In 2016, a special issue of the Journal of Revenue & Pricing Management will publish a series of papers on Robust Revenue Management. During the last decades, revenue management has emerged as a major application area of operations research and analytics. The goal is to control demand through optimized differentiated product pricing so as to maximize revenue. Frequent application areas are the transport and service industry, e.g. the sale of flight or rail tickets, hotel rooms, or car rentals. However, with the growing popularity of the concept, its application has spread to include further areas such as for instance demand management for production line utilization, communication networks, or delivery services.

Revenue management is susceptible to the effects of uncertainty, as it is based on forecasts and assumptions about parameters fixed during earlier stages of the planning process. The feedback loops between forecast and optimization propagate and potentially increase the effects of these uncertainties. Robust revenue management aims to absorb the anticipated effects of uncertainty using stable and flexible solutions, potentially foregoing solutions that would be optimal under perfectly certain conditions.

One example for robust revenue management is the ability to deal with capacity changes. Established concepts such as EMSR or dynamic programming regard the capacity as fixed given. However, due to technical or organizational deficiencies, capacity may change abruptly throughout the sales horizon. As a result, the number of units that can be sold has to be adapted on short notice. When revenue management is not robust, increased capacity can lead to unexpected decreases in the offered price, potentially alienating customers that bought earlier at higher prices. Alternatively, a capacity decrease that was not anticipated can hinder the company to offer the product to potentially valuable customers requesting later in the sales horizon. When the underlying cause is not considered further, such results can lead to faulty updates in the forecast updates preparing future revenue management iterations.

Further sources of uncertainty motivating robust revenue management include but are not limited to given fares attached to booking classes in capacity-based revenue management, technical or organizational constraints affecting real-world implementations of dynamic pricing, service blackouts leading to spill between physical products, changes in the competitive situation, or economic shocks rendering historical sales data obsolete. As revenue management is applied to novel application areas, new and adapted process requirements may create new sources of uncertainty.

In considering the motivation for robust approaches, contributors should aim to differentiate concepts of uncertainty and risk. For example, the success of different approaches can be expected to depend on the availability and quality of information on statistical distributions.

In considering robust approaches to revenue management, both flexible and stable solutions need to be explored. Stable solutions aim to reduce the uncertainty, for example by either improving the quality of forecasts or by rendering them forecasts unnecessary. Flexible solutions strive to make the best of uncertain outcomes by adapting the initial solution. Contributors are particularly encouraged to consider the implications of designing robust revenue management concepts and information flows with a view toward human decision makers. The involvement and incentivization of human analysts is at this point rarely considered in revenue management research. Particularly with regard to adapting the outcome of forecast and optimization adhoc to changes in the underlying conditions, these analysts play an important role in practice.
The research challenge motivating this call for papers is threefold: 1. Research is needed to identify sources of uncertainty motivating robust revenue management beyond the frequently considered risk of faulty demand forecasts. 2. The short- and long-term impacts of uncertainty depending on the robustness of the applied revenue management concept have to be quantified. 3. Making revenue management more robust calls for new forecast and optimization algorithms as well as process designs.

**Submission of papers**

Papers should be submitted by email to catherine.cleophas@rwth-aachen.de by **15th April 2015**.

The subject line of the email should read *Robust Revenue Management*

Advice about the suitability of papers and other inquiries can be sent to: catherine.cleophas@rwth-aachen.de

For guidelines on preparation of manuscripts please see the instructions for authors page at [http://www.palgrave-journals.com/rpm/author_instructions.html](http://www.palgrave-journals.com/rpm/author_instructions.html).

Papers should either be research or practitioner papers. **Research papers** are normally between 4000 to 6000 words and are subject to strict double-blind refereeing and will be reviewed by at least two referees. Research papers are usually considered (but not necessarily) to be theoretical, mathematical and written by academics. Whereas **practitioner papers** are normally 2000–4000 words and reviewed by one member of the journal’s editorial board for insightfulness, clarity and contribution to industry best practice.