

CENTRO DE
MATEMÁTICA
UNIVERSIDADE DO PORTO

ALGEBRA AND GEOMETRY SEMINAR

Totally positive skew-symmetric matrices

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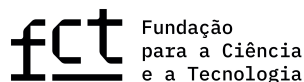
Abstract. Skew-symmetric matrices cannot be totally positive in the classical sense (all minors positive). Thus, we define a notion of positivity by viewing them as an affine chart of the orthogonal Grassmannian $OGr(n, 2n)$ and considering Lusztig's positivity in flag varieties. We provide a positivity criterion in terms of a fixed collection of minors, and show that their Pfaffians have a remarkable sign pattern. Finally, we also consider the Euclidean closure of this positive region together with its known CW cell complex structure. We give a way to recognise the cell of a nonnegative point by looking at its underlying matroid.

The talk will be followed by a coffee break.

TUESDAY, 25 MARCH

14H00

ROOM 0.29



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