



IWOCA 2009

20TH INTERNATIONAL WORKSHOP ON COMBINATORIAL ALGORITHMS

JUNE 28 – JULY 2, 2009, HRADEC NAD MORAVICÍ, CZECH REPUBLIC

iwoca09@iwoca.org

<http://www.iwoca.org/iwoca09>

Invited lecture

BRANCHING SYSTEMS

JACK EDMONDS

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 . Suggested background is Schrijver's 'Combinatorial Optimization'.
