

Algebraic characterization of dendricity

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Dendric shift spaces generalize episturmian shift spaces and codings of interval exchanges (themselves being two generalizations of Sturmian shift spaces) while preserving some of their properties. One of the first and most important result on dendricity is the so-called Return Theorem: If a shift space is minimal dendric, then the returns words to any given word form a basis of the free group over the alphabet. With H. Goulet-Ouellet, J. Leroy and P. Stas, we recently showed that this theorem is in fact a characterization. In this talk, I explain the ideas and tools for the proofs of both the Return Theorem and its converse.