# A SMOOTH CONVEX LOOP WITH VANISHING PROJECTIONS

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ABSTRACT. B. Solomon [1] has studied the problem of existence of a simple closed curve in $\mathbf{R}^3$ whose projections into planes in three linearly independent directions vanish in the sense of currents. He discovered some *nonsmooth* examples of such curves, and proved that no examples (smooth or otherwise) exist on *strictly* convex surfaces. We show that smooth (C^∞) examples exist, and may be constructed on convex surfaces.
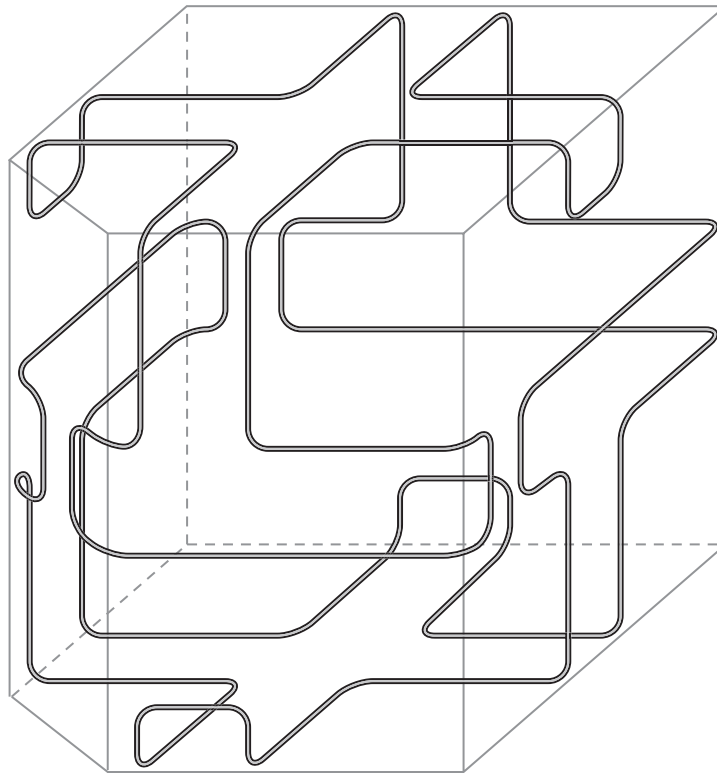
REFERENCES

[1] B. Solomon, *Projecting codimension-two cycles to zero on hyperplanes in* $\mathbf{R}^{N+1}$, Topology, to appear, preprint available at www.php.indiana.edu/~solomon/Math/Papers/cycles.pdf.

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