Shephard Prize: citation for Andrew Lobb

Short citation:

Professor Andrew Lobb of Durham University is awarded the Shephard Prize in recognition of his remarkable paper 'The Rectangular Peg Problem', published in the
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Long citation:

Here is the statement:

Call the of a rectangle the ratio of its long side to the short side. This is a number greater than or equal to 1. Now take your pencil and on a piece of paper draw any smooth curve that you want, so long as the curve closes up and never intersects itself. **Then for any value of there will be four points on that curve that form a rectangle of shape .**

This is a variant of the introduced by Toeplitz in 1911. This asks if we can do the same thing with =1 and the curve only continuous rather than smooth. This problem and its variants have attracted considerable attention over the last decade, but the original square peg problem remains open.

Lobb and Greene's solution to the smooth rectangular peg problem is short, clever, and beautiful. The key idea is to apply a relatively recent result in symplectic topology, proved by

Shevchishin in 2009: does not contain an embedded Lagrangian Klein bottle. Given and a smooth simple closed curve in the plane, Lobb and Greene construct an immersed Lagrangian Klein bottle C