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**Adrian Sanborn, Jian Li and Erez Lieberman Aiden\*** (erez@math.harvard.edu). *Physical Analogues of Peano Curves: from genome folding to new symmetries.*

I will discuss our recent work mapping the three-dimensional architecture of the human genome, emphasizing the role of the fractal globule, a physical analogue of the Peano curve. Next, I will highlight a collaboration with Adrian Sanborn and Jian Li, in which, motivated by the experimental findings described above, we identify a new symmetry property possessed by a broad array of fractal curves. (Received September 22, 2011)