Quarterly Newsletter of the INFORMS Revenue Management and Pricing Section

July 2008

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Message from the Chair

“Excuse me, how do you define supermodularity?”

The man sitting next to me looked puzzled. We had been watching a series of presentations on revenue management and game theory at the INFORMS Revenue Management and Pricing Conference in Montreal. I glanced at his name badge and saw that he was a revenue management analyst for a mid-sized airline. I soon learned that he had some background in probability and statistics, but not game theory. During the conversation that followed, I learned that he had been sent to the conference by his managers, to “See if there were any new developments that we really should know about.”

Our section’s mission statement includes the responsibility “To encourage the exchange of information among practitioners, users, and researchers in the area of revenue management and pricing.” I found that the audiences for the talks at the summer conference included an excellent mix of practitioners and researchers. As a section, however, we must make sure that useful information is flowing, and that it is flowing in both directions.

First, the good news. The Section membership rolls shows that a full 60% of our members are practitioners, compared with 40% for INFORMS as a whole. Given the wide prevalence and importance of revenue management techniques in industry, I believe that our section has an appropriate balance in membership between the two groups.

The presentations at conferences, however, have not been so balanced. The very first summer Section conference in 2001 had 21 technical presentations, of which 7 were based on work completed in industry, primarily by industry researchers or practitioners. The following graph shows what has happened since then: a steady increase in the total number of presentations, while the number of presentations by practitioners has remained flat.
I believe that active practitioner participation at conferences is vital for the health of our section. For practitioners, making a presentation offers the opportunity to receive feedback and advice from the wider revenue management and pricing community. It also allows academics another avenue (besides consulting and personal contacts) to examine problems faced in industry.

To encourage more participation by practitioners, our section will be offering a Practice Innovation Prize for successful and innovative applications of revenue management and pricing techniques by Section members. The prize-winners will be selected based on their originality and impact. More details about the prize, such as the application process and selection criteria, will be coming soon. If you are interested in the prize -- either as an applicant or perhaps to serve as a judge – please let me know.

By emphasizing practitioner presentations, I do not mean to downplay the value of presentations by academic researchers. In fact, our section has a proud history of “cross-border innovation,” in which new ideas move quickly between academia and industry, and back again. Good examples can be found by tracing the development of an important recent innovation: the use of choice models to more accurately describe customer behavior. First, users and practitioners in the airline industry began to recognize that customers’ choices often did not fit standard revenue management models, and this lack of fit would sometimes cause the optimization models themselves to go haywire. While researchers in industry were making quick, practical adjustments to their software, academics were trying to understand the causes of this phenomenon and to design reliable methods for dealing with it. The results include two papers that have won the Section prize for research: “Revenue Management under a general discrete choice model of consumer behavior” by Talluri and van Ryzin (2004), and “Models of the Spiral-Down Effect in Revenue Management” by Cooper, Homem-de-Mello, and Kleywegt (2006). The ideas presented in these papers then flowed back to industry, creating awareness of this issue, and as a result the proposed methods are now being encoded in software for airlines, railroads, and hotels.

In “Guns, Germs, and Steel,” a treatise on the evolution of human civilization, Jared Diamond examines the spread of technologies such as metallurgy and writing among societies. Diamond
emphasizes that societies with significant barriers to the diffusion of new ideas suffer over the long run. Whether these barriers are due to geography, climate, or culture, these societies abandon useful technologies and do not acquire new ones. Eventually they die out by themselves or are overrun by societies with superior technology. Societies that freely exchange technological ideas with others, on the other hand, are consistently more successful. Diamond’s analysis has implications for our own Section. What are our barriers to idea diffusion, and how can we tear them down?

And that initial question about supermodularity? I responded to the analyst, “If there is supermodularity between two groups of people, then when one group puts in more effort, it can help the other group.” I should have added, “Sort of like practitioners and academics.”

Sincerely,

Rob Shumsky
Section Chair
robert.shumsky@dartmouth.edu

INFORMS Annual Conference Boasts Over 140 Revenue Management and Pricing Talks

The INFORMS Annual Conference will be held October 12-15 at the Marriott Wardman Park and the Omni Shoreham in Washington D.C. Located a short metro ride from major attractions, the general reception will be held at the Smithsonian National Air and Space Museum. The revenue management and pricing sessions, organized by cluster co-chairs Gustavo Vulcano (gvulcano@stern.nyu.edu) and Victor Araman (varaman@stern.nyu.edu), promise something for everyone. For more information, see the INFORMS conference web site, http://meetings.informs.org/DC08/.

