Branching Systems

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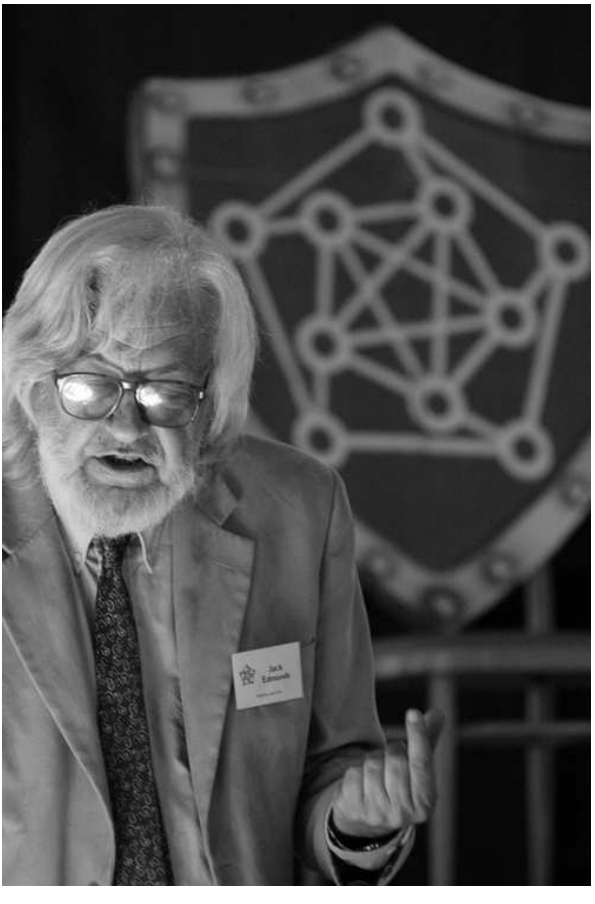
For a digraph $G = (V, E)$ with a specified subset $R(j)$ of V, its nodes, a branching $B(j)$ rooted at $R(j)$ is a forest in G such that for each node u in $V - R(j)$ there is exactly one edge of $B(j)$ entering u. A branching system $B = [B(j) : j \in J]$ is a collection of edge-disjoint branchings, with specified root-sets, in G. Given costs $c(i)$ on the edges i of G, and given root sets $R(j)$, we survey the use of matroids to find a least cost branching system, B.



Jack Edmonds giving his plenary lecture at IWOCA 2009.
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J. Fiala, J. Kratochvíl, and M. Miller (Eds.): IWOCA 2009, LNCS 5874, p. 1, 2009.