Weighted elastic Wardrop equilibrium principle via quasi-variational inequalities and applications to wireless devices

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ABSTRACT: The aim of the talk is to consider a weighted elastic traffic equilibrium problem in a non-pivot Hilbert space and prove the equivalence between a weighted wardrop condition and a quasi-variational inequality. Thanks to the variational formulation, we are able to establish some existence and regularity theorems. In order to obtain our regularity results, the set convergence in the Moscos sense plays an important role. As an application we show, using some results of the Senseable Laboratory at MIT, how wireless devices can be used to optimize the traffic equilibrium problem.