Call for Nominations for the 2008 Revenue Management and Pricing Section Prize

Nominations are being sought for the 2008 Revenue Management and Pricing Section Prize.

The prize is awarded for the best contribution to the science of pricing and revenue management published in English. Published work must meet the following requirements to be eligible for the prize:

- It must be in the form of a paper, a book, or a group of papers or books.
- It must be on the topic of pricing/revenue management.
- It must have been published in the past five years: 2003-2007. In the case of a group, at least one member of the group must have been published in one of those years.
- It must be written in the English language.
- It must have appeared in the open literature.

Books or papers may be case histories, reports of research representing new results, or primarily synthesis. For any nominated set (group of either articles or books) published over more than one year, it is expected that each element in the set is part of one continuous effort, such as a multi-year project or a continuously written, multi-volume book.
The prize committee will use the following criteria in making judgments:

- The extent to which the contribution advances the state of the art of pricing and revenue management.
- The originality of the ideas or methods.
- The new areas of application it opens up.
- The degree to which existing theory or methods are unified or simplified.
- The clarity and excellence of the exposition.
- The degree to which the contribution provides value for future applications, or enables improved practice.

A nomination consists of:

- A nominating letter specifying the work being nominated and explaining why it is deserving of the prize. Nominating letters must include the titles of the paper(s) or book(s), author(s), and the place and date of publication.
- Supporting letters, if desired. Supporting statements bearing on the worth of the publication in terms of the six criteria above will be very helpful, but are not required.
- Six copies of the work. In case of journal articles, it is sufficient to submit a pdf file containing the paper.

Nominations should be sent to the chair of the committee at the address below, or in the case of electronic submission, emailed to billcoop@me.umn.edu. The submission deadline is September 1, 2008.

The prize committee consists of:

E. Andrew Boyd, PROS
Rene Caldentey, NYU
William L. Cooper, University of Minnesota (Chair)
Department of Mechanical Engineering
111 Church Street, S. E.
University of Minnesota
Minneapolis, MN 55455

Call for Nominations for Section Officer and Board Positions

Nominations are now being sought for Vice Chair/Chair Elect, Secretary/Treasurer, and one open board position. The Vice Chair/Chair Elect will serve three years, one as Vice Chair, one as Chair, and one as a board member. The Secretary/Treasurer will serve a term of one year. The board member will serve a term of two consecutive years. Duties will commence at the 2008 INFORMS Annual Meeting, and the elected individuals must be members of INFORMS and the RM&P Section at that time. Nominations are being accepted now through August 15, 2008. To submit a nomination, contact one of the nomination committee members, Costis Maglaras at c.maglaras@gsb.columbia.edu or John Quillinan at John.Quillinan@disney.com.
**Section Constitution Brought Up-To-Date**

The Revenue Management and Pricing Section Constitution describes the purpose of the Section, the structure of its management and board, its schedule of meetings, and numerous other administrative details. The officers and board determined that many of the provisions are out-of-date, and this fall they will be proposing changes aimed at bringing it up-to-date. Following the guidelines of the Constitution itself, the following procedure will be used to consider these changes: (i) the amended version of the Constitution will be sent to all members via the listserv at least 3 weeks before the INFORMS Annual Meeting in October, (ii) the changes will be discussed during the Section business meeting at the INFORMS Annual Meeting, and (iii) a vote will be administered by email on the changes within two months after the meeting. Section members are encouraged to provide comments on the revised Constitution and to vote.

**Canadian Operational Research Society Seeks Pricing Cluster Chair**

CORS, the Canadian Operational Research Society, is seeking a cluster chair to organize sessions on revenue management and pricing for the CORS annual meeting July 14-17, 2009, in Toronto. Interested individuals should contact Rob Shumsky at robert.shumsky@dartmouth.edu.

**Reduced Fee Subscriptions to the Journal of Revenue and Pricing Management**

The Journal of Revenue and Pricing Management carries timely, relevant articles drawn from both industry applications and academic research. Members of the RM&P Section are entitled to significantly reduced subscription rates – an individual annual rate of $98 rather than the standard $216. The Journal’s publisher has recently streamlined the process for receiving the reduced rate. To receive the reduced rate, download and mail the subscription form available at www.palgrave-journals.com/rpm/RPM_O-F_Update_2008.pdf. To learn more about the journal, visit www.palgrave-journals.com/rpm/.

**Corporate Sponsorship Opportunities**

Your organization can help sponsor Section activities and have its name prominently associated with the premier organization for quantitative pricing and revenue management. To learn more, contact John Quillinan at John.Quillinan@disney.com.

Questions or comments may be directed to the newsletter editor, Andy Boyd at e.a.boyd@earthlink.net.