Summary for Nonlinear Optimization

Linlin Ge

1 Introduction

Table 1: Optimization Method

方法分类	Solved Problems	Methods
Local Deterministic		gradient descent and derivative
		Newton, Gaussian-newton, LM
		Quasi-Newton
		Expectation Maximization
Global Deterministic	Integer Programming Problem	Branch and Bound & Tree Search
		Graduated Assignment
		Mean Field Annealing
		Game Theoretical Framework
		Spectral Method
Stochastic		Genetic Algorithm & Simulated Annealing
		Particle Filtering
		Hough Transform
		RANSAC
		Belief Propagation
Constrained Search		Prune and Search
		Geometric Hashing
		Embedding Techniques

$$L = \begin{bmatrix} 2 & -1 & -1 & 0 \\ -1 & 3 & -1 & -1 \\ -1 & -1 & 3 & -1 \\ 0 & -1 & -1 & 2 \end{bmatrix}$$

References