Challenging Scientific Problems Emerging from Academic-Industry Collaboration

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Résumé - A successful collaboration between academics and industrial often requires a significant setup time and implementation time. Moreover, a significant hurdle is that the two parties usually have different goals: Publications for academics and practical achievements for industrial. However, new relevant, challenging and original scientific problems can emerge from tackling practical problems. This talk provides several examples of such problems in manufacturing and logistics that led to publications in international journals. Applications include production scheduling, inventory routing, lot sizing, workload balancing and qualification management.

Notice biographique - Stéphane Dauzère-Pérès is Professor at Mines Saint-Etienne in its site of Gardanne, France, and Adjunct Professor at BI Norwegian Business School, Norway. He received the Ph.D. degree from Paul Sabatier University in Toulouse, France, in 1992 and the H.D.R. from Pierre and Marie Curie University, Paris, France, in 1998. He was a Postdoctoral Fellow at M.I.T., U.S.A., in 1992 and 1993, and Research Scientist at Erasmus University Rotterdam, The Netherlands, in 1994. He has been Associate Professor and Professor from 1994 to 2004 at the Ecole des Mines de Nantes, France. His research interests broadly include modeling and optimization of operations at various decision levels (from real-time to strategic) in manufacturing and logistics, with a special emphasis on production planning (lot sizing) and scheduling, on semiconductor manufacturing and on railway operations. He has published 100 papers in international journals and has contributed to more than 250 communications in national and international conferences. Stéphane Dauzère-Pérès has coordinated numerous academic and industrial research projects, including 4 European projects and 30 industrial (CIFRE) PhD theses, and also eight conferences. He was runner-up in 2006 of the Franz Edelman Award Competition, and won the Best Applied Paper of the Winter Simulation Conference in 2013 and the EURO award for the best theory and methodology EJOR paper in 2021. .