Foreword

Analyzing the basic conditions of modern service and production processes, the strengthened competition constraints and unpredictable demand fluctuations are obvious factors which create an intense pressure, on the one hand, to reduce costs through an efficient process control and, on the other hand, to optimize revenue through an adequate capacity and price control (demand-side revenue optimization). Two points can be recognized when analyzing the research on this basic profit maximization problem: Firstly, much of the research focuses on the cost-reduction problem. This is characterized, for instance, by the operational control of production schedules or the logistics planning. Direct customer interaction is not the main point addressed here. Secondly, the research field underlying the capacity and price control problem during the customer transaction mostly focuses only on one of these two control components of a profit-enhancing Revenue Management. Within the implementation of a Revenue Management approach, it is the real-world applicability which should be focused on. With respect to unexpected fluctuations in demand and unknown behavior of the customers in respect of prices, a solution must be provided that considers these uncertainties in a way which will ensure that the necessary information can be obtained in practice.

Against this background, Mr. Becher develops a concept for an integrated capacity and price control in Revenue Management based on Fuzzy Expert Controllers. It is able to solve the outlined revenue objective under a practicable consideration of the underlying uncertainties. Remarkable is that Mr. Becher not only establishes a comprehensive and consistent theoretical concept but also evaluates his outstanding approach on the basis of three very interesting application cases. The results are important with respect to the adequate development of an integrated capacity and price control in Revenue Management and contribute to the further development of the economic research.

I wish Mr. Becher that this contribution will be successful and have an impact on the further development of Revenue Management in research and practice.

Prof. Dr. Axel Tuma