is a Marie Curie research fellow under the FP7-PEOPLE-2010-IEF Marie Curie Action. He currently holds a postdoctoral position at the Laboratoire Jacques-Louis Lions (LJLL), which is part of the Institut de Mathématiques de Jussieu (IMJ), in Paris. Broadly speaking, his research is focused on the idea of pushing on the use of algebraic and combinatorial methods in functional and numerical analysis.

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Faithfully,
Salvatore Tringali