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Vyron S Vellis* (vyron.vellis@uconn.edu), Department of Mathematics, University of Connecticut, 341 Mansfield Road U1009, Storrs, CT 06269-1009. *Holder curves and the traveling salesman problem.*

Given a bounded set $E \subset \mathbb{R}^n$, when is it possible to construct a nice map (Holder, Lipschitz) from the unit interval into \mathbb{R}^n so that E is contained in its image? In this talk we approach this question from two different directions. In this talk we discuss an extension of Peter Jones' traveling salesman construction, which provides a sufficient condition for E to be contained in a $(1/s)$ -Hölder curve, $s \geq 1$. The original result, corresponding to the case $s = 1$, identified subsets of rectifiable curves. When $s > 1$, $(1/s)$ -Hölder curves are more exotic objects than rectifiable curves that include snowflake curves and space-filling curves as basic examples. This talk is based on a joint work with Matthew Badger and a joint work with Matthew Badger and Lisa Naples. (Received July 23, 2018)