

## Arc-disjoint branching flows

Ana Karolinnna Maia de Oliveira <sup>1</sup>

<sup>1</sup> UFC

The problem of determining if a given network has a feasible flow is largely studied and known to be polynomial-time solvable. In this work, we consider the problem of finding multiple arc-disjoint flows and we study its complexity on networks with different capacities on the arcs. We focus on an specific type of flow, which can be useful for finding branchings in digraphs. We propose a conjecture to characterize (also based on the capacity function) the digraphs which admit multiple arc-disjoint branching flows and we show some cases where it holds.