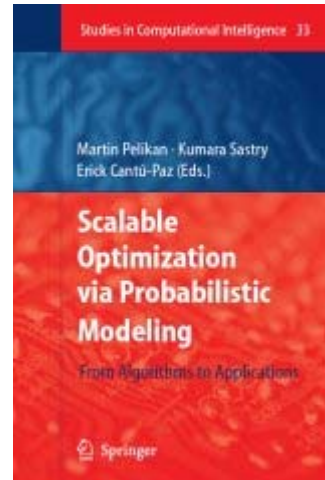


# FOR IMMEDIATE RELEASE:

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## Book by Illinois PhD Student Surveys Critical New Optimization Technique

**Urbana, IL, October 30, 2006.** At a time in his academic career when most PhD students are struggling to finish their dissertation research, Kumara Sastry, PhD student in Industrial and Enterprise Systems Engineering (IESE) at the University of Illinois at Urbana-Champaign (UIUC) has published a book. Together with former UIUC colleagues, Martin Pelikan (CS, PhD, 2002) and Erick Cantu-Paz (CS, PhD, 1999) Sastry has published a new edited volume, *Scalable Optimization via Probabilistic Model Building* (Springer, 2006), that presents a comprehensive picture of a new category of optimization procedure called *Estimation of Distribution Algorithms* or *Probabilistic Model-Building Genetic Algorithms*. The book is noteworthy both because of the importance of its content and because a graduate student was a prime mover of the project prior to getting his PhD. "Kumara Sastry is a horse; he's one of the hardest working graduate students I've ever seen," say his co-advisor David E. Goldberg, Dobrovolny Distinguished Professor and Director of the Illinois Genetic Algorithms Laboratory (IlligAL). "He also has an uncanny ability to focus his efforts in key areas of theoretical, practical, and commercial import in a manner that goes way beyond his years."

EDAs and PMBGAs are among the fastest growing topics in genetic and evolutionary computation, and a number of procedures with roots at the University of Illinois hold key records in solving hard problems quickly and well. Goldberg continues, "This book focuses like a laser beam on one of the hottest topics in evolutionary computation over the last decade or so." Sastry's research co-advisor, Duane Johnson, Bliss Faculty Scholar, in Material Science and Engineering highlights the importance of the book for practitioners: "the book brings together a selection of experts that (1) introduce the current

methodology and lexicography of the field with illustrative discussions and highly useful references, (2) exemplify these new techniques that dramatically improve performance in provable hard problems, and (3) provide real-world applications of these techniques.”

Despite making an important contribution to the literature, Sastry remains on track to finish his dissertation on the theory and application of advanced genetic and evolutionary computation techniques in Spring 2007. Sastry’s research straddles the theory and implementation of genetic algorithms and EDAs and crucial applications in material science and chemistry. Sastry was genetic algorithm lead on an interdisciplinary project that won a silver Human Competitive Performance award or Hummie at the 2006 Genetic and Evolutionary Computation Conference, and a recent Sastry paper was selected by the *Virtual Journal of Nanoscale Science & Technology* as frontier research. Although Sastry’s plans following graduation are not completely settled, he likes the growing excitement and entrepreneurial spirit at the University of Illinois. “During my time here at Illinois, I have been able to work with great professors, do cutting-edge work, and even help start a company. There are other places I could go following graduation, but I like the research and entrepreneurial possibilities right here in Champaign-Urbana and would like to stay if I can find the right opportunity.”

**About the Illinois Genetic Algorithms Laboratory.** The Illinois Genetic Algorithms Laboratory (IlliGAL) is the world’s preeminent research laboratory devoted to genetic algorithms and evolutionary computation. The lab was founded in 1990 by David E. Goldberg, Jerry S. Dobrowolny Distinguished Professor in Entrepreneurial Engineering, and is housed in the Department of Industrial and Enterprise Systems Engineering at the University of Illinois at Urbana-Champaign. IlliGAL pursues basic and applied research in genetic algorithms, genetics-based machine learning, and innovation support systems. The laboratory maintains regular collaborations with the National Center for Supercomputing Applications (NCSA) and the Materials Computation Center (MCC).

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