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James D Currie* (j.currie@uwinnipeg.ca), 515 Portage Ave., Winnipeg, Manitoba R3B 2E9, Canada. *Formal languages, topology, and some challenging computations.*

Combinatorics on words is a part of theoretical computer science which has historically drawn much of its motivation from dynamical systems. One thus is led to consider topological concepts, such as **entropy** or **perfect sets**, in connection with trees of words. It turns out that effectively deciding certain language questions can be boiled down to completing challenging searches on infinite trees. In this talk we will explore the links between words, topology, decision procedures and these searches. (Received August 18, 2016)