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**Lucio M-G Prado\***, Department of Mathematics, BMCC, The City University of New York, 199 Chambers Street, New York, NY. *The problem of  $p$ -Laplacian and its Surjectivity on Infinite Graphs*. Preliminary report.

Given a connected locally finite graph  $G$  with vertex set  $V$ , a discrete version of the  $p$ -Laplacian can be adapted to from Riemannian manifold. In this talk, I will give overview of some basic concepts and techniques with principal focus on the investigation of the *surjectivity* of the  $p$ -Laplacian in terms of  $p$  on infinite graphs. It is important to point out that this problem has direct relation to the existence of solution of Poisson equations.

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