1144-28-37 **Vyron S Vellis*** (vyron.vellis@uconn.edu), Department of Mathematics, University of Connecticut, 341 Mansfield Road U1009, Storrs, CT 06269. *Fractional rectifiability.*

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 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 fractal 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)