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Abstract for an Invited Paper
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Evolution and structure of the Internet: A statistical physics approach

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The talk will present an overview of the large-scale topological and dynamical properties of real Internet maps. First I will review the methodology used to obtain large scale maps of the Internet at the router and autonomous system level. Then I will discuss the statistical features and regularities observed in the large scale structure of the Internet and the importance of the dynamics in the formulation of adequate models. Finally the various results and models will be scrutinized in the light of a statistical theory that considers the map's incompleteness due to measurement biases.