

数学与系统科学研究院

计算数学所学术报告

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报告题目:

**Hidden-City Ticketing: the Cause,  
Cost and Impact**

邀请人: 优化与应用研究中心

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报告地点: **科技综合楼三层 311**

**计算数学所报告厅**

## **Abstract:**

**Hidden-city ticket is an interesting phenomenon existing in airline ticket pricing. It occurs when an itinerary with a connection city is cheaper than a ticket from the origin to the connection point. In such a case, a passenger traveling to the connection city will have the incentive to pretend to be traveling to the final destination, deplane at the connection point and throw away the rest of the ticket.**

**Hidden-city ticketing opportunities are not uncommon nowadays. In this paper, we establish a quantitative model to analyze hidden-city ticketing and its impact on both airlines revenues and consumers welfare. We first show that this phenomenon arises when there is a large difference in price elasticity on related itineraries. Then we build a dynamic programming model for the airlines that takes into account the hidden-city opportunities which are fully taken by passengers. Under this model, the optimal pricing reaction of the airlines is to eliminate such opportunities, but the airlines revenues will always decrease. We show that the decrease could be as much as half of the original optimal revenue when the passengers do not use hidden-city ticketing but not more. Meanwhile, as a reaction of the airlines towards such ticketing practice, the fares to the final destination of a hidden-city itinerary will increase, which eventually will hurt the passengers. We first take an exogenous competition model in our analysis and then validate it through a game theoretic approach. Numerical results are presented to illustrate our results.**

**欢迎大家参加!**