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Jonathan D.H. Smith* (jdsmith@iastate.edu), Department of Mathematics, Iowa State University, Ames, IA 50011. *Engel groups and Bruck loops.*

A classical construction associates a Bruck loop with a Moufang or Bol loop on which the squaring map is a permutation. That construction is now extended to a quadratically closed Bol loop or group (where the squaring operation is surjective) that satisfies the 2-Engel condition (for groups: elements commute with their conjugates). The Bruck loop is built on a space of sequences of elements from the original Bol loop.

One application of this work offers a new setting for complex reflections and midpoints on the unit circle, and the Riemann surface of the square root function. (Received August 06, 2015)