

Global Optimization: State-of-the-Art and Selected Applications

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The objective of global optimization (GO) is to find the absolutely best solution of nonlinear optimization models that [could] have a number of locally optimal solutions. After a concise introduction to the key GO model types and solution strategies, a selection of GO applications is presented that include

- * "Black box" systems optimization
- * Experimental design
- * Data classification
- * Nonlinear model fitting (calibration, regression)

János Pintér is a researcher and practitioner with over three decades of experience. His professional interests are primarily related to nonlinear optimization and its applications, including algorithm and software development. He holds M.Sc. (Eötvös University of Sciences, Budapest), Ph.D. (Lomonosow University, Moscow), and D.Sc. (Hungarian Academy of Sciences) degrees in Mathematics, with specializations in Operations Research, Stochastic and Global Optimization.

Dr. Pintér wrote and edited several books, and authored nearly 200 articles, book chapters, and other technical materials. His monograph titled *Global Optimization in Action* received the 2000 INFORMS Computing Society Prize. He also received grants and awards from a number of countries including Australia, Canada, Hungary, Netherlands, and the United States. Among other professional affiliations, he serves (served) on the editorial board of the *Journal of Global Optimization*, *Journal of Applied Mathematics and Decision Sciences*, *Algorithmic Operations Research*, and the *International Journal of Modeling, Identification and Control* (from 2005 to 2009). Dr. Pintér is past or present member/officer of the Canadian and Hungarian Operations Research Societies, INFORMS, the Mathematical Programming Society, and SIAM. Among numerous other professional activities, he served as a member of the Operations Research Committee of the Hungarian Academy of Sciences (1984-1994); between 2002 and 2004 he served as Global Optimization ViceChair of the INFORMS Optimization Society. In 2010, he has been elected to the Managing Board of EUROPT, the Continuous Optimization Working Group of EURO (the latter is the Association of European Operational Research Societies).

Dr. Pintér has worked and presented lectures in some 40 countries of the Americas, Europe, the Middle East, and the Pacific Region. He is also the principal developer of several professional nonlinear optimization software products for compiler platforms, optimization modeling languages, and integrated scientific-technical computing systems.

For further details, please visit <http://www.pinterconsulting.com>.