1145-11-2892   **Ricardo Conceição*** (`rconceic@gettysburg.edu`), 300 N Washington st, Department of Mathematics, Gettysburg, PA 17325, and **Rodrigo Gondim** (`rodrigo.gondim@ufrpe.br`). *On a Frobenius problem for integral domains.* Preliminary report.

Given a set of co-prime positive integers $a_1, \ldots, a_n$, the Diophantine Frobenius Problem is the following classical problem in number theory – Find the largest positive integer g for which the equation

$$x_1 a_1 + \cdots + x_n a_n = g,$$

has no solution with $x_i \geq 0$.

In this talk we will present a generalization of the Frobenius problem to integral domains, paying particular attention to those domains that are natural extensions of $\mathbb{Z}$, such as ordered Archimedean integral domains and the ring of p-adic integers. (Received September 25, 2018)