## ON N-EUCLIDEAN LOGARITHMIC MOSER-TRUDINGER-ONOFRI INEQUALITY AND SOME GEOMETRICAL VARIANTS

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ABSTRACT. In my talk I will extend the N-dimensional Euclidean Onofri inequality proved by Del Pino and Dolbeault for smooth compactly supported functions in  $\mathbb{R}^N$ , with  $N \geq 2$ , to a suitable weighted Sobolev space. I will show that in any dimension  $N \geq 2$ , the Euclidean Onofri inequality is equivalent to the logarithmic Moser-Trudinger inequality with sharp constant proved by Carleson and Chang for balls in  $\mathbb{R}^N$ . This is a joint paper with N. Borgia and G. Mancini.