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*Mader-Mengerian graphs (joint work with Vincent Jost, École Polytechnique, France).*

Given a graph  $G$ , an independent set  $S \subset V(G)$ , when is the maximum packing of vertex-disjoint paths with extremities in  $S$  equal to the minimum vertex-multicut separating  $S$ ? We study a weighted generalization of this property, the total dual integrality of:

$$\sum_{v \in P} x_v \geq 1 \text{ for every } S\text{-path } P$$

( $x \in \mathbb{R}^{V \setminus S}$ ). We provide characterizations in terms of forbidden minors, poly-time recognition and optimization algorithms for this TDI property.