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Dan Cristofaro-Gardiner, Tara Holm, Alessia Mandini and Ana Rita Pires*
(apissarrapires@fordham.edu). *Symplectic embeddings and infinite staircases*. Preliminary report.

McDuff and Schlenk studied an embedding capacity function, which describes when a 4-dimensional ellipsoid can symplectically embed into a 4-ball. The graph of this function includes an infinite staircase related to the odd index Fibonacci numbers. Infinite staircases have been shown to exist also in the graphs of the embedding capacity functions when the target manifold is a polydisk or the ellipsoid $E(2,3)$. This talk describes joint work with Cristofaro-Gardiner, Holm, and Mandini, in which we use ECH capacities and Ehrhart polynomials to show that infinite staircases exist for these and a few other target manifolds. I will also explain why we conjecture that these are the only such target manifolds. (Received January 19, 2017)