

## DECOMPOSITIONS OF COMPLETE GRAPHS INTO KAYAK PADDLES

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**Abstract.** A canoe paddle is a cycle attached to an end-vertex of a path. It was shown by Truszczyński that all canoe paddles are graceful and therefore decompose complete graphs. A kayak paddle is a pair of cycles joined by a path. We prove that the complete graph  $K_{2n+1}$  is decomposable into kayak paddles with  $n$  edges whenever at least one of its cycles is even.

*Key words:* Graph decomposition, graceful labeling, rosy labeling.