

AUTO-TUNING - GLOBAL OPTIMIZATION ALGORITHMS

- Several derivative-free global optimization algorithms exist: (Rios, Sahidinis, 2013)
 - Lipschitzian-based partitioning techniques:
 - **DIRECT** (Divide in RECTangles) (Jones, 2001)
 - Multilevel Coordinate Search (**MCS**) (Huyer, Neumaier, 1999)
 - Response surface methods
 - **Kriging** (Matheron, 1967), **DACE** (Sacks et al., 1989)
 - Efficient global optimization (**EGO**) (Jones, Schonlau, Welch, 1998)
 - **Bayesian optimization** (Brochu, Cora, De Freitas, 2010)
 - Genetic algorithms (**GA**) (Holland, 1975)
 - Particle swarm optimization (**PSO**) (Kennedy, 2010)
 - ...
- **New method:** inverse distance weighting + radial basis function surrogates (**GLIS**) (Bemporad, 2019)