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Mathematics and Statistics, McGill University, Burnside Hall, 805 Sherbrooke Street, Montreal,
Quebec H3A 0B95, Canada. *Regularity results for a Two-Penalty Boundary Obstacle Problem.*

In this talk we present results concerning a two-penalty boundary obstacle problem of interest in thermics, fluid dynamics, and electricity. Specifically we prove existence, uniqueness, and optimal regularity of the solution. Moreover we present structural properties of the free boundary. (Received February 06, 2018)