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"Succinct Encoding of Ordinal Trees for Fast Traversal"

By an ordinal tree we mean one in which the children of a node are numbered 1 through k. Several interesting encodings of size close to the information theoretic lower bound have been proposed for such trees, but none support all of the operations: subtree size, finding the parent of a node, and finding the i^{th} child of a node in constant time. In this paper we achieve that goal without increasing the space bound.