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Recent developments in lower-dimensional
obstacle problems

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The lower-dimensional obstacle problem was proposed by Signorini in the late 50's. Recently, this problem has received increasing attention, especially after the 2004 breakthrough $C^{1,1/2}$ optimal regularity result of Athanassopoulos and Caffarelli. In this lecture I will overview what is known about the problem, the role of monotonicity formulas, and discuss new developments and open problems.