

Peter Kall

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Peter Kall has been one of the principal guiding forces in the development of successive approximation methods in stochastic programming, as well as the promotion of software with (János Mayer) for Stochastic Programming (SLP-IOR). His orientation towards research has been a refreshing blend of mathematical rigor, and computational realism. A case in point is his research (in collaboration with Karl Frauendorfer) on the use of bounds in solving stochastic programming problems. This work addresses not only the algorithmic and mathematical issues dealing with successive approximations in two stage stochastic programming, but the kinds of heuristics that are necessary to ensure computational efficiency as well.

Peter Kall's 1976 book, *Stochastic Linear Programming* was not only among the first books in the area, but also provided new results on the stability of this class of models. Peter Kall has been a champion for the cause of stochastic programming through his leadership in several organizations, and editorial positions. Together with András Prékopa, he was the co-organizer of the Oberwolfach Conference on Stochastic Programming in 1979. This conference is considered by many as one of the seminal meetings in stochastic programming. Subsequently, he also organized the IFIP conference in 1991.

Prior to the collapse of the Soviet Union, Peter Kall was one of the central figures who facilitated collaboration on SP between researchers on both sides of the "Iron Curtain." This exchange kept the field of stochastic programming open to new ideas. For instance, A. Ruszczyński's regularized decomposition was implemented in Zürich, as were methods of probabilistic constraints due to Mayer, and Prékopa. Other illustrious researchers hosted at the institute include Werner Römisch and Rüdiger Schultz. As for new algorithms from the west, Peter Kall's institute hosted Jason Mai, a student from Arizona in the early days of stochastic decomposition.

Peter Kall has served on editorial boards of several journals, including *Annals of Operations Research*, *Optimization*, *Central European Journal of Operations Research and Economics* (Associate Editor), *Stochastic Programming E-print Series* (Advisory Editor), *Applied Mathematics & Optimization* (1985-1996), *Mathematical Methods of Operations Research* (1980-1999).

Selected Contributions

- Approximation methods for solving stochastic programs with recourse, *Numerische Mathematik* (1974).
- *Stochastic Linear Programming*, Springer-Verlag, Berlin, (1976)
- Error bounds for recourse problems, relations between upper bounds and moment problems, *Mathematische Operationsforschung und Statistik, Series Optimization* 13 (1982), *Zeitschrift für Operations Research - ZOR* 31 (1987); *Annals of OR* 30(1991).
- Stability analysis of recourse problems under perturbed probability distributions, in *Parametric Optimization and Related Topics*, Guddat, Jongen, Kummer, Nozicka, (eds.) (1987)
- Development of a model management system for stochastic linear programming (SLP-IOR) and of a workbench for testing SLP codes, *Mathematical Programming B* 75 (1996);
- Stochastic Programming (with S.W. Wallace) (1994).

