1108-51-495 **Richard K Hind*** (hind.1@nd.edu), Department of Mathematics, University of Notre Dame, Notre Dame, IN 46556. *Symplectic embeddings in dimension greater than four.* Preliminary report.

In their 2012 paper McDuff and Schlenk completely solved the existence problem for symplectic embeddings of 4-dimensional ellipsoids into balls. In other words, they calculated the function

$$c(x) = \inf\{R|E(1,x) \hookrightarrow B^4(R)\}.$$

Here an ellipsoid inside the standard symplectic Euclidean space is written as $E(a,b) = \{\frac{\pi}{a}(p_1^2+q_1^2)+\frac{\pi}{b}(p_2^2+q_2^2) < 1\}$ and $B^4(R) = E(R,R)$ is a ball.

For a fixed $n \geq 3$ we can define the function

$$f(x) = \inf\{R|E(1,x) \times \mathbb{R}^{2(n-2)} \hookrightarrow B^4(R) \times \mathbb{R}^{2(n-2)}\}.$$

I will talk about some constructions and obstructions which give upper and lower bounds respectively for $f(x)$. It is clear that $f(x) \leq c(x)$ but it turns out we have equality precisely when $x \leq \tau^4$, the fourth power of the golden ratio. This is work in progress with Daniel Cristofaro-Gardiner. (Received January 20, 2015)